

Three members elevated to SBE Fellow



Lawrence Behr



James Schoedler



Larry Wilkins

On April 7, 2013 the board of directors of the Society of Broadcast Engineers elected three members to the membership rank of Fellow. Elected were, Lawrence V. Behr, CSBE of Greenville, N. C., James B. Schoedler, CBNT of Denver, Colo. and Larry J. Wilkins, CPBE, AMD, CBNT of Prattville, Ala.

Behr is CEO of the consulting group, LBA Group, Inc. and has been a leader and innovator in the broadcast and wireless communications engineering industry for

over 50 years. Behr has developed new antenna systems and lightning protection products. He holds numerous issued and pending patents on these products and is a Charter Member of the SBE, holding membership number five.

Schoedler is a broadcast industry technology consultant. He has been an active member of SBE Chapter 48 for over a decade, serving as chairman for five years

FELLOW, page 10

Board candidates announced; Nominees from membership welcome

The annual election of national officers and directors of the SBE will take place July 26 through August 27. The nominations committee, chaired by immediate past president, Vinny Lopez, CEV, CBNT, of Chapter 22 in Central New York, has assembled a group of candidates; one for each of the four officer positions and seven candidates who will vie for the six available director seats. The committee has nominated Joseph Snelson, CPBE, 8-VSB for president. Snelson, of Las Vegas, Nev., is vice president of engineering at Meredith Corporation. A list and photos of the other candidates can be found at the end of this article.

Additional eligible members may enter the election after being nominated by a voting member (Member, Senior, Life, Fellow member categories, and voting representatives of SBE Sustaining Members) and endorsed by at least nine additional voting members. Nominations are to be sent to the national secretary, Jim Leifer, CPBE, at jimleifer@hotmail.com or mailed



President

Joseph Snelson, CPBE, 8-VSB
Vice President of Engineering
Meredith Corporation
Las Vegas, Nev.
Chapter 128

to Leifer at 8553 Tourmaline Blvd., Boynton Beach, Fla., 33437. Candidates must be voting members, current in their SBE dues and hold certification from the SBE at an engineering level (CBT or higher). If elected, these same requirements apply during the term of office.

Candidate nominations from the membership must be received by the SBE National Office no later than 4:00 pm, EDT, July 9, 2013.

Terms of officers, which include president, vice president, secretary and treasurer, are for one year. Terms for directors are two years. Election ballots

will be emailed to voting members who are in good standing on July 26 and will be completed using the SBE web-based election system. Voting members who

BOARD, page 3

IN THIS ISSUE

- 4 Technology apprenticeship
- 6 15 year old girl earns CBT
- 8 Photo album from 2013 NAB Show
- 11 New broadcast engineering handbook

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BOARD from page 1

chose to opt out of electronic balloting during this year's dues renewal period, and those members for whom the national office has no email address on record, will receive their ballots in the mail.

Mailed ballots are to be returned by USPS, express delivery or personal hand delivery so they are received by the national office by 5:00 pm EDT on August 27. Electronic balloting must also be completed by 5:00 pm EDT on August 27. Votes will be tabulated that evening by a board of tellers.

Candidates elected will take office during the SBE National Meeting on October 30 in Indianapolis, Ind.



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Corporate Regional Engineer and DoE Entercom Communications Greenville, S.C. Chapter 86



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Kirk Harnack, CBRE
Vice President and Executive Director Telos Systems Nashville, Tenn. Chapter 103



Mark Heller, CPBE, CTO
President & Chief Engineer WGBW and WLWB Radio Two Rivers, Wis. Chapter 80

The national meeting is being held in conjunction with the annual engineering/IT conference presented by the Indiana Broadcasters Association. The local host for the national meeting is SBE Chapter 25 of Indianapolis.

Serving on the committee with Lopez are Michael Maville, CBT, CBNT of Chapter 88, West Palm Beach, Fla. and Barry Thomas, CPBE, DRB, CBNE of Chapter 5, Atlanta, Ga. Questions about the role and responsibilities of members of the board may be directed to any committee member or to executive director, John Poray.

The list of candidates as submitted by the Nominations Committee includes:

Director Candidates



Ched Keiler, CPBE, 8-VSB, CBNT
Broadcast Consultant Ft. Lauderdale, Fla. Chapter 53



Tom Ray, CPBE, AMD, DRB
Tom Ray Broadcast Consulting New Windsor, N.Y. Chapter 15



Kim Sacks, CBT
Orban Broadcast Audio Specialist Hollywood, Md. Chapter 37



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Meintel, Sgrignoli & Wallace Waldorf, Md. Chapter 37

MARK YOUR CALENDAR

**Certification Application Exam
Deadline**
June 3, 2013

Exams held in local chapters, August 9-19

**Certification Exams held in local
chapters**
June 7-17 (application deadline has passed)

**Webinar by SBE — IP Microwave
STL's**
June 27

2-3:30 p.m. ET
Instructor: Jeff Holdenrid
Cost: SBE Members · Free, thanks to
DoubleRadius; Non- Members · \$49

**SBE Leadership Development
Course**
August 13-15

Atlanta, Georgia

Instructor: Rodney Vandever, Professor and
Consultant
Cost: SBE Members · \$590; Non- Members · \$640

**Certification Application Exam
Deadline**
September 13, 2013

Exams held in local chapters, November 1-11

**SBE National Meeting and IBA
Broadcast Engineering Conference**
October 29-30

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Indianapolis, Indiana

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LETTER FROM THE PRESIDENT

by Ralph Hogan, CPBE, DRB, CBNE
SBE President
rhogan@kjzz.org

NAB Education Foundation Technology Apprenticeship program promotes SBE Certification for young technologists

Annually, the NAB Education Foundation offers ten participants the opportunity to learn about the latest TV and radio gear and the state of the industry through its Technology Apprenticeship Program. The program includes a training course, apprenticeship, invitation to attend the NAB Show and the opportunity to become SBE certified as a SBE Certified Broadcast Technologist.

It was my distinct pleasure to speak with the ten students participating in this year's TAP during the NAB Show. They were bright, enthusiastic young people with an interest in technology and engineering. One could see their inquisitive nature by the questions they asked. They also attended the national SBE Membership Meeting on Tuesday afternoon of the NAB Show.

The participants are chosen via a competitive application process that saw 45 applications submitted this year. For the last three years, the SBE has continued its working relationship with NAB by participating on the panel that selects the TAP participants. The foundation draws upon five industry professionals to review the applications and then selects the ten finalists for the apprenticeship program.

The Class of 2013 was composed of students from:

- San Francisco State University - majoring in Broadcast and Electronic Communication Arts
- Omega Studios School of Applied Recording Arts and Sciences - majoring in The Master Recording Engineering Series Program
- Omega Studios School of Applied Recording Arts and Sciences - majoring in Live Sound Reinforcement

- American Broadcasting School - majoring in Broadcasting
- ITT Technical Institute - majoring in Computer Electronics Engineering Technology
- Hocking College - majoring in Applied Science in Broadcast Production and Engineering

The Technology Apprenticeship Program is a six-month curriculum designed to expose high-tech graduates and professionals to the broadcast industry.

TAP exposes the students to the latest technology in broadcasting at the NAB Show in Las Vegas and the Radio Ink Convergence Conference in Silicon Valley.

It provides them with paid hands-on training at a radio or television station and introduces them to technology professionals in the industry. Additionally, students are offered the prospect of becoming an SBE Certified Broadcast Technologist as part of their experience.

The program promotes, "If you are interested in video coding, IP audio and video, server-based audio and video, file-based audio and video or radio and television transmission, then you should consider a career in broadcast technology!"

College seniors, recent graduates and individuals with the appropriate skill set seeking to enter the broadcast industry are encouraged to apply for the program. To qualify, participants must have training in IT, digital technologies, broadcast engineering or other related areas. This program is open to all and it strongly encourages women and minorities to apply.

The participants have a very full six-month schedule starting in March. Students begin the apprenticeship with an informational webinar featuring experts from the NAB and the SBE followed in April by participants attending the NAB Show. There are activities planned for participants to interact with leaders in broadcast technology during the show. Then in May, they participate in International Association of Broadcast Manufacturers training. IABM is an international association that represents the broadcast and media technology supply industry worldwide. The months of June and July have them complete a two-month hands-on apprenticeship at a radio or television station. In August, the participants take part in a technology manufacturer visit. Finally, they wrap up the experience at NAB headquarters in Washington, D.C. While there, they spend a week working with the NAB Science Department developing a presentation that is delivered via webcast at the end of their visit.

As you can see, the NABEF makes quite an investment in each of the participants. They are the future of our industry. If you ever have the opportunity to meet or interact with them, you will not be disappointed.

The NAB Education Foundation is a non-profit organization dedicated to serving the public interest in supporting and advocating: education and training programs, strategies to increase diversity, initiatives stressing the importance of the First Amendment, community service, philanthropy and timely broadcasting issues.

SBE National Meeting comes to Indy



The 2013 National Meeting of the Society of Broadcast Engineers will be held in Indianapolis, Ind. on October 29-30, at the Sheraton Indianapolis at Keystone Crossing. The event is being held in conjunction with the annual Engineering and IT Conference presented by the Indiana Broadcasters Association. The local SBE host of the national meeting is Chapter 25 of Indianapolis.

The SBE National Meeting events include the Annual SBE National Awards Reception and Dinner on the evening of October 30. The SBE's major awards will be presented, including the Robert W. Flanders SBE Engineer of the Year and the James C. Wulliman, SBE Educator of the Year. Three new SBE Fellows will also be recognized: Lawrence Behr, CSBE, James Schoedler, CBNT, and Larry Wilkins, CPBE, AMD, CBNT. Chapters and other individual members will be recognized for outstanding achievement in chapter operation and professional accomplishments, respectively.

The SBE Annual Membership Meeting, which will be streamed live via the Internet, will take place on October 30 at 4 pm ET (1 pm PT). The meeting's agenda includes the induction of the newly elected officers and directors as well as updates on the society's programs and services. Other activities during the national

meeting include the fall meeting of the national board of directors, the annual Fellows Breakfast and a meeting of the national Certification Committee.

The IBA Engineering and IT Conference includes a full day of technical presentations and a trade show, consisting of industry manufacturers and suppliers. The sessions, trade show, breakfast, lunch and the awards reception and dinner, are all included in the reasonable fee of just \$100. The newly renovated Sheraton has extended a special room rate of \$109 per night plus tax. The hotel has free parking in their adjoining garage.

More information about the SBE National Meeting and IBA Engineering and IT Conference is available at the SBE and IBA websites. Pre-registration will be available at the IBA website later this summer. Everyone is invited to attend, but especially if you live in Indiana or neighboring states, don't miss this opportunity to take part. Save the dates; October 29-30.



LEGAL PERSPECTIVE

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

THE HILL, THE GAO, AND STOPPING THE NOISE

I have a trio of things to talk about this month. First of all, during this 113th Congress, and for the third time in as many Congressional terms, SBE is back on Capitol Hill once again looking for sponsors for the Senate and House versions of our legislative plan to improve FCC technical decision making. We call the Bill the "FCC Commissioners' Technical Resource Enhancement Act." The legislation would permit, but not require, each Commissioner to employ a fourth professional staff assistant -- an electrical engineer or computer scientist -- to provide the Commissioner with technical consultation when appropriate, and to interface with the FCC's Office of Engineering and Technology, Commission bureaus, and other technical staff of the Commission. This can be done without any cost to taxpayers and without increasing the net staff levels at FCC (due to the acute shortage of engineers at the agency as the result of retirements and hiring freezes due to sequestration).

We weren't able to get this legislation passed last term (2011 and 2012), despite very active lobbying for it by Senator Olympia Snowe of Maine (now retired) and Representatives Stearns of Florida and McNERNEY of California. Sadly, Mr. Stearns was not re-elected in Florida last fall. Because of that and Senator Snowe's retirement, we have had to find champions elsewhere to introduce the Bills this term. We have commitments to do that in both the House and Senate, but the preference is to have bipartisan support at the outset (as we have had in each of the last two Congressional terms). The importance of that is obvious when you consider how polarized the House and Senate are lately. Few pieces of legislation, when introduced, are truly bipartisan. SBE's is pretty close. However, there are those on the Hill who view any increase at all in Federal staff as a show-stopper, and even if the FCC recoups its costs through regulatory fees, there are those who view any increase in Federal budgets as unacceptable. Those positions are not unreasonable, but they do pose a problem for us in pursuing this legislative agenda item. SBE government relations committee chair Ched Keiler and I have made a lot of rounds in Washington selling the Bill, and we will be doing a lot more in the near term. But make no mistake: Any legislation now is a tough sell in Congress. More on this shortly.

At the SBE membership meeting in Las Vegas at the NAB Show in April, I noted in my brief remarks to the crowd that for the first time in my 34-year tenure with SBE, a major broadcast auxiliary band is threatened with reallocation. There are actually two threats to the 2 GHz BAS band now. I mentioned in the February 2013 issue of The Signal that there is a serious proposal to auction the band 1755-1850 MHz for broadband use. This would displace a large number of important and diverse federal uses from that 95 MHz of spectrum, all or most of which would have to be relocated elsewhere. The only band that is being considered for reaccommodation spectrum for those Federal users is

the 2025-2110 MHz band. Not good.

The Government Accountability Office issued a report on April 27 entitled "Spectrum Management: Preliminary Findings on Federal Relocation Costs and Auction Revenues." This is an important report because the FCC is prohibited from conducting spectrum auctions where the cost of relocating incumbent services exceeds the anticipated revenues from the auction of the spectrum being cleared. The GAO report (GAO-13-563T) concludes several things, the last of them very important to broadcasters:

1. Actual costs to relocate federal users from the 1710-1755 MHz band exceeded the original \$1 billion estimate by about \$474 million as of March 2013, although auction revenues appear to exceed relocation costs by over \$5 billion.
2. The Department of Defense expects to complete relocation from 1710-1755 MHz for about \$275 million, which is approximately \$80 million less than its \$355 million estimate. According to DOD, the relocation of systems from this band has been less expensive than originally estimated because many systems were simply re-tuned to operate in the adjacent 1755-1850 MHz band.
3. The DOD's preliminary cost estimate for relocating systems from the 1755-1850 MHz band is not firm. DOD officials said that changes to key assumptions could substantially change its costs. *Most importantly, said the GAO report, decisions about which spectrum band DOD would relocate to are still unresolved.*

So, it is unclear whether or not 2 GHz is still the target for DOD facilities relocation from 1755-1850 MHz. The other clear threat to the 2 GHz BAS allocation though is from CTIA, which in March recommended to FCC that it identify 15 MHz of contiguous spectrum for reallocation to commercial broadband use as required by statute, and that it come from the 2 GHz BAS band. CTIA proposes to use the 2095-2110 MHz segment, together with the 2110-2155 MHz band for base downlinks, to be paired with 1695-1710 MHz and 1710-1755 MHz for mobile uplinks. The 2095-2110 MHz band is, says CTIA, attachment, the "clear choice for the Commission to identify and allocate." SBE sent a rebuttal to FCC Commissioners two days later, noting that the 2095-2110 MHz band would be the worst possible choice, and explained the public's reliance on real-time ENG and event production using this band daily.

The final topic I wanted to cover in this issue of The Signal is Commissioner Pai's well-received AM revitalization effort. The SBE had an occasion prior to the NAB convention this spring (and prior to Commissioner Pai's panel discussion in Las Vegas) to visit with Commissioner Pai and his staff and to discuss some technical issues that contribute to AM broadcasting's audience woes.

Our concern is that the Commission does not have a good handle on ambient RF noise levels and trends over time; it has uneven regulations governing noise-generating intentional, incidental and unintentional radiators; and its enforcement efforts in this context are both impractical and insufficient. When an AM listener receives interference, he or she will not suffer it, they will simply utilize different media. FCC interference resolution is premised on complaints, so AM broadcast band interference is not well-documented. Even if AM interference complaints were to be lodged, the FCC's Enforcement Bureau is not equipped to deal with them. Adequate staff does not exist, and attrition through retirement and hiring freezes has left FCC District Offices understaffed. Nor is interference from Part 15 devices to AM receivers addressed at the manufacturer level. It is the user of the device that is required to adhere to the non-interference requirement in the Part 15 rules, and that is unworkable. Part 15 device users are typically non-technical persons with no interference resolution capabilities and no incentive to assist in resolving the problems, even if any might happen to be reported to them by an AM listener.

Given the inherent difficulty in finding the source of RF noise from unlicensed (or licensed) RF devices, RF noise from unlicensed Part 15 devices (and Part 18 Industrial, Scientific and Medical devices) is a large and currently unmanageable problem. But it is not a problem that can't be fixed. That is the dialog that we should be having with the FCC now. Bravo to Commissioner Pai. It is past time that we had a hero at the FCC.

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CERTIFICATION UPDATE

Douglas W. Garlinger, CPBE, 8-VSB, CBNT
SBE Certification Committee Member
doug@garlinger.com

Rebekah J. Sullivan, youngest Certified Broadcast Technologist (CBT) at age 15

At age 15, SBE Youth Member, Rebekah Sullivan has become the youngest person to ever obtain the level of SBE Certified Broadcast Technologist, (CBT). Rebekah lives in Temple, Texas. At age 10, she got her first Ham Radio License. At age 13, she passed the tests for FCC General Radiotelephone License and Amateur Extra Class License. Rebekah, KE5WLE, was named "Ham Radio Operator of the Year" in 2012 by the Temple Amateur Radio Club.

Recently Rebekah attended a birthday party at her grandparent's church, where she met the owner of a local low-power Christian TV station in Killeen. She was interested in learning about the station's planned upgrades and antenna modifications to improve the station's coverage. She plans to tour the station soon and now that she has her CBT certification, Rebekah hopes to do volunteer work at the TV station.

You would think that might be enough about this young lady's technical accomplishments but it's not. Rebekah is the youngest person to pass the Certified Electronics Technician (CET) exam and become a Certified Journeyman Electronics Technician. Did I mention Rebekah has a Ship Radar Endorsement and is a Journeyman Radar Electronics Technician, a Journeyman Wireless Electronics Technician as well as holding a GMDSS Radio Operator/Maintainer License?

Rebekah describes herself as very interested in computers and robotics. She would like to build a robot named Tag-bot that detects light, so she can play tag with him using a flashlight. She enjoys hacking with Lego Mindstorms NXT. She likes learning new

computer languages; her favorites are Microworlds, Python and Ruby. After passing her CET, her father gave her a Raspberry Pi computer as a gift.

Rebekah has many interests in addition to electronics. Her Papa, Mama, three sisters and two brothers live on a farm. They raise goats, steers and chickens, and they garden. She enjoys working with Boolean Algebra and loves books by J.R.R. Tolkien and is a Tolkien Subject Matter expert. She likes drawing and crocheting, studying Spanish and Welsh and enjoys caring for "Hissy" and "Beetling Brows," the family hissing cockroaches. She is very interested in chemistry and the family shower curtain has the Periodic Table on it.

Rebekah's father, Steve Sullivan, was a Broadcast Engineer and has told her many stories about late night transmitter repairs and equipment installs. Rebekah is home-schooled and is a student instructor for her two younger sisters, Hannah and Naomi, and her two

younger brothers, Joshua and Caleb. Her younger siblings are following a similar advanced path of learning under the instruction of Rebekah and her father.



Rebekah helps younger sister Hannah with technician flashcards.



Certification Question

answer on page 15

Which is the most accurate way to measure average 8-VSB power on an RF spectrum analyzer?

- A. Normal marker with BW correction
- B. Noise marker with BW correction
- C. Channel power (or band power) markers separated by 5.381 MHz
- D. Channel power (or band power) markers separated by 6 MHz
- E. All of the above have the same accuracy

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Certified Broadcast Television Engineer™ (CBTE®)
André Smith, Thornton, Colo. – Chapter 48

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Alan Parnau, Hackettstown, N.J. – Chapter 15

FEBRUARY EXAMS

Certified Senior Television Engineer™ (CSTE®) Jonathan Solomon, Stamford, Conn. – Chapter 15
Certified Broadcast Networking Technologist® (CBNT®) Thomas Fowler, Centerville, Ohio – Chapter 33
Certified Radio Operator® (CRO®) Kenneth Smith, Bayside, N.Y. – Chapter 15
Certified Television Operator® (CTO®) Patrick Danner, San Pedro, Calif. – Chapter 47

EXAMS CONDUCTED DURING THE NAB SHOW

Certified Senior Radio Engineer™ (CSRE®) Thomas Oliver, Williamstown, Ky. – Chapter 35
Certified Broadcast Networking Engineer™ (CBNE™) Timothy Anderson, Covington, Ky. – Chapter 33
Joseph Carter, Arlington, Texas – Chapter 67
Michael Gurthie, Cahlrotte, N.C. – Chapter 45
Jeffery Hartman, Amarillo, Texas – Chapter 67
Daniel Olewine, Clifton, Va. – Chapter 37
Andrew Stern, San Francisco, Calif. – Chapter 40
Certified Broadcast Networking Technologist® (CBNT®) Charles Gawlik, San Diego, Calif. – Chapter 36
Eric Jingst, Toledo, Ohio – Chapter 104
Certified Broadcast Technologist® (CBT™) Kimberly Sacks, Hollywood, Md. – Chapter 37
Certified Television Operator® (CTO®) Lara Jessen, Riverside, Calif.
Justin Shearin, Henderson, Nev.

SPECIAL PROCTORED EXAMS

OKLAHOMA ASSOCIATION OF BROADCASTERS
Certified Broadcast Networking Engineer™ (CBNE™) Brandon Gabbard, Tulsa, Okla. – Chapter 56
Richard Brett Gilbert, Jenks, Okla. – Chapter 56
Darin Hall, Tulsa, Okla. – Chapter 56
Steve Laskowsky, Bethany, Okla. – Chapter 85
Donald Root, Jenks, Okla. – Chapter 56
David Shaffer, Broken Arrow, Okla. – Chapter 56
ALABAMA BROADCASTERS ASSOCIATION
Certified Broadcast Radio Engineer™ (GBRE®) Dale Holden, Mobile, Ala. – Chapter 118
Certified Broadcast Technologist® (CBT®) Maria Dudzak, Ketchikan, Alaska – Chapter 89
Carey McDill, Birmingham, Ala. – Chapter 68
Dee Miller, Albertville, Ala. – Chapter 111
Michael Missildine, Dothan, Ala. – Chapter 118
Scott Shepperd, Dothan, Ala. – Chapter 118

COURSE COMPLETION

Certified Broadcast Technologist® (CBT®)DINFOS
Anthony Pizzo, FPO, AE

CERTIFIED BY LICENSE

Certified Broadcast Technologist® (CBT®) Jan Andrews, Alexandria, Va. – Chapter 37
Timothy Berry, Knoxville, Tenn. – Chapter 113
David Brett, Poland, Ohio – Chapter 122
Lynn Durham, Grove Port, Ohio – Chapter 52
Brian Poellnitz, Tuscaloosa, Ala. – Chapter 68
James Pound, Lawrenceville, Ga. – Chapter 5
Nathan Smith, Pensacola, Fla.
Rebekah Sullivan, Temple, Texas – Chapter 79
Charles Tate, Birmingham, Ala. – Chapter 68
George Warren, Elkridge, Md. – Chapter 37

CERTIFIED RADIO OPERATOR® (CRO®)

Sam Casaccio, Stamford, Conn.
Harold Cochran, Martin, Tenn.
Tim Russell, Twin Falls, Idaho
Pasadena City College
Nicole Barreras, Los Angeles, Calif.
Jose Cano, Pacoima, Calif.
Ray Franklin, Pasadena, Calif.
David Ickes, Pasadena, Calif.
Mark Larane, Altadena, Calif.
Hector Lozano, Pasadena, Calif.
Justin Naranjo, Santa Clarita, Calif.

David Rodriguez, Altadena, Calif.
Sonali Serasinghe, North Hollywood, Calif.
Naomi Suda, Monterey Park, Calif.
Charles Yao, Glendale, Calif.

CERTIFIED TELEVISION OPERATOR® (CTO®)

Clay Dunn, Charlotte, N.C.
Gabriele Fellows, Medford, Ore.
Lori Hiris, Bozeman, Mont.
Sydney Hoffner, Bozeman, Mont.
Patrick Kelly, Omaha, Neb.
Normandy High School
Brandi Bernow, Parma, Ohio
David Deger, Parma, Ohio
Eric McGinnis, Parma, Ohio
Anna Rencz, Seven Hills, Ohio
Andrew Smith, Parma, Ohio

RECERTIFICATION

The following 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®)
Craig Beardsley, Chicago, Ill. – Chapter 26
Jon Blomstrand, St. Paul, Minn. – Chapter 17
Randy Gehman, Akron, Pa. – Chapter 41
Benjamin Hill, Pennsauken, N.J. – Chapter 18
Mark Rapson, Land O Lakes, Fla. – Chapter 39
David Siegler, Atlanta, Ga. – Chapter 5
Donald Stewart, Buffalo, N.Y. – Chapter 133
Certified Senior Radio Engineer (CSRE®) AM Directional specialist™ (AMD™)
Digital Radio Broadcast Specialist™ (DRB™)
Gary Blau, Plantation, Fla. – Chapter 53
Certified Senior Radio Engineer™ (CSRE®)
R. Brett Gilbert, Jenks, Okla. – Chapter 56
James Turvasille, Colorado Springs, Colo. – Chapter 48
Certified Senior Television Engineer™ (CSTE®)
Richard Kempiaik, Yorba Linda, Calif. – Chapter 131
Certified Broadcast Radio Engineer™ (CBRE®)
Ralph Jones, Glendale, Ariz. – Chapter 131
Michael Lenmen, Omaha, Neb. – Chapter 74
Saul Perez, Northridge, Calif. – Chapter 47
Certified Broadcast Television Engineer™ (CBTE®)
Yezmin Blue, Seattle, Wash. – Chapter 16
Elmir Husetovic, Lombard, Ill. – Chapter 26
Tim Lange, El Cajon, Calif. – Chapter 36
John Wenzelberger, Worthington, Ohio – Chapter 52
Certified Broadcast Television Engineer™ (CBTE®) 8-VSB Specialist™
Daniel Zillich, Albuquerque, N.M. – Chapter 34
Certified Audio Engineer® (CEA®)
Gary Faller, Winter Garden, Fla. – Chapter 42
Daniel Nevels, Tampa, Fla. – Chapter 39
Certified Video Engineer® (CEV®)
Michael Belanger, Morrow, Ohio – Chapter 33
Kristaq Kalandar, Saugus, Mass. – Chapter 11
Certified Broadcast Networking Technologist® (CBNT®)
Gary Blau, Plantation, Fla. – Chapter 53
Timothy Chapman, Buchanan, Mich. – Chapter 30
Dan Entingh, Denver, Colo. – Chapter 48
Rubin Garcia, Aventura, Fla. – Chapter 53
Randy Gehman, Akron, Pa. – Chapter 41
R. Brett Gilbert, Jenks, Okla. – Chapter 56
Elmir Husetovic, Lombard, Ill. – Chapter 26
Dennis Maddox, Fountain Inn, S.C. – Chapter 86
Robert Nelson, Emporia, Kan. – Chapter 3
Kevin Trueblood, Madison, Wis. – Chapter 24
Certified Broadcast Technologist® (CBT®)
Eugene Balossi, St. Louis, Mo. – Chapter 55
Robert Bertrand, New Brunswick, N.J. – Chapter 15
William Bleye, East Syracuse, N.Y. – Chapter 22
Sanford Boyd, Andalusia, Ala. – Chapter 118
Daniel Copher, Virginia Beach, Va. – Chapter 54
Raymond De Frances, Atlanta, Ga. – Chapter 5
Mark Long, Nicoma Park, Okla. – Chapter 85
Ronald Manasco, Robertsdale, Ala. – Chapter 118
Patrick O'Gara, Las Vegas, Nev. – Chapter 128
Bruce Pedersen, Eugene, Ore. – Chapter 76
Frank Peterman, Manvel, Texas – Chapter 105
Maria Salcido, Sumter, S. C. – Chapter 101
Michael Strobel, Flanders, N.J. – Chapter 15
Rodney Zeigler, Lexington, Neb. – Chapter 87
Certified Television Operator® (CTO®)
Gregory Corns, Gardena, Calif.
Jeff Holt, West Allis, Wis.
Dan Jensen, Indianapolis, Ind.
John Johnson, Billings, Mont.
Michael McCormick, Ogallala, Neb. – Chapter 87
Lynda McWilliams, Menifee, Calif.
Paul Pritchett, Tulsa, Okla.
Javier Silva, North Miami, Fla.

Accredited SBE Frequency Coordinators

The Society of Broadcast Engineers provides the accreditation program to offer volunteer SBE coordinators the opportunity to be recognized as part of a standards-based, nationally recognized program of local, voluntary broadcast-auxiliary frequency coordinators. It demonstrates to the broadcasting industry the widespread acceptance of the voluntary set of SBE standards guiding local coordination.

William Ingram Cleveland, Texas Houston Texans GDC

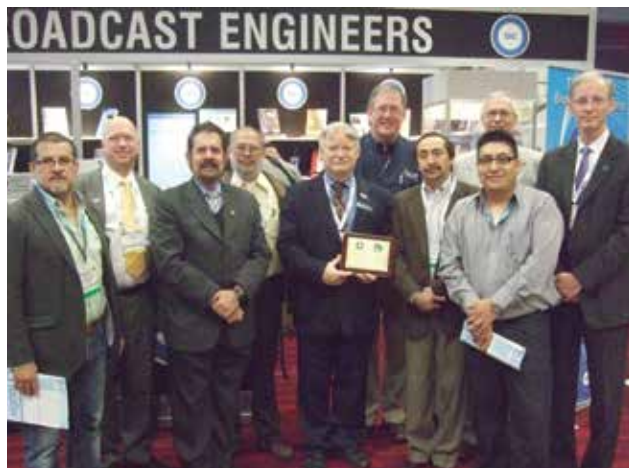
SBE photo album from the 2013 NAB Show

SBE members attending the 2013 NAB Show in Las Vegas were kept busy visiting many of the 1,300 exhibits, attending dozens of technical sessions, along with various meetings and events.

SBE wishes to thank the sponsors who helped make some of our meetings, events and the prizes we gave away, possible. Our sincere thanks go to Vislink Broadcast, sponsor of the SBE Membership Meeting,

which also made a generous donation to our Ennes Scholarship Fund. Our thanks also go to our daily SBE booth sponsors, including Boxx Communications, Ka You Systems, Nema Electronics and Blackmagic Design.

Here's a look back at the show through photos.



SBE president, Ralph Hogan holds a plaque commemorating 21 years of association with AMITRA, the professional association of broadcast engineers in Mexico. To the right of Hogan is AMITRA president, David Contreras.



Jim Bernier, national certification committee chairman (r), joins (l-r) Rick Ryan, Ch. 28; Bill Croghan, Ch. 128; John Batson, Ch. 68 and Chriss Scherer, Ch. 59, who display their plaques recognizing them for years of service as SBE certification chairs for their local chapters. Scherer holds a second plaque recognizing him for 15 years of service on the national certification committee.



President Hogan pays tribute to SBE founder, the late John Battison, during the membership meeting.



Past national presidents of the SBE, Ray Benedict (l) and Richard Rudman at the SBE booth.



SBE member, Scott Fybush holds the 2013 edition of Tower Site Calendar, which he publishes.



Some of the large crowd that attended the Ennes Workshop on Saturday of the NAB Show.



President Hogan presents a certificate of appreciation to Fred Baumgartner for organizing another successful one-day Ennes Workshop held as part of the NAB Broadcast Engineering Conference.



Thanks to Vislink for sponsoring the SBE Membership Meeting.



Ralph Hogan holds the entry jar as Karen Johnson, vice president of SBE booth sponsor, Ka You Systems, pulls the winning entry for the daily prize, a \$200 gift card from Fry's Electronics.



During the NAB Show, SBE officials met with a delegation from SBE affiliate, the Korean Broadcast Engineers and Technicians Association.



Greg Bolton, Randy Lee and Sean Garrett were winners of a prize during the SBE Membership Meeting.



There was a full house at the membership meeting.



SBE member, Jeff Schick of Chapter 15 attended the membership meeting and came away with the big prize, a \$300 Fry's Electronics gift card, presented to him by SBE executive director, John Poray.



Our thanks to these companies for serving as daily SBE booth sponsors.



Winners of the 2013 NAB Engineering Achievement Awards: Leonard Charles, Jay Adrick and Frank Foti, pose with SBE president Ralph Hogan (l). All three are members of the SBE.



Five of the NAB Education Foundation engineering apprentices enjoy the NAB Technology Luncheon with some of the members of the SBE National Board of Directors.

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EDUCATION UPDATE

by Wayne Pecena, CPBE, 8-VSB, AMD, DRB, CBNE
SBE Education Committee Chairman
w-pecena@tamu.edu

Learning opportunities await you

The Society of Broadcast Engineers provides a variety of professional development opportunities to the membership delivered by a variety of mediums. Educational programs are a cornerstone of the services provided by the SBE. Programs available include online live and on-demand webinars, online SBE University courses, and in-person presentations held at different venues throughout the country.

The Ennes Workshop held each year at the NAB annual show is one of the premier professional development offerings of the SBE in cooperation with the NAB. Those who attended the 18th annual Ennes Workshop at NAB 2013 were given insight into the future of content delivery during a full day program with the theme of "Alternate Content Delivery". The opening tutorial focused on Streaming Media Technology by Jan Ozer was an incredible 2-hour crash course into the current and future technology that makes streaming media delivery possible to a variety of consumer devices. Additional presentations throughout the day focused on topics ranging from Ethernet AV bridging, to internet content delivery, to the consumption of media by the consumer, to multicasting in a unicast world. A Saturday afternoon presentation by James O'Neal of TV Technology Magazine was of special note. After several hours of looking at the future and where broadcast engineering is headed, James brought us back in time by meeting "Granville Klink," where an overview of one of the world's largest private collections of broadcast engineering equipment and memorabilia was presented.

Ennes Workshops are also held outside the NAB Show at venues around the country. SBE Chapter 11 of Boston will host a program on November 7, in Worcester, Mass. It's not too late to bring an Ennes Workshop to your chapter or state broadcast association meeting this fall. The workshops feature multiple topics and speakers that provide television and radio engineers with the latest information in broadcast technology.

The audience the SBE targets for its programs range from the beginner in the field to programs focused on furthering the knowledge of the seasoned broadcast engineer. Be sure to visit the SBE website and take advantage of the numerous programs

offered, including over 25 on-demand webinars available online, on your schedule!

FEATURED WEBINAR – Free for SBE Members!

Broadcasters have needed and asked the FCC for more channels and bandwidth for years now. We need more! With the growth of HD audio and video, the need for reliable STL's continues to grow every year.

Finally, the FCC has opened up new frequencies that can be used for reliable STL's. In August of 2011, the FCC abolished the last link rule opening up Part 101 licensed frequencies to broadcasters. These frequencies, like 950 MHz, 7 GHz, and 13 GHz are licensed frequencies but with the ability to run high speed bi-directional data rates. These frequencies have the ability to provide up to a gigabit of bi-directional throughput to your transmission sites.

We invite you to join us for the upcoming Webinar by SBE on "IP Microwave STL's." This webinar, which takes place June 27, will inform you on these new licensed frequencies and the design dos and don'ts. The webinar also looks at a live path profile showing what can be done today. Thank you to SBE Sustaining Member DoubleRadius for making it possible to offer this webinar at no cost to our members. The cost for non-members is \$49.



SBE Leadership Development Course

The 2013 SBE Leadership Development Course returns to Atlanta this summer. This highly interactive and unique professional development program focuses upon preparing the broadcast engineer for leadership and management roles in the industry. The 2013 course takes place Tuesday-Thursday, August 13-15 at the Hyatt Place Atlanta Airport South in Atlanta, Ga.

Featuring Purdue University Professor Rodney Vandever, this three-day highly interactive course challenges you to refine your leadership skills as you better understand and improve how you interact with others. Subjects include: understanding the dynamics of leadership, a leadership behavioral style assessment,

communications, effective motivation techniques, building winning teams and much more. The course is filled with exercises, including challenging workplace scenarios in an effort to help students work through difficult interpersonal situations.

Vandever is Professor of Organizational Leadership and Supervision at Purdue University. He brings more than thirty years of industrial and business experience in management positions in human resources, training and development and manufacturing. He has been a professor at Purdue since 1994, teaching classes in human behavior in organizations, leadership philosophy and leadership strategies for quality and productivity. He also has his own business, VanTECH Training. This will be Vandever's fourth year teaching this course for the SBE.

And finally, how can you help? The education committee is comprised of your peer SBE members that volunteer their time, knowledge, and expertise to identify education needs of the membership and industry, determine and review content of programs offered, and select those best qualified to deliver the desired content. Let the education committee know your professional development interests and needs. Suggest presenters that you feel have expertise and knowledge to share with the industry. Volunteer your knowledge and expertise by providing education events to the SBE membership. Remember, the SBE is your Society!

For more information on any SBE Education program, contact Kimberly Kissel, kkissel@sbe.org Education Director at the national SBE office.



Granville Klink at WIBG Radio, Elkins Park, Pa. in 1932. Photo provided by James O'Neal.

FELLOW from page 1

Mountain Section of the Society of Motion Picture and Television Engineers. In Denver, the two organizations work together closely. Jim has developed monthly technical presentations and executed the chapter's signature program, the annual technical Boot Camp.

Wilkins is employed by the Alabama Broadcasters Association, where he has developed a program to support new EAS equipment integration for ABA member stations. Recognizing a need to develop new

technical personnel for broadcast stations in his state, he developed and created training classes on radio and television broadcast engineering, IT and master control. Wilkins' career in broadcasting began in 1961, and among the many volunteer roles he has had, he's a past chairman of Chapter 118 in Montgomery.

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.

Seventy-four members have now been honored with the Fellow rank in the society's 49 year history.

The three recipients will be recognized for their election to Fellow during the SBE National Awards Dinner on October 30, 2013 in Indianapolis, Ind. The dinner is part of the annual SBE National Meeting, held in conjunction with the Indiana Broadcasters Association Engineering/IT Conference. Information about the SBE National Meeting program and the IBA conference is available at the SBE website.



FOCUS ON SBE

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

SBE Broadcast Engineering Handbook slated for 2015 release

The SBE has teamed up with McGraw-Hill Publishing and industry author, Jerry Whitaker, in a project to develop and publish a new book, "The SBE Broadcast Engineering Handbook." This should be a landmark publication when it is released, which is expected to be in time for the 2015 NAB Show.

Jerry Whitaker, who is the vice president of standards development with the ATSC, has been a well recognized author on radio and television technical topics for more than 30 years. His background also includes a stint as editor of Broadcast Engineering magazine. For this new book, he'll serve as the lead author, and chair an SBE editorial advisory board (EAB) consisting of experts from the broadcast engineering industry. Andrea Cummis, CBT, CTO, a member of the SBE Board of Directors and chair of our publications committee, is leading the effort from the SBE side.

The handbook will number roughly 1,000 pages and include a wide range of chapters covering the broad scope of technical radio and television topics. In addition to Whitaker, other industry subject matter experts will author the book's chapters, with content being determined by Whitaker and the EAB. The McGraw-Hill Professional division plans to publish the book in both hard cover and digital form.

The SBE is very pleased to be working with Jerry Whitaker and McGraw-Hill on this important project. Whitaker is no stranger to the SBE, having been a member since 1980. He served on the national board for several years and as vice president in 1992. He was heavily involved in the early SBE national conventions in the late 80's and early 90's. McGraw-Hill is one of the world's largest and most respected publishers. SBE has carried technical books published by McGraw-

Hill in our book store for more than 20 years. This is a great opportunity for the SBE to be involved in a project of this magnitude. We eagerly look forward to the handbook's release in 2015



Jerry Whitaker



Andrea Cummis

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Society of Broadcast Engineers, Inc. 2012 Audited Financial Statements

Combined Statement of Assets, Liabilities and Net Assets - December 31, 2012

ASSETS

Cash and cash equivalents	\$75,183
Investments	\$962,365
Office Equipment	\$25,717
Intangible Assets	\$4,820
Total Assets:	\$1,068,085

LIABILITIES and NET ASSETS

LIABILITIES	\$0
NET ASSETS:	\$1,068,085
TOTAL LIABILITIES & NET ASSETS	\$1,068,085

2012 SBE Audited Revenue & Expense Statement*

INCOME:

Membership Fees & Support	\$359,156
National Meeting	\$39,875
Certification	\$65,772
Publications	\$74,414
Education Services	\$85,843
Interest & Dividend Income	\$26,050
Net Realized/Unrealized	
Gain (Loss) from Investments	\$56,164
Miscellaneous Income	\$10,991
Total Income:	\$718,265

EXPENSES:

Member Services	\$318,791
Chapter Rebates	\$37,226
National Meeting	\$27,703
Publications/Communications	\$80,626
Certification	\$77,897
Education	\$101,958
Administration	\$81,668
Depreciation/Amortization	\$15,879
Total Expenses:	\$741,748

CHANGE IN NET ASSETS:	\$23,483
NET ASSETS 12/31/2011	\$1,091,568
NET ASSETS 12/31/2012:	\$1,068,085

* Audited statement reflects modified cash accounting method. Investments are listed at market value.

WELCOME TO THE SBE

NEW MEMBERS

Tim M. Koza - Saugus, CA	Donald L. Root - Jenks, OK
Steven Mena - Tucson, AZ	Andrew M. Ruoff - Lindenwold, NJ
Randy R. Suchy - New Berlin, WI	Nic S. Serack - Caldwell, ID
Timothy M. Dime - Terryville, CT	Steven M. Skullr - Burbank, CA
Steven Allen - Winona Lake, IN	Stephen Delaney - Little Rock, AR
Anthony J. Pizzo - FPO, AE	David E. Donaldson - Waterville, OH
Ruben J. Alvarez - Fresno, CA	Gabriel M. Rosas - Inglewood, CA
Peter Dilorio - Yonkers, NY	Gregory C. Tankersley - Baltimore, MD
Maria S. Dudzak - Ketchikan, AK	Erik Costa - Bowling Green, KY
Clayton D. Heeren - Sioux Falls, SD	Tim R. Dimas - Humble, TX
Christopher Maylett - Fairfax, VA	London C. Fortenberry - Las Vegas, NV
Carey W. McDill - Birmingham, AL	Donald G. Francis - Sugarloaf, PA
Brian W. Poellnitz - Tuscaloosa, AL	Iris L. Herbert - Houston, TX
Santiago E. Rodriguez - Doral, FL	Dan Makinster - Morgan Hill, CA
Scott Shepperd - Dothan, AL	Timothy A. Meier - Bakersfield, CA
Charles E. Tate - Birmingham, AL	Martin Otalike - Abuja, FCI, Nigeria
Christopher T. Wolford - Pearland, TX	Erik Sheldon - Humble, TX
Raymond M. Mansfield - Pembroke Pines, FL	Dong Sun - Jinan, Shandong, China
Andrew Darcy - Encinitas, CA	David J. Toon - Marquette Heights, IL
Michael F. Budronis - Nashville, TN	Andy Huynh - San Gabriel, CA
Charles Gawlik - San Diego, CA	Steve J. Laskowsky - Bethany, OK
Joseph Marno - Dumfries, VA	Michael J. Raffaele, Jr. - Waldwick, NJ
Scott Durgin - Middletown, RI	Robin Shahid - Ashland, MA
Rich Frantz - Reading, PA	Scott M. Parker - Midlothian, VA
James L. Robinson - Dayton, OH	Gustavo A. Barreto - Miramar, FL
Daniel J. Gonzales - Moorpark, CA	Charles G. Kemp - Nassau, Bahamas
Marisabel Santana Mercado - Alexandria, VA	Cliff M. Obrist - Buffalo, NY
Gary Trenda - Menasha, WI	Jose N. Rodriguez - FPO, AP
George Warren - Elkridge, MD	Jaclyn Wilson - Ocala, FL
Gary L. Combs - Maryville, TN	Joseph R. Glessner - Bridgeton, NJ
Brandon D. Damon - Grand Rapids, MI	Joseph C. Norris - Fulton, MS
Brandon K. Gabbard - Tulsa, OK	Jemal D. Royster - Stamford, CT
Gene A. Gorczyca - Grand Rapids, MI	Robert Seutter - Westlake Village, CA
Davin E. Harsila - Grand Rapids, MI	Brian S. Wood - Provo, UT
Ferdinand Montalvo - Binghamton, NY	

NEW STUDENT MEMBERS

De'Moi A. Lettsume - St. Thomas, VI	Christopher G. Barajas - San Francisco, CA
Jumaane Wilks - Boca Raton, FL	Edick Safarians - Burbank, CA

NEW ASSOCIATE MEMBERS

Christy Lynn I. White - Hackett's Cove, Nova Scotia, Canada

NEW YOUTH MEMBERS

Michael J. Warren - Lancaster, PA

RETURNING SENIOR MEMBERS

Nicholas Cap - Coraopolis, PA

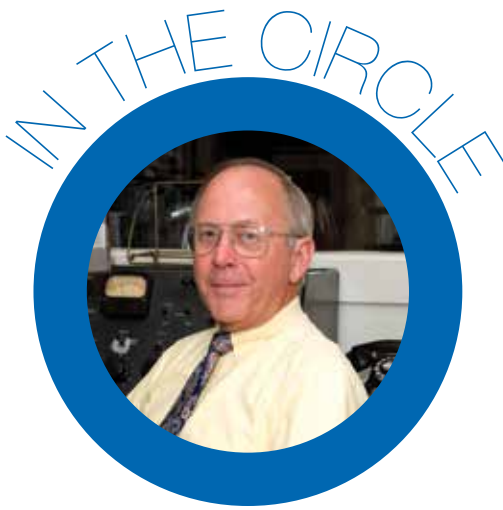
RETURNING MEMBERS

William E. McBride - Martinsburg, WI	Andrew C. Stern - San Francisco, CA
Jose Toscano Hoyos - Miami, FL	Elliott N. Cristofoli - Oakville, Ontario, Canada
Jeff L. Heldman - McMurray, PA	Adolph A. Garza - San Angelo, TX
Robert W. Scott - Corpus Christi, TX	Philip Brooks - Oklahoma City, OK
Emeric Feldmar - Shrewsbury, MA	Thomas L. Miller - Fort Belvoir, VA
Bob Pectelidis - Glen Allen, VA	James H. Pound, III - Lawrenceville, GA
Michael A. Friedman - Richmond, VA	Gerald L. Weaver - Broken Arrow, OK
Jack W. Thouvenell - Saint Joseph, MO	Raymond C. Baca - Modesto, CA
Dale W. Holden - Mobile, AL	Daniel T. Olewine - Clifton, VA
Gregory A. Benson - Miami, FL	Gregory A. Gade - Bennington, NE
Fernando JG Moreira - Sao Jose dos Campos - SP, Brazil	Kyle Burnett - Oklahoma City, OK
Gary C. Rogers - Marietta, GA	Steven W. Lewis - Oklahoma City, OK
Randy S. McCann - Martinsburg, WV	Craig M. Claytor - San Diego, CA
Marshall A. Rice - Troy, IL	Christopher J. Ernst - Fort Irwin, CA
Phillip B. Powell - Riverview, FL	Gail M. Pineda - Moreno Valley, CA
Adam J. Lancaster - Bakersfield, CA	Stephen C. Williams - Manitou Springs, CO
Stephen Jaskela - North Andover, MA	Mitchell L. Janklow - Westfield, NJ
Naveed Aslam - Peachtree City, GA	Bob Fitzhugh - Gold River, CA

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- Advanced Broadcast Solutions • 2012**
Arco Groenenberg (206) 870-0244
Systems Integrator
- Advanced Electronic Services (AES) • 2012**
Eda Gray (536) 719-0755 Ext. 142
Electronic, Hydraulic, Motor Repair
- American Tower Corporation • 2000**
Peter A. Starke (781) 461-6780
Development/Construction/Management
- Anton/Bauer Inc. • 2004**
Kyle Dann (203) 929-1100
Manufacturer Portable Power Systems
- ATGi • 2012**
Anthony Graves (480) 844-8501
Satellite Communications Solutions Provider
- Audemat-Worldcast Systems Inc. • 2000**
Christophe Poulain (305) 249-3110
Control Manufacturer
- AVCOM of Virginia, Inc. • 2010**
Warren McElfresh (804) 794-2500 ext. 312
Spectrum Analyzers
- Avid Technology • 2011**
Bill Barton (978) 640-4020
Broadcast Products and Services
- Belden Electronic Division • 1991**
Steve Lampen (800) 235-3361
Cable and Connectivity
- Bexel • 2009**
John Root (818) 565-4314; Calrec
Broadcast and Audio Consoles
- Blackmagic Design • 2012**
Terry Frechette (978) 337-0991
Switchers, Digital Cameras, Routers
- Blonder Tongue Laboratories, Inc. • 2013**
Jeff Smith (512) 238-6973
Encoders, Digital CATV, Edge/QAM/IP
- Boxx Communications • 2012**
Mark Walker (310) 287-1285
HD Wireless Video Transmission
- Bracke Manufacturing LLC • 2012**
Patra Largent (949) 756-1600
RF & Microwave Components
- Broadcast Electronics Inc. • 1978**
Tom Beck (217) 224-9600
Radio Equipment Manufacturer
- Broadcast Engineering Magazine • 1984**
Bradley L. Dick (913) 341-1300
Journal of the Broadcast Industry
- Broadcast Microwave Services Inc. • 1997**
Jim Kubit (805) 581-4566
Manufacturer, Transmitters, Receivers, Antenna Systems
- 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
- 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
- Chyron Corporation • 2013**
Kieran Foster (905) 330-8902
Broadcast Graphics Solutions
- Comrex Corporation • 1997**
Chris Crump (978) 784-1776
Audio CODECS & Telephone Interface Products
- Comsearch • 2004**
Tim Hardy (703) 726-5651
Frequency Coordination Services
- Content & Communications World (CCW) • 2006**
Michael Driscoll (203) 371-6322
HD World, 3D World and SATCON
- Continental Electronics Corporation • 1976**
Michael Troje (800) 733-5011
AM & FM IBOC Transmitters
- Dialight Corporation • 2006**
US Headquarters (732) 919-3119
FAA Obstruction Lighting, L.E.D. Based
- Dielectric Communications • 1995**
Joe Zuba (609) 256-8190
or Matt Leland (207) 655-8139
TV & FM Broadcast 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
- DSI RF Systems, Inc. • 2010**
Judy Mueller (732) 563-1144
RF Service/Installation/Products
- du Treil, Lundin & Rackley, Inc. • 1985**
Jeff Reynolds (941) 329-6000
Consulting Engineers
- DVEO - Division of Computer Modules Inc. • 2011**
Laszlo Zoltan (858) 613-1818
Everything About Transport Streams
- e2v • 1997**
Mark Strohecker (914) 593-6831
Electronic Components, SATCom Amplifiers
- Econco • 1980**
Debbie Storz (800) 532-6626 or (530) 662-7553
New & Rebuilt Transmitting Tubes
- Elenos USA • 2012**
(305) 799-5571
Energy Efficient FM Transmitters
- Elektronika America Inc. • 2010**
Maria Quintero (305) 592-4506
High Efficiency FM/TV Transmitter & Exciters
- ENCO Systems Inc. • 2003**
Don Backus (800) 362-6797
Digital Audio Automation & Delivery
- ERI - Electronics Research • 1990**
David White (812) 925-6000
Broadcast Antennas, Transmission Line, Filters/
Combiners, Towers and Services
- Federal Communications Compliance LLC. • 2012**
Jim Purther (202) 670-4322
FCC Public File Compliance
- Florical Systems • 2008**
Ashley Condon (352) 372-8326
Television Broadcast Automation
- Fujinon, Inc. • 1986**
Thom Calabro (973) 633-5600
Broadcast & Communications Products
- Gecco International/General Cable • 1995**
Joe Zajac (847) 795-9555
Audio, Video Cable Products
- Graham Brock, Inc. • 2012**
Marilyn Matheny (912) 638-8028
Technical Consultation - Radio/TV
- Grass Valley • 2000**
Andy Jackson (404) 929-5000
TV/Film Production & Broadcast Professionals
- Harris Corporation • 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
- Henry Engineering • 2011**
Hank Landsberg (562) 493-3589
"We Build Solutions"
- High Resolution Systems • 2011**
Drew Taylor (888) 742-7690 ext. 108
Systems and Show Control
- Image Video • 1997**
Zach Wilkie (416) 750-8872 ext. 228
Under Monitor Tally Display Systems, Monitor
Design and Manufacture Broadcast Equipment
- Inovonics Inc. • 2012**
Lukas Hurwitz (831) 458-0552
Radio Broadcast Equipment
- International Datacasting Corporation • 2012**
Rudi Polednik (613) 596-4120 ext. 2222
Media-aware Content Delivery
- JAMPRO Antennas Inc. • 2011**
Alex Perchevitch (916) 383-1177
DTV/DVBT & HD Radio-IBOC Solutions
- Ka You Systems • 2011**
George Gimourginas (301) 585-4302
Audio, Video, IP - Satellite
- Kathrein Inc., Scala Division • 1985**
Michael W. Bach (541) 779-6500
Antennas for Broadcasting & Communications
- L-3 Communications Electron Devices • 2003**
Steve Bliak (570) 326-3561, ext. 229
Tubes, Power
- Latakoo Inc. • 2011**
Rod Taylor (512) 825-8709
Internet Video Distribution
- LBA Technology Inc. • 2002**
Javier Castillo (252) 757-0279
AM/MW Antenna Equipment & Systems
- Lincoln Financial Media • 2007**
Barry Thomas (404) 239-7211
Media Group Owner
- LYNX Technik • 2007**
Steve Russell (661) 251-8600
Broadcast Terminal Equipment Manufacturer
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Andrew Barth (845) 246-3036
Audio, Video, AV Broadcast Supply
- Maxell Corporation of America • 1991**
Patricia Byrne (973) 653-2423
Data/Broadcast Video Media
- Micronet Communications Inc. • 2005**
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Coordination Services / Frequency Planning
- Microwave Video Systems • 2011**
Warren J. Parece (781) 665-6600
Microwave Equipment Rental, Sales & Service
- Middle Atlantic Products • 2005**
David Amoscatto (973) 839-1011
Equipment, Mounting, Solutions
- MoreCom Inc. • 2009**
Kyle Moorehead (763) 533-5535
Networking & AV Construction
- Myat, Inc. • 2013**
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Transmission Line, Filters, Combiners
- Moseley Associates Inc. • 1977**
Dave Chancey (805) 968-9621
Digital STLs AM/FM/TV
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(202) 429-5340
Industry Trade Association
- National Football League • 1999**
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Game Day Coordination Operations
- Nautel Inc. • 2002**
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Radio Broadcast Transmitter Manufacturer
- NewBay Media • 2013**
Thomas Leader (212) 378-0438
Publisher of Broadcast Magazine
- Nemal Electronics Int'l Inc. • 2011**
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Cables, Connectors, Assemblies and Fiber Optic
- Neutrik USA, Inc. • 2012**
Kathy Hall (704) 972-3050
Ruggedized Optical Fiber Systems
- NuComm/RF Central • 2009**
Don Hoeler (908) 852-3700 ext. 3110
Digital and Analog Video Microwave Systems
- Orban • 2011**
David Rusch (480) 403-8300
Audio Processing AMFMTV
- Panasonic Solutions Company • 1985**
Joe Facchini (201) 392-6183
Professional Broadcast Equipment
- Pasternack Enterprises • 2001**
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Coax & Fiber Products
- Potomac Instruments Inc. • 2012**
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RF Measurement Equipment Manufacturer
- ProAudio.com- A Crouse-Kimzey Co. • 2008**
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Proaudio Broadcast Equipment Distributor
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- Propagation Systems Inc. - PSI • 2010**
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Quality Broadcast Antenna Systems
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AM, FM and HD STLs, Copper & Optical
- Qualis Audio Inc. • 2011**
Douglas Oordon (310) 621-4448
Audio and Loudness Monitoring
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Paul Campagna (724) 349-1412
State-of-the-art RF Hardware Solutions
- QVC • 2011**
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Multimedia Retailer
- RCS • 2003**
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Audio and Video Content Management
- RDL • 2004**
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Audio, Video, Control & Test Equipment Manufacturer
- RF Specialties Group • 2008**
www.rfspecialties.com
Everything from the Microphone to the Antenna
- Richland Towers • 2001**
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Tower Owner/Management
- Rohde & Schwarz • 2003**
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Broadcast Transmitters, Test & Measurement
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DTV System Integrator
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Manufacturer, Television Broadcast Equipment
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Emergency Alert Systems Products
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Broadcast Equipment- New/Used
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Broadcast Transmitter & ATSC Mobile
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Tower/Antenna Erections
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Dale Ladner 888-SHIVELY
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Microphones, Wireless Systems, Headsets
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Routers, Mixers, Consoles, Intercoms
- Signet • 2008**
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Broadcast Equipment Support Sales
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Signiant Content Delivery Software
- Snell Inc. • 1995**
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Video Equipment Manufacturer
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- Technostrobe • 2009**
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Video Test Equipment Manufacturer
- 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 RF Licensing Company • 2003**
Steven Slocum (888) 373-4832
FCC Broadcast Auxiliary Licensing Services
- TFT • 2011**
Darryl E. Parker (408) 943-9323
STL, EAS/CAP, RF Monitors
- The Durst Organization - 4 Times Square • 2004**
John M. Lyons, CPBE (212) 997-5508
TV/FM/Microwave Tower Site
- The Switch • 2011**
Peter Hartz (323) 645-8011
Fiber Transmission Provider
- Tielne The Codec Company • 2003**
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POTS, ISDN, Codecs & AV Products
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Madison Batt (425) 640-2266
Tower Engineering Analysis & Design
- Trilithic • 2011**
Tom Cridlin (317) 895-3600
Emergency Alert Equipment (EAS)
- Unimar Inc. • 2001**
Thad Fink (315) 699-4400 ext. 307 or (813) 943-4322
Tower Obstruction Lighting Designer,
Manufacturer, Distributor
- Vislink Broadcast • 1991**
Mark Tommey (978) 671-5700
Video Microwave Systems
- Voice of America • 2011**
Richard P. Barnes, PhD, CBRE (202) 203-4848
- Ward-Beck Systems Ltd. • 2004**
Michael Jordan (416) 335-5999
Metering, Monitoring, Distribution, Conversion
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Members With 25 or More Years of Membership
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James E. O'Neal, CPBE, CBNT

is technology editor for TV Technology magazine in Alexandria, Va., following a 37-year career as a broadcast engineer. He has been a member of the SBE since 1970 and holds the Certified Professional Broadcast Engineer and Certified Broadcast Networking Technologist certifications from the SBE. He's a member of Chapter 37 in Washington, D.C.

What got you started in the business?:

I became interested in broadcasting when I was little more than a toddler. I recall hearing a man with a nice voice on my grandmother's bedside radio saying, "This is so and so coming to you from Radio City in New York." I knew that New York was a long way off and decided then and there that I had to find out how this was possible.

Who has been a mentor to you?: I actually had three mentors. My first was one of dad's golfing buddies, Henry Fenwick. He was wire chief of the local telephone company and encouraged my interest in radio and electronics. I built my first crystal radio with parts supplied by the Bell System, thanks to Henry. Later, junior high and beyond, Paul Klipsch, of Klipschorn hi-fi loudspeaker fame, took me under his wing. He was well versed in many other areas of engineering, including RF. I would also have to name Haskell Jones, manager of our little town's only commercial radio station. On a great leap of faith, he put me to work on a paid basis at the station when I was about 14. I thought then I should be paying him for the privilege of working at a real radio station.

What are you best known for?: The one I'll probably be remembered for most is upsetting the wonderful little story about how on Christmas Eve, 1906, one Reginald A. Fessenden singlehandedly did the world's first radio broadcast. I set out to write a 100th anniversary commemorative piece about it for Radio World magazine and to my very great surprise, found that there was really nothing to substantiate the story. Some of the histories, at least accounts I see on the Internet and one new book, have begun to reflect my findings. I still believe that Mr. Fessenden did the first broadcast, but it wasn't on Christmas Eve and the circumstances were not what the history books reported.

What do you value most about your involvement with SBE?: When I joined SBE, I was just starting out in the television broadcast engineering business and was looking for answers to a lot of technical questions. I figured (correctly) that membership would be a foot in the door. More than 40 years later, I still view the organization as a great resource for technical knowledge through its various programs and the opportunity to network with others.

When I'm not working: I serve on the board of directors of the National Capital Radio and Television Museum and I also collect and restore radio and television equipment, both consumer and broadcast. I've been working for several years constructing a working replica of the little hometown radio station I started with back in the early 1960's, KXAR. This includes control room, studio, technical equipment area and lobby. Most of the gear is authentic late 1940's period and it's all there, from RCA velocity mics to the Collins transmitter and GR monitors; there's even a Motorola CONLERAD receiver and an AP Teletype machine.

Pictured here: James O'Neal is seated in the control room of his replication of the first broadcast station at which he was employed. The station, KXAR, went on the air in late 1947 and the RCA 74 mic and Collins 212B audio console visible in the photograph were part of the original equipment package.

CHAPTER SPOTLIGHT

Chapter 15, New York City

The SBE chapter in the United States' number one broadcast market covers the entire New York City metro area. This includes the five boroughs, all of Long Island and Westchester County in New York State, central and northern New Jersey and southwestern Connecticut.

Jeff Smith, CPBE, chairman of SBE 15, as he likes to call it, says that the chapter has a meeting season that runs September through May, meeting on the third Thursday of the month. The chapter holds both evening and afternoon meetings. Smith says the key to keeping the chapter successful is by keeping its membership involved.

Smith says members are attracted to the chapter's meetings in part due to the variety of topics presented that are current and on the mind of the local membership. The chapter also offers lunch or dinner at no cost to the members, which Smith says is a big plus. SBE 15 is made up of students and professionals in all fields of media and has members in manufacturing, radio, television, production and film.

Smith said a recent meeting that was particularly successful was this past March, which was a joint meeting held annually with the Society of Motion Picture and Television Engineers, New York City Section. The program was on fiber for broadcasters,

a topic of much interest to broadcast engineers in the area, according to Smith. Joint meetings, be it with SMPTE or the Audio Engineering Society, typically draw more than 100 people, making them great networking as well as educational events.

Smith says the chapter has been working on increasing the percentage of members who hold SBE certification. One way they do this is by having the chapter pay the complete cost for SBE certification and SBE CertPreview for any active SBE 15 member.

Smith says that SBE 15 members have fantastic networking and educational opportunities. "The New York City broadcast engineering community is very tight knit and our meetings are equally a social event as much as an educational event," says Smith. He says, "Our members also benefit from getting to see some of the latest technology first. Many equipment manufacturers and vendors jump at the opportunity to show off to the largest media market in America."

To communicate with members, SBE 15 maintains three email lists; a general membership list and two frequency coordination lists. Members actively use all of them to discuss various topics and issues, as well as to post some comic relief. SBE 15 also maintains an active Facebook page.

"SBE 15 has offered Ennes Workshops, RF Safety Classes, and all our meetings try to be more educational rather than sales driven," Smith said and went on to say, "SBE 15 donated our 2012 rebate back to the SBE. Our chapter is lucky enough to be financially stable, due in large part to the support of advertisers and meeting sponsors."



Members of Chapter 15 in New York City gather for a meeting at CBS Radio.

ENNES

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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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MEMBERS ON THE MOVE

Ron Adair is now director of technology and operations at Gannett Broadcasting's KXTV in Sacramento, Calif.

Michael Englehaupt, CBT has been named chief technology officer for KQED-FM in San Francisco, Calif.

John Humphrey, CPBE of Valencia, Pa. is now director of Business Development, Technical Services for multimedia consulting, design and integration company, Communications Engineering, Inc.

Tom Ray, CPBE, AMD, DRB of New Windsor, N.Y. has opened a new consulting firm, Tom Ray Broadcast Consulting.

Jeff Smith, CPBE is now Syndication Studio Manager at Clear Channel Communications, New York, N.Y.

Have you recently made an employment change or received a promotion? Let your fellow SBE members know about it. Send your news to jporay@sbe.org.

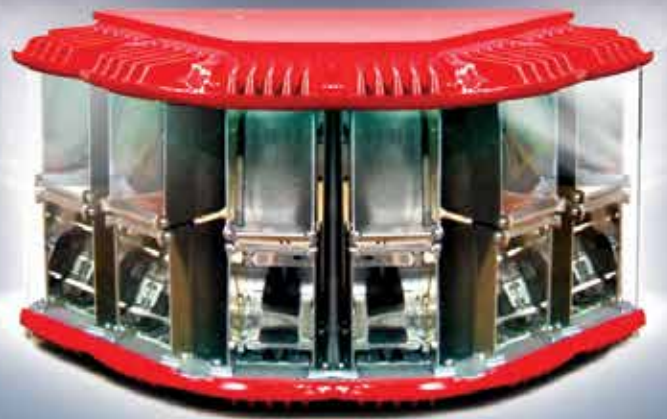


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