

THE Signal

Bimonthly Publication of the Society of Broadcast Engineers



The Association for
Broadcast and
Multimedia Professionals

www.sbe.org

Volume 30, Issue 2 • April 2017

SBE Plans Multiple Events for 2017 NAB Show

The NAB Show is just days away. As you plan how you will spend your time at the convention, be sure you include the many SBE events on your convention calendar. While the Ennes Workshop launches the convention on Saturday, the highlight for SBE members is the annual Membership Meeting, which will be followed by a reception. The Membership Meeting will be held on Tuesday, April 25, at 5:15 p.m. in room N256. The Membership Meeting brings you up to date on all the SBE activities and programs, and it includes a milestone-service recognition of SBE chapter certification chairs, and updates on the society's plans, programs and government relations efforts. Everyone attending will be eligible to win prizes, including a Blackmagic Design ATEM Television Studio HD (courtesy of the Membership Meeting sponsor Blackmagic Design), a \$250 gift card for Fry's Electronics and restaurant gift cards.

You'll want to get to the meeting early as well, because the first 125 people in line will receive an SBE-logoed stylus.

The Membership Reception starts immediately after the meeting at 6:15 p.m. Light snacks and drinks are possible from the generous support of several Sustaining Member sponsors. They are listed on page 8. There will also be multiple prize drawings at the reception thanks to Gold sponsor EMP Solutions.

A big change for the SBE this year is that the SBE booth has moved to the North Hall meeting room hallway. The official booth number is NL1. It's near room N262.

Check the complete event schedule on page 8 of this issue, and also in the SBE Sustaining Member Online Resource Guide and NAB Show Exhibitor Listings.

You'll find details for several committee meetings, the board of directors meeting, SBE certification exams, and the daily booth prize drawing.

See you in Las Vegas!



The Membership Meeting at the 2016 NAB Show

Participate in the 2017 Compensation Survey

The SBE is conducting its second (and ongoing) compensation survey now. The SBE launched this annual effort to provide practical information to SBE members about individual compensation (salary and benefits) based on the type of broadcast or multimedia involvement (beyond just radio and TV), market size and years of experience. SBE members will have access to the full report.

The 2016 survey enjoyed a successful response rate, but as with any survey, a larger sample pool will provide more reliable results.

We encourage every SBE member to participate to provide a large sample base of responses. All responses are anonymous. With your help we can provide a useful and practical resource to SBE members. Find the survey link in email communications and on the SBE website.

Highlights of the survey will be reported in

The Signal. The full report will be available for download to members from the SBE website.

IN THIS ISSUE

- 4 Letter from the President
- 5 Education Summit Takeaways
- 6 Cert Exam Process
- 8 SBE @ The NAB Show
- 10 Satellite Coordination
- 12 New Satellite for Radio
- 15 Board of Directors Changes





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

SBE Membership Drive Runs Through May 1

The SBE Membership Drive began on March 1, and it carries the theme Professional Development Through Membership. The SBE is the only organization that is devoted to the advancement of all levels and types of broadcast engineering, and SBE membership is the best way to take full advantage of all the organization has to offer.

Recruit a new member during the Drive, and you will be entered into the member drive drawing for prizes donated from our Sustaining Members. If you recruit a new Sustaining Member, you'll earn five entries into the prize drawing. Prizes include logo items, books and more. The grand prize is airfare and hotel to attend the SBE National Meeting held in conjunction with the 2017 Rocky Mountain Audio Video Expo (AVX) in Denver, Oct. 25-26.



And as a further bonus, for every new member you sponsor you will receive \$5 off your 2018 dues (up to \$25).

Full details are on the SBE website. Follow the link on the home page.

Who will be the next Robert W. Flanders SBE Engineer of the Year Award recipient?



It could be you. It could be someone you nominate.

The SBE National Awards Program is now accepting nominations for chapter and individual awards to recognize the efforts of SBE members and chapters for their contributions to the SBE.

Full details and the nomination forms are available online.

Don't wait. Nominate a member or a chapter today.

sbe.org/awards



Certification Question

Answer on page 6

The FCC rules regarding unavoidable under power operation for broadcast stations specify:

A. Notice must be given to the FCC on the 10th consecutive day of under power operation, and Special Temporary Authority must be obtained if under power operation extends beyond thirty consecutive days.
B. No notice to the FCC is required.

C. Notice must be given to the FCC on the 30th consecutive day of the under power operation and at monthly intervals thereafter.
D. Notice must be given to the FCC on the 15th consecutive day. No further action is required.

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LETTER FROM THE PRESIDENT

By Jerry Massey, CPBE, 8-VSB, AMD, DRB, CBNT
SBE President
jmassey@sbe.org

New Webinars, New Locations

I am really excited about the response to one of our latest webinars RF101: Broadcast Terrestrial Transmission Course. This is an eight-part course presented by Dennis Baldrige, CPBE, 8-VSB, AMD, DRB, CBNT, that runs in live sessions through September, and each module is then available on-demand. I encourage you to register to take this course as it presents the basics of RF transmission. It's a fantastic course for the new engineer

and is a refresher for us older engineers. This course started in February, and we have had approximately 100 participants on each webinar, so that tells you that the SBE is helping to train and refresh engineers in this specialized field. You can sign up for the entire course or just individual webinars that interest you. As always, you can find out more information on the SBE website at sbe.org. It is well worth your time and money to check out this course.

RF101 is not the only new course we offer. Wayne Pecena, CPBE, 8-VSB, AMD, DRB, CBNE, is conducting a course titled Introduction to IP Networking and the Physical Layer. This is a five-part webinar to brush up and become acquainted to IP networking. Additional information is also available on the SBE website so check it out and sign up!

To the NAB Show

We are just a short time away from the NAB Show, and your SBE will be there. There are some changes from past years you will want to keep in mind. The NAB Broadcast Engineering Conference has

been renamed the Broadcast Engineering and Information Technology Conference (BEITC). The BEITC session rooms have also moved to the west end of the North Hall second floor. The Ennes Workshop on Saturday will be in N262-264, and the rest of the BEITC (Sunday through Thursday) will be in N256, N258 and N260. The SBE booth is also moving to stay close to the conference location. We will be near the escalators opposite the BEITC session room doors on the North Hall second floor in the lobby (Booth NL1). As in years past, the SBE Booth will be stocked with publications you can purchase, and ready for you to pay your dues and apply to be SBE certified! Please stop by so we can meet you personally! A member of the Board of Directors or an officer will be there to greet you as will members of the national SBE staff.

Also, please attend the SBE Membership Meeting on Tuesday afternoon, room N256 from 5:15 p.m. to 6:15 p.m. Following the national meeting will be the SBE reception and this is a time to meet old friends and mingle. I do look forward to seeing and meeting each of you!

Not Too Late to Renew Your SBE Membership

The April 1 deadline has come and gone, but it's not too late to renew your membership in the SBE and retain your membership benefits. Those in the Member, Senior, Student, Associate and Fellow membership categories may 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. The renewing member will receive an automated email message confirming the receipt of the payment.

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 (SBE, 9102 N. Meridian Street, Suite 150, Indianapolis, IN 46260) or by fax at 317-846-9120.

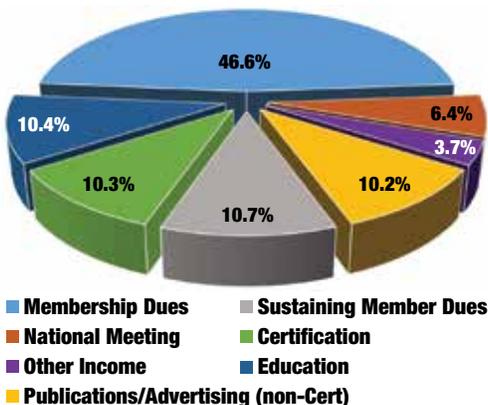
Members with questions about their renewal, or those who did not receive a renewal reminder in the mail, may contact Scott Jones at the SBE National Office at 317-846-9000 or kjones@sbe.org.

2016 SBE Financial Year in Review

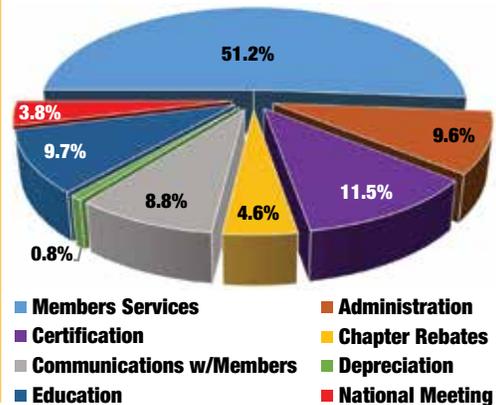
The Society of Broadcast Engineers, Inc. completed 2016 with net revenue from all operations of \$23,814. Gross income from all sources was \$753,690 while expenses were \$729,876. The value of SBE savings and investments as of Dec. 31, 2016, were \$1,071,579. Total SBE assets as of Dec. 31, 2016, were \$1,095,123, an increase of \$2,147 over 2015. Long-term investment gains totaled \$59,671.

A percentage breakdown of SBE income from program operations and expenses is depicted in the accompanying charts. A financial statement will be published in the June issue of *The Signal*, following completion of the Society's annual audit.

Income From Program Sources



Expenses From All Sources





EDUCATION UPDATE

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

The SBE Education Summit

In September 2016, the SBE embarked on an ambitious undertaking to access the education and professional development needs of the broadcast industry in the immediate future and beyond. The SBE Education Summit convened at the One World Trade Center in New York City. The breathtaking view of New York City from the 63rd floor presented a challenge to remain focused on the business at hand throughout the day.

The goal of the Summit was to gain insight into technologies, issues, and knowledge areas that the broadcast engineer must possess in the future to remain an effective technology professional. The lessons learned will be utilized to guide development of future SBE educational programs or enhance our existing programs. The Summit brought a blue-ribbon panel of industry leaders together to explore several outcome areas that included:

- View of the industry in the future: 2019, 2021, & 2026
- Identify skills & knowledge required by new industry technology support
- Identify skills & knowledge required for legacy technology support
- Identify cross-training needs between audio/video, RF, and IT technology areas
- Uncover unknown or unanticipated outcome(s)

What Was Learned?

As the day concluded, the expectation of lessons learned became more of lessons confirmed, as no unique outcomes were identified. These confirmations concluded that the TV spectrum re-pack would consume considerable engineering resources for select stations for the next three years, even affecting radio. ATSC 3.0 would be the next big thing in TV that will significantly affect IT infrastructure within the station technical facility. The broadcast technical facility has become a data center environment with virtualization and cloud technology in common use.

SDI will be a past technology likely within five years but certainly less than 10 years with IP dominating the replacement options. HD Radio faces continuing challenges even as automobile makers have ramped up inclusion in their models. At the same time, IP-delivered alternatives are being offered. It comes as no surprise that AM radio is in a pickle, although big-signal AM radio does well in many markets with sports and talk programming dominating. Content remains king! Meanwhile, several AM stations have gone dark and forfeited the station license because revenue does not cover operating costs. In many locations, the AM antenna field real estate is the most valuable station asset.

Were There Unexpected Outcomes?

The value of an assembled group such as that at the Summit often occurs in the unstructured discussions. A couple of takeaways for me included the revelation that new technology

implemented in the broadcast facility was not to save money, but to do new things in the industry. The reality is that it takes less technical staff today than in the past, although it's important to note that as traditional broadcast engineering staff needs decrease, IT back office support needs often increase to support content distribution. Another area of some surprise was the emergence of specialized contract services in many markets, such as high-power RF facility maintenance and tape machine repair. Yes, tape is still alive, but experienced repair staff is rare.

As you might expect, the need for IT professionals continues. In many cases, finding the IT staff is easy, but keeping the IT staff is difficult with broadcast pay often lagging many traditional IT jobs by 20-30 percent. It is important to keep in mind that we are in the content distribution business. Over-the-air broadcast

has been the mainstay of the industry, and will continue to have a critical role, but the emergence of other mediums will continue to grow and change content delivery methods. Thus, the adaptability of the broadcast technology professional to change with the consumer demand will be a key personal trait for success in the industry.



Education Summit attendees tour the One World Trade Center construction site.

What is Next?

The SBE will continue to develop professional development programs to benefit the broadcast engineer.

Specific programs will look to continuing a focus upon traditional broadcast engineering skills blended with IT skills, project-management-skill development, and people-skill enhancement. Special thanks go to the industry leaders who assembled for the SBE Education Summit. Panel participants included Jay Adrick, industry consultant; Jan Ozer, industry consultant; Milford Smith, Greater Media; Robert Seidel, CBS Television; Conrad Trautmann, Cumulus Media; and Mario Vechi, PBS.

A final thank you goes to the Ennes Educational Foundation trustees who provided foresight and funding to make the Education Summit possible. Thanks to SBE member John Lyons and the Durst Corporation for providing an extraordinary meeting environment at the One World Trade Center.

RF101

The SBE RF101 webinar series is well underway, with two of the eight modules already presented to date. If you missed any of the previous webinars, remember that all SBE webinars are available on-demand so you can take part on your own schedule. The RF101 webinar series was developed and conducted by industry consultant Dennis Baldrige. He targets those new to broadcasting with minimal RF experience, but I bet there is something for everyone to learn.

Your SBE Education Committee wants to know your career professional development needs. Consider providing your expertise and knowledge to your SBE peers through one of many program delivery platforms. Lend your advice and guidance to the SBE Education Committee.

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



CERTIFICATION UPDATE

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

Possible Change Coming to Exam-taking Resources

The National Certification Committee has been asked on various occasions over the years to allow electronic devices to be utilized when taking certification exams. The committee has allowed on a limited basis the use of e-book readers, iPads, calculators and smart phones with calculator function as long as they were put into airplane mode and not connected to the internet for the multiple choice portion of the exam. Those exams with essay questions are closed book. No peripheral resources are allowed during the essay portion of the senior, specialist or networking engineer exams.

Broadcast engineering and the underlying technology have advanced to the point that a large portion of what the technical staff sees to is done online or is in electronic form. Most manuals today are not printed but supplied as PDF or DOC files. List serves and manufactures websites provide an abundance of information to the technician or broadcast engineer to build or maintain facilities. The days of brute memorization seem to be mostly behind us and electronic tools are commonly used in the course of a day to solve both routine and technical problems. Over the past

few years there have been an increasing number of requests to allow more electronic connectivity in the exam room. The committee has been listening and began exploring the idea last year.

The certification committee is considering various options to supplement the existing process of administering exams and what may be allowed to be used if implemented. If adopted the existing exam process will be modified so that exam takers will be able to bring reference books, hand written or electronic notes and calculator as usual to the exam and also be allowed to use electronic devices that can connect to the internet. One thing for the exam taker to understand is that there is no implied guarantee that internet will be available at test locations so appropriate backup precautions should be taken when taking the exam. Maintaining the integrity of the question database is critical to the success of the certification program. We want to be certain that the questions are not removed from the examination room. During the exam only handwritten notes created during the exam must be turned in with the exam package (no electronic note taking during the exam).

The National Certification Committee has been conducting beta testing with internet electronic device connectivity by way of handpicked certification exams since February 2016. The trial started with a couple of local chapter exams and then expanded the availability to everyone included in exam sessions. Over the past year information from participants and proctors has been gathered along with exam scores. The committee will review the comments from the exam takers and proctors at the April 22, 2017, Certification Committee meeting and make a recommendation to the Board of Directors whether to allow electronic devices with network connectivity to be used in taking SBE Certification Exams. If adopted the exam question database will have to be modified to account for the increased availability of information.

The SBE congratulates those who serve their chapters as certification chairs. See the list in headlines at sbe.org.

EQ Answer from page 3

The answer is A.

Notice must be given to the FCC on the 10th consecutive day of under power operation, and Special Temporary Authority must be obtained if under power operation extends beyond 30 consecutive days.

SBE-news

SBE Partners with SACIA

By Chuck Kelly
Chair, SBE International Committee

The SBE and the Southern African Communications Industries Association (SACIA) recently signed an affiliation agreement, which allows for open communications among like-minded organizations. SACIA is a not-for-profit society headquartered near Johannesburg, and offers technical training as well as certification in broadcast and communications technical fields.

Similar agreements are in place between the SBE and professional societies in Mexico, Canada, Brazil, Uruguay, South Korea, Pakistan, and the Philippines. There are no voting rights or financial ties under the agreements, but they are intended to share information regarding the changing technology of the broadcast industry worldwide.



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SBE Certification Achievements

CONGRATULATIONS

LIFE CERTIFICATION	<p>Certified Professional Broadcast Engineer (CPBE) Jack Layton, McMurray, PA - Chapter 20</p> <p>Certified Broadcast Technologist (CBT) Kenneth Koyan, Wellington, OH - Chapter 70</p> <p>Certified Professional Broadcast Engineers and certified senior broadcast engineers who have maintained SBE certification continuously for 20 years, are at least 59½ years old and are current members of the SBE may be granted Life Certification if so requested. All certified who have retired from regular full-time employment and are at least 59½ years old may be granted Life Certification if they so request. If the request is approved, the person will continue in his/her current level of certification for life.</p>		
CERTIFIED PROFESSIONAL BROADCAST ENGINEER	<p>Certified Professional Broadcast Engineer (CPBE) Rusty Armitage, Knoxville, TN - Chapter 113</p> <p>Applicant 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.</p>		
NOVEMBER EXAMS	<p>Certified Broadcast Networking Engineer (CBNE) Daniel Paixao, Meridian, ID - Chapter 115</p>		
FEBRUARY EXAMS	<p>Certified Senior Television Engineer (CSTE) John Luff, Sewickley, PA - Chapter 20</p> <p>Certified Broadcast Radio Engineer (CBRE) Edward Stofferahn, Zimmerman, MN - Chapter 17</p> <p>Certified Broadcast Television Engineer (CBTE) Nihad AliAkbar, Alexandria, VA - Chapter 37 Vincent Atwood, Fort Meade, MD - Chapter 37 Rick Jesse, Springfield, MO - Chapter 56</p>	<p>Certified Video Engineer (CEV) Jonathan Bernstein, Rockville, MD - Chapter 37 David Higgins, Walkersville, MD - Chapter 37 Michael Infante, Chicago, IL - Chapter 26</p> <p>Certified Broadcast Networking Technologist (CBNT) Lucretia Lee-Arceneaux, Marietta, GA - Chapter 48 Luis Ortega, Culver City, CA - Chapter 47</p>	<p>Certified Broadcast Technologist (CBT) Elizabeth Delaquess, Madison, WI - Chapter 24</p> <p>Certified Radio Operator (CRO) Kirsten Basinet, Bellingham, WA - Chapter 16 Timothy Meinig, Seattle, WA - Chapter 16</p> <p>Certified Television Operator (CTO) Luis Ortega, Culver City, CA - Chapter 47 Boris Shiloff, New Kensington, PA - Chapter 20</p>
SPECIAL PROCTORED EXAMS	<p>Certified Audio Engineer (CEA) Jun Lin Chan, Penang, Malaysia Swee Cherng Tan, Penang, Malaysia</p>	<p>Certified Broadcast Networking Technologist (CBNT) Aaron Kerr, Calgary Alberta Canada Payne Toy, Calgary Alberta Canada</p>	
CERTIFIED BY LICENSE	<p>Certified Broadcast Technologist (CBT) Stephen Holt, Waldorf, MD - Chapter 37</p>	<p>Joshua Rule, Roanoke, VA - Chapter 78 Chris Waldrup, Tracy City, TN - Chapter 103</p>	
CERTIFIED RADIO OPERATOR (CRO)	<p>Leo Ross, Fair Haven, NJ</p>	<p><i>St. Petersburg College</i> James Ayers, St. Petersburg, FL Samuel Mattson, St. Petersburg, FL</p>	<p><i>St. Petersburg College (cont.)</i> Emilio Pareja, St. Petersburg, FL Derrell Parrott, Tampa, FL</p>
CERTIFIED TELEVISION OPERATOR (CTO)	<p>David Bickford, Jericho, VT Ishmael Ghani, Lithonia, GA Jeff Hartman, Madison, WI</p>		
RECERTIFICATION	<p>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.</p>		
	<p>Certified Professional Broadcast Engineer (CPBE) John Huntley, Rockford, IL - Chapter 96 Fran McLemore, Smiths Station, AL - Chapter 118</p> <p>Certified Senior Radio Engineer (CSRE) AM Directional Specialist (AMD) John Justin Tucker, Charleston, SC - Chapter 107</p> <p>Certified Senior Radio Engineer (CSRE) Jerry Olson, Cheney, WA - Chapter 21</p> <p>Certified Senior Television Engineer (CSTE) Steven Barousse, Knoxville, TN - Chapter 113</p> <p>Certified Senior Radio Engineer (CSRE) AM Directional Specialist (AMD) Rick Swell, Highland, IN - Chapter 26</p> <p>Certified Senior Television Engineer (CSTE) 8-VSB Specialist Elvir Hadziselimovic, Cottonwood Heights, UT - Chapter 62 Jerry Martin, Loma Linda, MO - Chapter 56 Dennis Vigil, Albuquerque, NM - Chapter 34</p>	<p>Certified Broadcast Networking Engineer (CBNE) Steven Barousse, Knoxville, TN - Chapter 113 Jerry Martin, Loma Linda, MO - Chapter 56</p> <p>John Justin Tucker, Charleston, SC - Chapter 107</p> <p>Certified Broadcast Radio Engineer (CBRE) David Maxson, Medfield, MA - Chapter 11 Friend Weller, Logan, UT - Chapter 62</p> <p>Certified Broadcast Television Engineer (CBTE) David Baker, Addison, IL - Chapter 26 Leslie Garrett, Terre Haute, IN - Chapter 25 John Marcon, Little Rock, AR Scott Nielson, Layton, UT - Chapter 62 Michael Tody, Manlius, NY - Chapter 22 Glen Wright, Knoxville, TN - Chapter 113</p> <p>Certified Broadcast Networking Technologist (CBNT) Michael Snyder, Albuquerque, NM - Chapter 34 Dennis Vigil, Albuquerque, NM - Chapter 34 Mark Watson, Reno, NV - Chapter 69</p>	<p>Certified Broadcast Technologist (CBT) Robert Dunn, River Ridge, LA - Chapter 72 Eric Hartzell, Columbus, OH - Chapter 52 Carl Lewandowski, Pottstown, PA - Chapter 120 Michael Mick, Gurnee, IL - Chapter 26 Randall Moore, Tallahassee, FL - Chapter 7 Aaron Read, East Providence, RI - Chapter 11 Kevin Rotz, Tripoli, IA - Chapter 55 Aaron Savage, Millilani, HI - Chapter 63 Sean Suttell, Pasadena, MD - Chapter 132 Mark Watson, Reno, NV - Chapter 69</p> <p>Certified Television Operator (CTO) Stanley Armstrong, Rocky Mount, NC Sasa Petrovic, Grand Rapids, MI - Chapter 102 Dennis Renn, Boulder, CO Josian Rodriguez, Phoenix, AZ Eric Williams, San Antonio, TX</p> <p>Certified Radio Operator (CRO) Michele Mayzes, Berkeley, CA</p>

ENNES EDUCATIONAL FOUNDATION TRUST

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.

- Greenberg Scholarship**
Michael Baker, Glen Burnie, MD
Russell Harbaugh, Southfield, MI
William Harris, Albuquerque, NM
Milford Smith, Jr., Lawrenceville, NJ
- Battison Scholarship**
E.J. Alexander, Russellville, AR
Michael Baker, Glen Burnie, MD
Noel Richardson, S. Charleston, WV
Richard Wood, Cottage Grove, WI

- Ennes Scholarship**
Jay Adrick, Cincinnati, OH
Thomas Alderson, Spokane, WA
Michael Baker, Glen Burnie, MD
Stuart Casteel, Ukiah, CA
Hai-jong Chon, Woodbridge, CT
Andrew Clark, Davie, FL
Jorge Conde, Guayama, PR
Charles Dube, E. Longmeadow, MA
Thomas Hackett, Burke, VA
Dale Harry, Rocklin, CA
Kevin Hornberger, Plainfield, IL

THANKS TO THE FOLLOWING SUPPORTERS FOR THEIR CONTRIBUTIONS

- Robert Leskovec, Richmond Hts., OH**
J. Cole McClellan, Austin, TX
Jan Pritzl, Milwaukee, WI
Chris Read, Greenwood, IN
Robert Sleight, Apex, NC
Kenneth Stiver, Amherst, NY
Richard Thomas II, Okemos, MI
Michael Waldman, Chesterfield, MO
Jack Williamson, Tampa, FL
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Robert Lacey, Jr., Methuen, MA
Henry Lam, Bellaire, TX
Kishore Persaud, Catonsville, MD
Mark Phillips, Beacon, NY
Richard Williams, Trenton, NJ

SBE Schedule of Events

Saturday, April 22

- **SBE Ennes Workshop** 9 a.m.-5:30 p.m.
Conference registration required
LVCC North Hall Meeting Room N262/264
- **SBE Certification Committee Meeting** . . . 6:30-11 p.m.
Westgate Resort Conference Room 7

Sunday, April 23

- **SBE Board of Directors Meeting** . . . 8:30 a.m.-12 p.m.
Westgate Resort Conference Rooms 7 and 8
- **SBE Education Committee Meeting**. 3-4:30 p.m.
Westgate Resort Conference Room 7
- **SBE Frequency Coordination Committee Meeting (Sponsored by T-Mobile)**. 3 -5 p.m.
Westgate Resort Conference Room 8

Monday, April 24

- **Fry's Gift Card Daily Booth Giveaway**
Courtesy of Nemal Electronics

Tuesday, April 25

- **SBE Certification Exams**. 9 a.m.-12 p.m.
Westgate Resort Conference Rooms 9 - 10
- **SBE Frequency Coordinators Meeting** . . 1:30-3:30 p.m.
Westgate Resort Conference Rooms 9 - 10
- **Fry's Gift Card Daily Booth Giveaway**
Courtesy of LinkUp Communications
- **SBE Spring Membership Meeting** 5:15-6:15 p.m.
Blackmagic Design ATEM Television Studio HD giveaway,
plus other prizes
LVCC North Hall Meeting Room N256
- **SBE Member Reception** 6:15-7:15 p.m.
Multiple prize giveaway
LVCC South Hall Meeting Room TBA

Wednesday, April 26

- **Fry's Gift Card Daily Booth Giveaway**
Courtesy of Blackmagic Design

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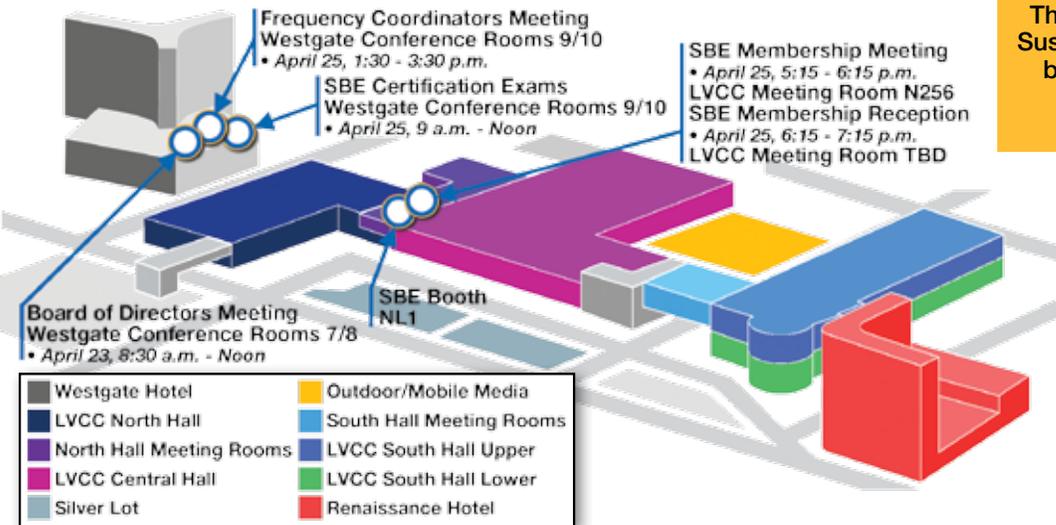
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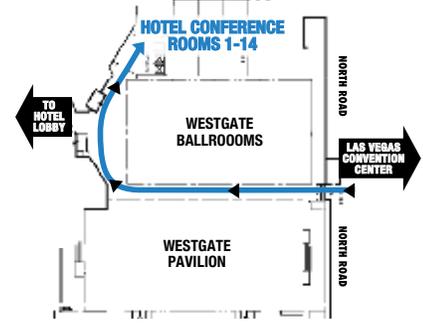
SBE Booth Hours
Booth NL1

- Sunday: 2 p.m. - 4 p.m.
- Monday: 10 a.m. - 6 p.m.
- Tuesday: 9 a.m. - 5 p.m.
- Wednesday: 9 a.m. - 6 p.m.
- Thursday: 9 a.m. - 2 p.m.



Don't Forget the Resource Guide
There's lots more information about SBE Sustaining Members and their convention booth locations in the online Sustaining Member Resource Guide.
sbe.org/sections/guide

Westgate Conference Rooms



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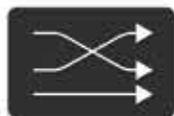
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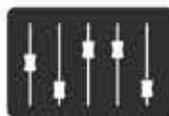
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Audio | **Ultrimix**



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LEGAL PERSPECTIVE

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

Bringing It Back Down To Earth

As most broadcast engineers know, syndicators and networks often require that a station that uses receive-only C-Band satellite feeds be able to receive their programming from any satellite at any time; especially at times of special events or news feeds. For that reason, when broadcast engineers register Fixed Satellite Service (FSS) receive-only earth stations, they specify the entire band in the full (geostationary) arc, so the earth station is able to receive programming with the requisite flexibility in real-time when necessary. That full-band, full-arc C-band registration has always been possible and routine. It allows the earth station to shift to any frequency in the band and to aim at any satellite without risk of interference, and it is critical to broadcasters' important role as first informers. Furthermore, at thousands of major news and entertainment events in the United States each year, transportable FSS uplink and downlink systems are used to bring viewers coverage of sporting events, longer term news events and entertainment events.

The way fixed microwave users view the full-band, full-arc FSS registration protocol, however, is radically different. Terrestrial microwave fixed service users license only the channels they need and only on paths they need. So they tend to view registration of receive-only earth stations by broadcasters in the full-band, full-arc as overkill and spectrum warehousing, which precludes fixed microwave licensees from using channels and paths that microwave users may want to use.

The Fixed Wireless Communications Coalition (FWCC), which represents and comprises fixed microwave users and equipment manufacturers for the fixed microwave service, filed in December 2016 a petition for rule making (RM-11778) asking the FCC to disallow full-band, full-arc earth station registrations. Instead, the petition proposes that a satellite earth station be allowed to coordinate only the frequencies and directions for which it has an immediate need. In this way, additional spectrum would be made available for fixed microwave facilities in the 3.7-4.2 GHz band. The petition said that the earth station could also earmark any amount of additional frequencies and directions as "growth capacity" for possible future use. A microwave operator would be able to license these only if nothing else is available on the

path that the microwave licensee needed to cover. In that case, the fixed microwave licensee would have to coordinate with the FSS earth station registrant on how to be least disruptive to the earth station's possible future plans.

The FWCC recognized that some earth stations must be able to access multiple satellites and add and change satellites on short notice. This of course includes broadcasters. For those satellite users, FWCC recommends a waiver process, permitting them to coordinate additional frequencies, azimuths and elevations with no time limit on when they might be used. The FWCC claims that the proposed rule change will increase spectrum availability, maximize efficient use of the spectrum and impose only nominal negative impact on earth station operators.

The comments and reply comments on the FWCC petition were filed in January, and the petition is now under consideration by the Commission. There were relatively few comments filed, and those who favored the proposal and those who opposed it fell, predictably, into two neat piles: the FWCC proposal was supported by fixed terrestrial microwave users, and opposed by satellite earth station registrants and FSS earth station users, including broadcasters.

Among the opponents of the proposal is the Satellite Industry Association (SAI) which claimed that "the flexibility of an earth station operator to shift frequencies and/or satellites without going through a lengthy re-licensing process promotes competition, enables satellite operators to provide service following a natural disaster or other emergency, and facilitates service continuity or restoration if a transponder or satellite suffers a problem." The NAB argued that the waiver process proposed by the FWCC was cumbersome and unworkable. The NAB said that broadcasters' earth station facilities must have the flexibility that full-band, full-arc FSS earth station registration and licensing has provided to maintain consistent programming to the public. This is due to the routine need to access programming from different network feeds or other sources, which may be on almost any transponder or satellite. The NAB noted that east coast and west coast network feeds may use different satellites and channels, and a station that is unable to receive one feed can often utilize the other. Because Sun outages make certain satellites completely unavailable for periods of time, the backup capability assured by full-band, full-arc licensing guarantees uninterrupted program distribution.

This is not the first time the FWCC has made this proposal. In 1999, the FWCC requested a declaratory ruling from the FCC such that an FSS earth station operator would have to demonstrate "actual need" for the spectrum requested at the time of licensing. Specifically, where the FSS earth station is using spectrum that is shared with point-to-point terrestrial services, the Commission should prohibit use of the entire frequency band, to requiring it to use no more than twice the amount of spectrum for which it is able to demonstrate an "actual need." The FCC dismissed this request in 2002, saying that there was no evidence of denied access to fixed terrestrial microwave service spectrum due to FSS operators full-band, full-arc registrations.

The SBE plans to make its members' views known to the decision makers at the FCC about this FWCC proposal. Let us know your thoughts. Thanks.

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FOCUS ON SBE

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

It's NAB Show Time!

Many of you will head to Las Vegas this month for the 2017 NAB Show. The SBE is once again a presenting partner with the NAB for its broadcast technical conference, renamed this year, the NAB Broadcast Engineering and Information Technology Conference. A reflection of where the conference has headed in recent years, with so much of the technical broadcast facility routed in IT.

The BEITC begins Saturday, April 22 with the all-day Ennes program, which requires a full NAB Conference registration. The BEITC continues Sunday through Thursday. Visit the NAB Show website, nabshow.com, for the complete conference schedule.



SBE members and guests at the 2016 SBE Member Reception.

There are changes this year. You'll find the BEITC in the North Hall Second Floor meeting rooms of the Las Vegas Convention Center (LVCC). The Ennes program on Saturday will be in Rooms N262/264 and the remaining days of the BEITC will be in rooms N256, N258 and N260.

With the move of the BEITC, the SBE exhibit booth is also moving to the same North Hall Second Floor area. We'll be in booth NL1 (North Lobby 1), which is located by the escalators right in front of the BEITC session rooms. Please make it a point to stop by the booth and meet members of the national SBE Board and staff. Check out the discounted technical books available at our bookstore and the SBE logo items. We will also welcome new member applications and member renewals at the booth.

The annual spring SBE Membership Meeting will be Tuesday in Room N256 beginning at 5:15, just after the end of the final BEITC sessions. During the one-hour meeting, we'll recognize our chapter certification chairs who have achieved volunteer service milestones and hear updates from SBE President Jerry Massey and other SBE leaders.

The first 125 people in attendance will receive a special SBE memento, and everyone in attendance will be eligible to win prizes, which include a Blackmagic Design ATEM Television Studio HD switcher, a \$250 gift card from Fry's Electronics, three \$25 dinner gift cards and two SBE logo hats, all courtesy of membership meeting sponsor Blackmagic Design.

Immediately following the membership meeting will be the annual SBE Reception; beverages and appetizers provided compliments of our reception sponsors: Gold Sponsor - EMP Solutions. Silver Sponsors - B & H Photo, Video & Pro Audio, Comrex and JVC Professional Video. Bronze Sponsors - AC Video Solutions, Broadcast Electronics, Econco, Hitachi Kokusai Electric Comark, Jampro/Alan Dick, PlayBox Video and WideOrbit.

Members of the SBE, guests and friends are invited to the

meeting and reception, which will be located in the same North Hall Second Floor meeting room area.

The SBE will also hold its spring meeting of the Board of Directors in Conference Rooms 7-8 of the Westgate Hotel on Sunday April 23 from 8:30 a.m. until noon. Members are welcome to attend.

We'll also hold our annual meeting of volunteer SBE frequency coordinators at the Westgate Hotel. Reserve Tuesday, April 25 from 1:30 to 3:30 p.m. in Conference Rooms 9-10. Led by SBE National Frequency Coordination Committee Chair RJ Russell, the agenda includes the latest on the US Department of Defense spectrum-sharing project and other spectrum related issues. SBE frequency coordinators in town for the show are encouraged to attend. The meeting is sponsored by T-Mobile.

The NAB Show exhibits open Monday through Thursday. You can get a free exhibits-only pass by pre-registering and using the SBE discount code, EP04 (EPzero4). Non-NAB members can use the same code to register for the full convention conference package and save \$100.

We do hope to see you at the NAB Show!



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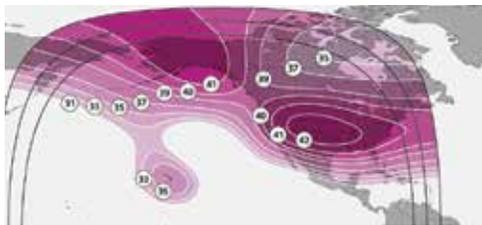


ENGINEERING PERSPECTIVE

By Chris Childs
SEG, a Division of WESCO Distribution
cchilds@wesco.com

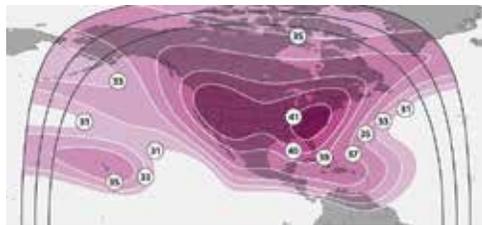
Commercial Radio Satellite Transition

For more than 25 years, the distribution of syndicated radio content has been residing in the sky on the AMC-8 satellite in the 139° west longitude orbital slot. The transition from this orbital slot to a new satellite 105° west longitude has begun. This transition and dual illumination of signals on both satellites began Feb. 1, 2017, and will be completely live on the new satellite by June 30, 2017.



The Satellites

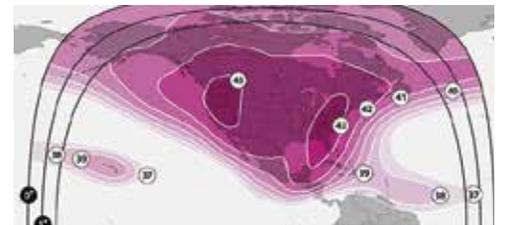
The current satellite, AMC-8, is quickly approaching its end of life (EOL). SES (the satellite operator) currently has no plan to replace this satellite. AMC-18, which is currently in the 105° slot, will be replaced later in 2017 by SES-11. AMC-18 has lower signal level throughout the US than the satellite at 139° (approximately 1-2 dBw less). Radio stations with smaller satellite



gree compliant could have serious margin issues if attempting to utilize these satellite dishes with the new satellite.

Gains and Losses

The look angle for the new orbital slot will be significantly different. For example, in the Northeastern U.S., current look angles are at a compass heading of 250° and an elevation of 10°. With this low el-



The North America coverage footprints of AMC-8, AMC-18 and SES-11 (left to right).

The majority of radio stations in the USA receive some sort of content from this satellite. The five major distribution platforms that will be transitioning to the new satellite include Westwood One, Skyview Satellite Network, OMNI, Premier and Learfield, plus many others. The transition to the new satellite is a huge task and needs to be started sooner than later to meet the network deadlines.

dishes, damaged equipment and non-compliant dishes could possibly experience a detrimental effect on margin in the new orbital slot. The radio networks suggest using 3.7/3.8 meter satellite dishes to receive commercially distributed content from the new satellite. Once SES-11 is launched, the footprint/signal strength will increase to provide equal or slightly greater signal level than AMC-8 currently provides.

evaluation, it may have been a challenge to find a location to position a receive dish for this look angle to the satellite. On the flip side, the satellite dish is almost perpendicular to the ground and the accumulation of snow and ice is significantly reduced. In many cases, a snow cover would have allowed the system to operate.

From the same receive location, the look angle to the new neighborhood will be 221° and 32° elevation. This will allow many additional options to install a dish with an advantageous look angle, but be aware of possible angle issues from walls, other satellite dishes, towers, buildings or other obstructions. This increased elevation will also allow snow to accumulate on your dish at a greater rate. Radio stations should plan for new snow covers, de-icing systems and ice-quake systems. For northern radio stations, weather protection is strongly suggested.

Another benefit of the more central satellite arc location is in fall and spring, sun outages happen approximately 2.5 hours earlier. This may offer improved timing. Previously in the Eastern Time Zone, these interruptions would occur during drive time, causing outages during live payout. With the earlier outages, loss of live content during premium ad slots should not occur.

Plan ahead and budget your resources. New equipment may have longer lead times, and field services may become harder to schedule as we approach the June 30 deadline.

Existing Systems

Existing satellite dishes that are hail damaged or have holes in the panels can pick up adjacent satellite/RF noise, causing a lower margin. This isn't as much of a problem in the 139° neighborhood, but could become a severe issue in the new 105° neighborhood.

To prepare for this transition, SEG has worked closely with many radio station groups. We have found many facilities have satellite dishes that are severely hail damaged, missing panels, are too small for the new satellite neighborhood, aren't two-degree compliant, or are rusted to the point of no return.

The current 139° satellite neighborhood doesn't have any adjacent satellites to the west, and the nearest satellite to the east is 4° away. This has allowed stations to align their existing dishes to the west slightly, eliminating added RF noise from adjacent satellites.

Stations operating small satellite dishes or reflectors that are not two-degree de-

Infinite Possibilities



KV-PZ100W pictured with optional Verizon LTE modem and RM-LP100 controller

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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
- AVDB Group • 2014**
Maria Cody 720-940-7131
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Advanced Music Scheduling Solutions
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- Black Box • 2014**
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RF & Microwave Components
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Robert Tarsio 914-737-5032
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Tom Beck 217-224-9600
Radio Equipment Manufacturer
- Broadcast Microwave Services Inc. • 1997**
Jim Kubit 805-581-4566
Manufacturer, Transmitters, Receivers,
Antenna Systems
- 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
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Audio Mixing Equipment
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- Comsearch • 2004**
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Frequency Coordination Services
- Continental Electronics Corporation • 1976**
Michael Troje 800-733-5011
AM & FM IBOC Transmitters
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Teleprompting Software & Hardware
- Dakota Lighting Supply • 2015**
Randy Doremus 303-748-6241
FAA/Obstruction Lighting Products
- Davicom, Division of Comlab, Inc. • 2014**
John Ahern 418-682-3380
Remote Site Monitoring and Control Systems
- DEVA Broadcast • 2015**
Todgor Ivanov 305-767-1207
Monitors, IP Audio Codecs, RDS/RBDS
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- Dialight Corporation • 2006**
US Headquarters 732-919-3119
FAA Obstruct. 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
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Intensity
- DTS Inc./HD Radio Technology • 2014**
Rick Greenhut 443-539-4335
HD Radio Technology
- du Trell, 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
- e2v • 1997**
Dominic Piarulli 914-593-6828
Electronic Components
- 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
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Dennis Ford 336-859-2031
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- Floral Systems • 2008**
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Television Broadcast Automation
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Tracy Brink 727-280-8843
Broadcast Vehicle Manufacturer
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Mark Goins (Radio) 513-899-9124
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- Heartland Video Systems, Inc. • 2011**
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- Hitachi Kokusai Electric Comark • 2013**
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Matt Granard 425-286-1900
Global Connectivity Solution Provider
- Image Video • 1997**
Zach Wilkie 416-750-8872 x228
Under Monitor Tally Display Systems,
Monitor Design and Manufacture Broadcast
Equipment
- Inovonics Inc. • 2012**
Gary Luhman 831-458-0552
Radio Broadcast Equipment
- Integrated Microwave Technologies • 2009**
John Payne 908-852-3700
Wireless Video Systems
- 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
- Ka You Systems • 2011**
George Gimourginas 301-585-4302
Audio, Video, IP - Satellite
- 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
- 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
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Al Dripchak 973-653-2414
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- Micronet Communications Inc. • 2005**
Jeremy Lewis 972-422-7200
Coordination Services/Frequency Planning
- Microtech Gefell GmbH • 2016**
Michael Militzer +49 36649-82245
Microphones
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Microwave Equipment Rental, Sales & Service
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David Amoscatto 973-839-1011
Equipment, Mounting, Solutions
- Midtown Video • 2016**
Jesse Miller 305-669-1117
Complete Studio Production Support
- MoreCom Inc. • 2009**
Kyle Moorehead 763-533-5535
Networking & AV Construction
- 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
- Nautil Inc. • 2002**
Jeff Welton 877-662-8835
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Benjamin L. Nemser 305-899-0900
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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
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Quality Broadcast Antenna Systems
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Multimedia Retailer
- Radio Frequency Systems • 2015**
Scott Martin 812-589-4755
Broadcast & Telecom Antennas & Systems
- RCS • 2003**
Diana Stokey 308-284-3007
Audio and Video Content Management
- RDL • 2004**
David Zovod 928-778-9678 x104
Audio, Video, Control & Test Equipment
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- RF Specialties Group • 2008**
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Antenna
- Rohde & Schwarz • 2003**
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Jared Schatz 613-228-0688
Manufacturer, Television Broadcast Equipment
- Sage Alerting Systems Inc. • 2010**
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Emergency Alert Systems Products
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Audio and RF Broadcast Equipment Supplier
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Danielle Rita 781-791-4611
Accelerated File Transfer Solution
- 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 818-556-2616
Video Equipment Manufacturer
- Solid State Logic • 2014**
Steve Zaretsky 212-315-1111
Digital 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
- The Switch • 2011**
Peter Hartz 323-645-8011
Fiber Transmission Provider
- Tektronix Inc. • 1977**
Jim Lang 503-627-2980
Video Test & Measurement, Equipment
Manufacturer
- Telemetrics Inc. • 2016**
Anthony Cuomo 201-848-9818
Camera Robotic Control Systems
- 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
- Tieline The Codec Company • 2003**
Dawn Shewmaker or Jacob Daniluck 317-845-8000
Audio Codec Manufacturer
- Unimar Inc. • 2001**
Thad Fink 315-699-4400, 813-943-4322
Tower Obstruction Lighting Designer,
Manufacturer, Distributor
- Verizon Digital Media/Services • 2015**
Gary Learner 781-221-7400
Media Intelligence and Logging Solutions
- Vislink Inc. • 1991**
Mike Payne 978-671-5700
Video Microwave Systems and Services
- Wheatstone • 2010**
Jay Tyler 252-638-7000
IP Consoles, Routers & Processors
- WideOrbit • 2012**
Brad Young 214-923-6337
Broadcast Management Software, Automation
and Master Control
- Wireless Infrastructure Services • 2006**
Travis Donahue 951-371-4900
Repacking Services - West Coast Turnkey
Services
- Wnwech Tech Corporation • 2014**
Luiz Santiago 310-220-5664
Systems Integration

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Member Spotlight: Brian Heise

Member Stats

SBE Member Since: 1998
Certifications: CPBE, CBNT
Chapter: 67 North Texas
Employer: Independent broadcast engineer (since 2008)
Position: Owner, Chief Engineer
Location: Belle, TX
I'm Best Known For: Radio transmitter-antenna service and thinking outside the box.

Q What do you value most about your SBE involvement?

A I really enjoy the certification programs that add value to my career, and the educational programs as I am a perpetual learner.

Q What got you started in broadcast engineering?

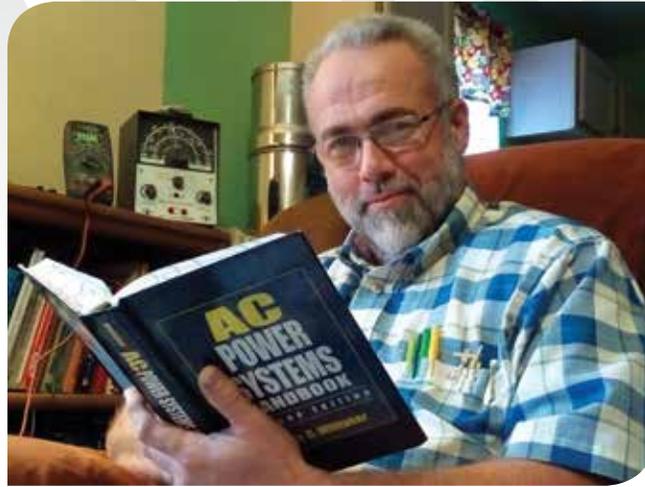
A Like so many of us, I loved radio from my youth. Started wanting to be a DJ, then it was discovered that I knew something about electronics and the rest is history.

Q What do you like most about your job?

A The frequent new challenges, the learning of something new and the joy of getting to work with so many talented people. I do what I love and I love what I do.

Q When I'm not working I...

A ...am a ham radio operator, enjoy the outdoors, collect old shortwave radios and test equipment,



Brian settles in with a good book.

and spend time with family and church.

Q You may not know this, but...

A ... I am about to be a grandpa for the first time. and one of the more unusual transmitter site visits was performed via a helicopter ride to a mountain top where my job was to hold on to all of our gear and couldn't get my seat belt on before we took off! I wasn't too worried until we got to about a 45 degree angle.

Q Do you have a nickname?
A "Jimmy from the Hunting Channel."

Dennis Miller broadcast one of his radio shows via ISDN from our studios. The line had gone down intermittently and I was on my way in from the transmitter site. By the time I made it to the studios, the line was back up, but I didn't know it. I burst through the studio door wearing my normal transmitter attire; camo hat, denim jacket, jeans, and plaid flannel shirt, when I realized he was in the middle of his show. He stated calmly and coolly, "Well I see 'Jimmy from the Hunting Channel' has arrived." He then asked me to introduce myself to his audience.

Nominations Committee Seeks Board Candidates

By Jim Bernier, CPBE, CBNE

The work of the SBE Nominations Committee has begun. Members of this committee include: Chris Tarr, CSRE, AMD, DRB, CBNE, from Mukwonago WI; Dick Burden, CPBE, from Canoga Park, CA; Hank Volpe from Philadelphia, PA; and chairman Jim Bernier, CPBE, CBNE, from Atlanta, GA.

The SBE Nominations Committee seeks qualified candidates who are voting members (Member, Senior, Fellow or the designated representative of a SBE Sustaining Member) in good standing (dues paid). Candidates must hold an engineering level of SBE certification (CBT or higher, CBNT or CBNE) and main-

tain it the entire duration of service on the Board, if elected. Candidates should have a desire to serve and lead, not only as a member of the board, but through service as a national committee chair or member. Members of the Board are "at large," meaning they represent all members, not any one specific region, state, city or chapter.

Members of the Board are expected to attend two meetings each year; in the spring, held during the annual NAB Show, and in the fall, at the annual SBE National Meeting. Other meetings may be called via conference call during the year.

The national SBE board includes 12 directors, four officers and the immediate past president. Directors serve two-year terms and officers serve one-year terms. Six director seats will be contested in 2017 as will all four officer positions. The SBE By-laws limits the number of terms of elected members of the Board. Directors may serve three consecutive terms. The secretary and treasurer may serve up to four consecutive terms and the president and vice president may serve up to two consecutive terms. The maximum number of years anyone may serve on the board is ten consecutive years.

Members interested in offering their candidacy and serving on the national Board if elected are encouraged to contact the chairman of the SBE Nominations Committee, Jim Bernier, CPBE, CBNE, at jim.bernier@sbe.org or 678-466-0002. A slate of nominees will be assembled by the committee by May 1. Other qualified members may be nominated by members in good standing no later than July 10.

The election takes place from July 24 through Aug. 23. Candidates elected will be installed into office during the SBE National Meeting in Denver, CO, on Oct. 26.

Webinar Series: RF101

The eight-part SBE RF101 series is underway, and you can still take advantage of the entire series.

Participate in the live presentation of SBE RF101 Module 3 on Thursday, April 13 at 2 p.m. ET.

Catch-up with the on-demand modules, and mark your calendar for the remaining live events:

1. Introduction to Radio Frequency (RF) Available on-demand
2. Transmission Lines Available on-demand
3. Towers, Antennas, and Transmission Systems . April 13, 2017, 2 p.m. ET
4. Antenna Gain - Feed-line Loss May 18, 2017, 2 p.m. ET
5. Modulation Fundamentals June 15, 2017, 2 p.m. ET
6. AM, FM, TV RF Propagation July 20, 2017, 2 p.m. ET
7. RF Transmitter Measurements Aug. 24, 2017, 2 p.m. ET
8. FCC Regulations. Sept. 21, 2017, 2 p.m. ET

sbe.org/webinars

Changes Come to SBE Board of Directors

SBE President Jerry Massey has appointed Wayne Pecena, CPBE, 8-VSB, AMD, DRB, CBNE, as national secretary for the SBE national Board of Directors. The SBE Executive Committee ratified the appointment during a conference call meeting held December 12. The position was vacated when Tim Anderson, CPBE, DRB, CBNE, resigned to focus on his new career as a commercial airline pilot. Anderson was elected national secretary in August 2016 after having served as a director on the Board for six years.

Pecena, who is director of engineering at Texas A&M University and a member of Chapter 99, has been a member of the SBE Board for four years and was elected to a third director term in 2016. He chairs the SBE Education Committee and will continue to do so.

To fill Pecena's vacated Board seat through fall 2018, Massey appointed Vinny Lopez, CEV, CBNT, which the SBE Executive Committee ratified during its 2017 winter meeting. Lopez is chief engineer at WSTM/WTVH/WSTQ-Sinclair Broadcast Group, Syracuse, NY, and a member of SBE Chapter 22 Central New York. He is a past president, vice president and secretary of the SBE, and served his first term as a director in 2001.

Wayne Pecena also served on the SBE Executive Committee as an appointed Board member. As secretary, he is a member of the Executive Committee. To fill that seat, Massey appointed Director Jim Bernier, CPBE, CBNE, senior director of broadcast engineering at Turner Entertainment Networks and a member of Chapter 5 in Atlanta.

SBE EAS Advisory Group

The Society of Broadcast Engineers has been an active source of information for the Emergency Alert System since it was launched. As the system has developed and evolved to include new technologies and alerting partners, so has the SBE adapted to be the most effective and thorough resource for broadcasters to use to implement their EAS efforts.

As part of this evolution, SBE President Jerry Massey authorized the formation of the SBE EAS Advisory Group to stay abreast of developments regarding EAS that will affect SBE members, including changes in federal regulations, policy and technology, and communicate pertinent developments to appropriate SBE national leadership and staff.

The group's member's are Larry Wilkins, CPBE, AMD, CBNT (group chair), George Molnar, James Hoge, Ed Czarnecki (Monroe Electronics/Digital Alert Systems), and Harold Price (Sage Alerting Systems).

The group members were chosen to yield insight from the two SBE national committees that are involved with EAS issues, SBE members who are heavily involved with EAS, and SBE sustaining members that manufacture EAS equipment. The group reports to Wayne Pecena, CPBE, 8-VSB, AMD, DRB, CBNE, the chair of the SBE Education Committee, and Joe Snelson, CPBE, 8-VSB, the chair of the SBE Government Relations Committee.

On the announcement, SBE President Jerry Massey said, "The SBE has worked with the various EAS partners, from stations to manufacturers to legislators, to be the trusted source of EAS information. The SBE EAS Advisory Group continues the effort that was begun by previous SBE committees."

Larry Wilkins added, "One focus of the group will be to field reports concerning origination or distribution problems from broadcast stations and state emergency communications committees. Using the expertise of the committee members along with information from our contacts with the FCC and FEMA, a recommended solution can be issued to the industry."

WELCOME TO THE SBE

NEW MEMBERS

Elizabeth D. Acle - Washington, DC
Brian D. Allred - Nampa, ID
Tyler Angle - Meade, KS
Tom Bray - San Antonio, TX
David Burke - Montgomery, AL
Patrick M. Cameron - Pearland, TX
Brian Crossley - Grosse Pointe Farms, MI
Ian D. Cushman - Brentwood, TN
Steven J. D'Ambrozio - Stuyvesant, NY
Mead Elliott - Chicago, IL
Shawn Fagan - Bozeman, MT
Eric A. Fredricey - Santa Barbara, CA
Tom B. Gaggin - Tampa, FL
Robert H. Glentz - Tomahawk, WI
Richard Gorbutt - Acworth, GA
Lee E. Griffin - St. Petersburg, FL
Robert C. Haisch - Lincoln, NE
Joshua W. Hatton - Leighton, AL
Bennie Hickson - Charlotte, NC
David P. Higgins - Walkersville, MD
Jim Hockridge - Berkeley, CA
Brian Jones - Oakton, VA
Doug P. Kaufman - Hutchinson, KS
Alexander J. Kaufmann - Auburn, ME
Kent Keglovitz - Quakertown, PA
Carlos Landron - Houston, TX
Jonathan Light - Pearisburg, VA
Thomas H. Lloyd - Renton, WA
Joseph H. Loman - Greenville, SC
Orlando L. Lopez - Houston, TX
Cameron MacDonald - N. Ridgeville, OH
Terrance Mancilla - San Francisco, CA
Anthony Moreno - Columbia, MD
Lee A. Mosley - Guntersville, AL
Shahid Nadeem - Fujairah, UAE
Patricia G. Nelson - Rossville, GA
Christopher Nixon - Lakewood, CO
Jose M. Noriega - Mexico City, Mexico
Robert Packard - Elyria, OH
Alex P. Papadopoulos - Washington, DC
Morris Pollock - Montgomery, AL
Matthew A. Reidy - Cleveland, OH
Shaun C. Reinhold - Ward, AR
George Salloum - Riverside, CA
Jeff Schwartz - West Babylon, NY
Boris M. Shiloff - New Kensington, PA
Gregory J. Smalfelt - Fairfax, VA
Michael E. Smith - Canandaigua, NY
Scott A. Smith - Billings, MT
Joe Taylor - Liberty Lake, WA
Coleman A. Vice - LaGrange, GA
Neil S. Werfel - Seabrook, NH
Weston Wheeler - Starksboro, VT
Robert J. Wolf - Chico, CA

NEW STUDENT MEMBERS

Nap Yin Chan - Fanling, Hong Kong
Hei Tung Chan - Fanling, Hong Kong
Ho Lam Chan - Tai Wai, Hong Kong
Chit Long Chan - Tsuen Wan, Hong Kong
Chun Fai Chan - New Territories, Hong Kong
Ho Sing Chan - Tin Shui Wai, Hong Kong
King Ho Chau - Ma On Shan, Hong Kong
Xiaofeng Chen - To Kwa Wan, Hong Kong
Man Ki Choy - Sha Tin, Hong Kong
Alec P. Connolly - Toledo, OH
Jeremiah S. Gandy - Buckley, WA
Wing Cheung Heung - Sheung Shui, Hong Kong
Chun Ho Lau - Fanling, Hong Kong
Joshua D. Lawson - Greenwood, IN
Hui Lam Leung - Sheung Shui, Hong Kong
Mau Lam Leung - Fanling, Hong Kong
Hui Fung Lo - Sha Tin, Hong Kong
Shin Chyau Luk - Ma On Shan, Hong Kong
Wai Tat Mak - Tai Po, Hong Kong
Abdur R. Raza - Harwood Heights, IL
Yiu Yeung Tse - Sha Tin, Hong Kong
Kwan Ming Wong - Tai Po, Hong Kong
Ho Kit Wong - Sha Tin, Hong Kong
Chi Fung Yip - Fanling, Hong Kong
Wu Kwong Yiu - Sheun Shui, Hong Kong

RETURNING MEMBERS

David J. Abdoo - Schenectady, NY
Douglas E. Allen - Kentwood, LA
David W. Bateman - Portsmouth, VA
Frank W. Bell - Clifton, NJ
Christopher W. Boone - Houston, TX
John P. Bracken, Jr. - Rockledge, FL
Reynaldo L. Cisneros - Grand Prairie, TX
Ron G. Fuller - Arlington, TX
Enrique Garcia - Toa Baja, PR
Rubin Garcia - Aventura, FL
Armando Gonzales - Wylie, TX
James J. Hetherington - Raleigh, NC
David A. Hodges - Christiansburg, VA
Stephen R. Holt - Waldorf, MD
Jeff J. Jachim - Grand Rapids, MI
Jesse Jaurretche - North Miami, FL
Tommy E. Jenkins - San Antonio, TX
Brad M. Jurens - Chicago, IL
Kevin F. Kantorski - Shorewood, IL
Christopher M. King - Knoxville, TN
Allen LeMelle - Clovis, CA
Jeffrey D. Lovetinsky - Phoenix, AZ
Randy S. McCann - Martinsburg, WV
John J. Mehrtens - Newton, MA
Christopher M. O'Hearn - Onalaska, WI
Jimmy J. Poole - Van Buren, AR
Steven Sanford - Franklin, TN
Nandini Sen - Arlington, VA
Dustin T. Sledge - Rome, GA
Jaime A. Uranga - Sugar Land, TX
Donald S. Whitaker - Blountville, TN
Jacob A. Wyatt - Ogallala, NE
Stanley P. Zuidema - Green Bay, WI

NEW ASSOCIATE MEMBERS

Owen F. Garland - Hagerstown, MD
Fatimah A. McCarther-Shabazz - Birmingham, AL



RETURNING ASSOCIATE MEMBERS

Don D. Baker - Columbus, IN

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MEMBERS ON THE MOVE



▶ **Mark Johnson** is now the president of Link Up Communications in Panama City, FL.

Tim White is an RF systems engineer at Fort Myers Broadcasting Company.

▶ **Joe Fleming** became the chief engineer/IT manager at Saga Communications in Richmond, VA, several months ago.

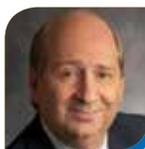
Brett Patram has joined the Telos Alliance as a support engineer.



▶ **Dave Dybas**, CBRE, AMD, is the owner and engineer at Sparks Broadcast Service in Chicago.

Mike Cooney, CTO and VP of engineering of Beasley Broadcast Group, received the 2016-2017 *Radio World* Excellence in Engineering Award.

▶ **John Lyons**, CPBE, has received the 2017 NAB Television Engineering Award.



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

MARK YOUR CALENDAR

SBE Membership Drive

Began March 1, 2017

sbe.org

Drive runs until May 31, 2017.

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online

April 1 - May 16, 2017

sbe.org

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April 22 - 27, 2017

nabshow.com

SBE Certification Exams

NAB Show

April 25, 2017

sbe.org/certification

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