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.

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.
STREAM TO MULTIPLE DESTINATIONS SIMULTANEOUSLY

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

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 Authorization 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.

Certification Question

Professional Development Through Membership.

Answer on page 6

The Signal is published bimonthly by the Society of Broadcast Engineers, Inc., 9102 North Meridian Street, Suite 150, Indianapolis, IN 46260. Questions or comments regarding editorial content or design should be referred to Chris Scherer at 317-762-9725 or cscherer@sbe.org. For advertising, contact Debbie Hennessy at dhennessey@sbe.org. SBE is a registered trademark of the Society of Broadcast Engineers.

SBE National Office
317-846-9000  www.sbe.org
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 Balridge, 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!

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.
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.

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. 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 delivery 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.

What is Next?

The SBE will continue to develop professional development programs to benefit the broadcast engineer. 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 Balridge. He targets those new to broadcasting with minimal RF experience, but I bet there is something for everyone to learn.

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.
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 is done online or is in electronic form. Most manuals today are not printed but supplied as PDF or DOC files. List serves and manufacturers 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.
SBE Certification Achievements

CONGRATULATIONS

LIFE CERTIFICATION
Certified Professional Broadcast Engineer (CPBE)
Jack Layton, McMurray, PA - Chapter 20
Certified Broadcast Technologist (CBT)
Kenneth Koyan, Wellington, OH - Chapter 70

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.

CERTIFIED PROFESSIONAL BROADCAST ENGINEER
Certified Professional Broadcast Engineer (CPBE)
Rusty Armitage, Knoxville, TN - Chapter 113
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.

NOVEMBER EXAMS
Certified Broadcast Networking Engineer (CBNE)
Daniel Paixao, Meridian, ID - Chapter 115

FEBRUARY EXAMS
Certified Senior Television Engineer (CSTE)
John Luff, Sewickley, PA - Chapter 20
Certified Broadcast Radio Engineer (CBRE)
Edward Stoffersahn, Zimmerman, MN - Chapter 17
Certified Broadcast Television Engineer (CCTE)
Nihad Alakkar, Alexandria, VA - Chapter 37
Vincent Atwood, Fort Meade, MD - Chapter 37
Rick Jesse, Springfield, MO - Chapter 56

Certified Video Engineer (CEV)
Jonathan Bernstein, Rockville, MD - Chapter 37
David Higgins, Waukesha, MD - Chapter 37
Michael Infante, Chicago, IL - Chapter 26
Certified Broadcast Networking Technician (CBNT)
Lucretia Lee-Arevaneau, Marietta, GA - Chapter 48
Luis Ortega, Culver City, CA - Chapter 47

SPECIAL PROCTORED EXAMS
Certified Audio Engineer (CEA)
Jun Lin Chan, Penang, Malaysia
Swee Cheng Tan, Penang, Malaysia

Certified Broadcast Technician (CBT)
Aaron Kerr, Calgary Alberta Canada
Payne Toy, Calgary Alberta Canada

CERTIFIED BY LICENSE
Certified Broadcast Technician (CBT)
Stephen Holt, Waldorf, MD - Chapter 37
Joshua Rule, Roanoke, VA - Chapter 78
Chris Waldrup, Tracy City, TN - Chapter 103

CERTIFIED RADIO OPERATOR (CRO)
Leo Ross, Fair Haven, NJ
St. Petersburg College
James Ayers, St. Petersburg, FL
Samuel Mattson, St. Petersburg, FL

CERTIFIED TELEVISION OPERATOR (CTO)
David Bickford, Jericho, VT
Ishmael Ghani, Lithonia, GA
Jeff Hartman, Madison, WI

RECERTIFICATION
The following applicants completed the recertification process either by re-examination, point verification through the local chapters and national Certification Committee approval or and met the service requirement.

Certified Professional Broadcast Engineer (CPBE)
John Huntley, Rockford, IL - Chapter 96
Fran McLemore, Smiths Station, AL - Chapter 118
Certified Senior Radio Engineer (CSRE) AM Directional Specialist (AMD)
John Justin Tucker, Charleston, SC - Chapter 107
Certified Senior Television Engineer (CSTE)
Jerry Olson, Cheney, WA - Chapter 21
Certified Senior Television Engineer (CSTE) 8-VEB Specialist
Rick Swell, Highland, IN - Chapter 26
Certified Senior Television Engineer (CSTE) 8-VEB Specialist
Elvi Hadziiselimovic, Cottonwood Heights, UT - Chapter 62
Jerry Martin, Loma Linda, MO - Chapter 56
Dennis Vigil, Albuquerque, NM - Chapter 31

Certified Broadcast Networking Engineer (CBNE)
Steven Baroussie, Knoxville, TN - Chapter 113
Jerry Martin, Loma Linda, MO - Chapter 56
John Justin Tucker, Charleston, SC - Chapter 107
Certified Broadcast Radio Engineer (CBRE)
David Maxson, Medfield, MA - Chapter 11
Friend Weller, Logan, UT - Chapter 62
Certified Broadcast Television Engineer (CCTE)
David Baker, Addison, IL - Chapter 26
Leila Garrett, Terre Haute, IN - Chapter 24
John Marcon, Little Rock, AR
Scott Nelson, Layton, UT - Chapter 62
Michael Tody, Milwaukee, WI - Chapter 97
Gwen Wright, Knoxville, TN - Chapter 113
Certified Broadcast Networking Technician (CBNT)
Michael Snyder, Albuquerque, NM - Chapter 34
Dennis Vigil, Albuquerque, NM - Chapter 54
Mark Watson, Reno, NV - Chapter 69

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 Sleigh, Apex, NC
Kenneth Silver, Amherst, NY
Richard Thomas II, Okemos, MI
Michael Waldman, Chesterfield, MO
Jack Williamson, Tampa, FL

Youth Scholarship
Harvey Arnold, Ellicott City, MD
Michael Baker, Glen Burnie, MD
Jamie Baumann, San Antonio, TX

ENNES EDUCATIONAL FOUNDATION TRUST
Greenberg Scholarship
Michael Baker, Glen Burnie, MD
Russell Harbaugh, Southfield, MI
William Harris, Albuquerque, NM
M liford 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 Castelle, Ukiah, CA
Hai-jong Chon, Woodbridge, CT
Andrew Clark, Davie, FL
Jorge Conde, Guayaquil, PA
Charles Dube, E. Longmeadow, MA
Thomas Hackett, Burke, VA
Dale Harry, Rocklin, CA
Kevin Hornberger, Plainfield, IL

Robert Lacey, Jr., Methuen, MA
James Grimes, Evanston, IL
Gregory Foss, Riverside, CA
Sasa Petrovic, Grand Rapids, MI - Chapter 102
Dennis Renn, Boulder, CO
Josian Rodriguez, Phoenix, AZ
Eric Williams, San Antonio, TX

Masaaki Beppu, Nagoya, Aichi, Japan
Charles Brentlinger, Scottsdale, AZ
Mark Bulla, Laurel, MD
Andrew Clark, Davie, FL
Tom Crowley, Sea Cliff, NY
Marc Fenton, Moreno Valley, CA
Gregory Foss, Riverside, CA
James Grimes, Evanston, IL
Robert Lacey, Jr., Methuen, MA
Henry Lam, Bellaire, TX
Kishore Persaud, Catonsville, MD
Mark Phillips, Beacon, NY
Richard Williams, Trenton, NJ

St. Petersburg College (cont.)
Emilio Pareja, St. Petersburg, FL
Derrell Parrott, Tampa, FL

April 2017
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

SBE Event Sponsors

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
Fully Featured, Customizable Master Control

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Audio | Ultrimix
4K Ready | Ultrispeed
Control | DashBoard

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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.
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.

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!
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 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.

**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 elevation, 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 playout. 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.
SUSTAINING MEMBERS

Support the companies that support the SBE and the industry

April 2017
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...
A. ...am a ham radio operator, enjoy the outdoors, collect old shortwave radios and test equipment, 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 maintain 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
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

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Changes Come to SBE Board of Directors

SBE President Jerry Massey has appointed Wayne Pecena, CPBE, 8-VSB, AMD, 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, CEO, 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 legislatures 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."
**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.

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**MARK YOUR CALENDAR**

**SBE Membership Drive**
Began March 1, 2017  
Drive runs until May 31, 2017.  
sbe.org

**SBE Compensation Survey**
online  
April 1 - May 16, 2017  
sbe.org

**NAB Show**
Las Vegas, NV  
April 22 - 27, 2017  
nabshow.com

**SBE Certification Exams**
NAB Show  
April 25, 2017  
sbe.org/certification
Application deadline is March 17, 2017.

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