Add the SBE NAB Show Events To Your Calendar

With the NAB Show just around the corner, 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 19, at 6 p.m. in room S225. 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 chairmen, and updates on the society’s plans, programs and government relations efforts. Everyone attending will be eligible to win prizes, including a Blackmagic Design Micro Studio Camera 4K (courtesy of the Membership Meeting sponsor Blackmagic Design), a $300 gift card for Fry’s Electronics and restaurant gift cards.

You’ll want to be one of the first in line as well, because the first 135 people at the meeting will receive an SBE-logoed padded luggage handle.

The Membership Reception starts immediately after the meeting at 7 p.m. also in room S225. Light snacks and drinks are possible from the generous support of several Sustaining Member sponsors. They are listed on page 9. There will also be a prize drawing at the reception. Five B&H Photo $100 gift cards will be given away, courtesy of B&H Photo.

Check the complete event schedule on page 8 of this issue, and also in the SBE Sustaining Member 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!

SBE Broadcast Engineering Handbook Now Available

The SBE Broadcast Engineering Handbook: Hands-on Guide to Station Design and Maintenance is the latest in a series of books offered by the Society of Broadcast Engineers focused on broadcast technologies, station operation, and professional certification. The broadcast industry has embarked on perhaps the most significant transition of technologies and business models in the history of modern radio and television. Nowhere is this transition more evident than in the studio, where IT technologies are becoming the norm. With these and other changes in mind, the SBE undertook a project to produce a comprehensive handbook with McGraw-Hill that covers key areas of interest to broadcast engineers. This book is divided into seven major sections, plus an extensive annex. Each section focuses on a particular area of expertise.

- Section 1: Regulatory Issues
- Section 2: RF Systems
- Section 3: DTV Transport
- Section 4: IT Systems
- Section 5: Production Systems
- Section 6: Facility Issues
- Section 7: Broadcast Management

The goal of the handbook is to provide a concise overview of technologies, principles and practices of importance to radio and television broadcast engineers, and to provide pointers to additional detailed information. Led by noted industry author, Jerry C. Whitaker, CPBE, 8-VSB as editor-in-chief, more than 50 subject matter experts have contributed to this book, which will sure to be an important addition to any broadcast and media engineer’s toolbox.

The book is approximately 950 pages and includes many diagrams and photos. Order your copy through the SBE Bookstore at the SBE website (www.sbe.org and click on SBE Store). The book retails for $199 but members of the SBE may purchase it for $159, plus shipping, a 20% discount.

IN THIS ISSUE
3 Membership Drive
4 Letter from the President
6 Certification Recognition
8 SBE @ the NAB Show
10 Protect Your Licenses
11 22 Years With The BEC
12 UASs for Broadcasters
Manage your IP video deployments securely from anywhere in the world with the Core Cloud Platform. View, configure, monitor and record each of your Teradek codecs in real-time or route your video feeds to any number of destinations, including CDNs with Core’s intuitive drag and drop user interface.
SBE Membership Drive Runs Through May 31

The SBE Membership Drive began on March 1, and it carries the theme The Road To Success. 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.

If you recruit a new member during the Drive and your name is on the sponsor’s line of the membership application, your name 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 2016 Ohio Association of Broadcasters Engineering Conference in Columbus, OH, Oct. 26-27.

And as a further bonus, for every new member you sponsor you will receive $5 off your 2017 dues (up to $25).

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

A non-directional AM, a non-directional FM or a TV station has been constructed according to the terms of its construction permit and program tests have begun. How many days are allowed to complete equipment performance measurements and file an application for license to cover the outstanding construction permit?

A. 30 days  B. 20 days  C. 10 days  D. 1 calendar week  E. 1 calendar month

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Board of Directors

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SBE National Office
317-846-9000  www.sbe.org
Are You Ready for the NAB Show? The SBE Is.

Time seems to be flying faster because it seems like the 2015 NAB Show was just a couple of months ago! No matter how time is flying for us, the convention is here again, and it’s time for us to have the opportunity to see what’s new and meet colleagues from all across the world. This year as in the past, your Society of Broadcast Engineers will attend the NAB Show, and we are looking forward to meeting you.

Once again, the SBE, in partnership with the NAB, is sponsoring the Broadcast Engineering Conference. This is a great opportunity for you to catch up on the new technologies in addition to gaining a better understanding of present technologies and operations. These sessions are being presented by leaders in their fields, and many of these are SBE members themselves. If you come to Las Vegas early, the SBE will present the all-day Saturday Ennes Workshop. When you attend, get there early as it’s always a packed house. SBE member Fred Baumgartner CPBE, CBNT, has worked all year to put this together, and this year we have many exciting topics covering television, radio, IT and more. This is one event you can’t miss.

The SBE booth (L30) is where you will find the SBE staff and board members. In addition, you can check out the SBE Bookstore, renew your membership or join the SBE. The SBE booth will be in the same location as last year at the north end of the second floor lobby of the LVCC South Hall. In your travels to and from the Broadcast Engineering Conferences, take time to stop in. We want to meet you.

We have a very special event happening at the SBE booth on Sunday, April 17 at 3 p.m. PT, and you are invited to attend. We’ll hold a press conference to announce the release of the new SBE Broadcast Engineering Handbook: Hands-on Guide to Station Maintenance and Design. Come and meet the authors, look at the new book, and share in our excitement in this announcement.

Don’t forget the SBE membership meeting and reception. Mark your calendar for Tuesday, April 19 at 6 p.m. Room S225 for the Membership Meeting immediately followed by the reception in the same room. Come early and receive a neat door prize! I look forward to seeing you there.

While you are roaming the vast exhibits, look for SBE Sustaining Member placards in exhibitors’ booths. When you see that placard, tell that exhibitor you appreciate their sustaining membership in the SBE.

Sustaining Members not only provide financial support to the SBE, but many participate in the Broadcast Engineering Conference, the Ennes Workshops year round, SBE Webinars and the SBE University, giving you educational training for your career.

On another topic, let me talk about membership. Here is how you can help the SBE and also reduce your next year’s membership dues. Between now and May 31 for every new member you recruit to the SBE, you will receive up to $5 off your next year’s membership dues up to $25. What better way to bring a new member into the SBE and also to reduce your next year’s dues? And yes, there will be prizes given as well. A drawing will be held on June 4, and the grand prize will be a trip to the SBE National Meeting to be held in Columbus, OH, including airfare within the continental US, two nights at the Crowne Plaza Hotel and all registration for all the SBE events and conferences. There are also many other great prizes that will be awarded. For all the details be sure to visit the SBE website.

I am looking forward to meeting as many of you as I can at the NAB convention, so if you see me, introduce yourself. Safe travels, and I will see you soon.

Compensation Survey

The SBE is conducting its first (and ongoing) compensation survey now. The goal is 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.

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.

compensation survey.png

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Why Do I Need a Subnet Mask?

The Ethernet-based IP network has become an integral part of the broadcast technical facility. IP addressing can become a challenging aspect of designing and managing a network of host devices especially when public routable IPv4 addresses are involved. The scarcity and/or cost of public addresses create a need to optimize the IPv4 address deployment.

An IP host on an Ethernet network requires two types of addresses. The Layer 2 Media Access Control address (MAC address) is a unique hardware address that identifies the host within a network subnet or broadcast domain. At Layer 3, the IP address identifies a specific network that the host is connected to. If a host should move from one network to another, the IP address must change.

The IP address is a key component of the Layer 3 functionality, whether IPv4 or the newer IPv6 format. Several key points should be kept in mind with regards to IP addressing and these points should be considered as rules to observe:

- Each network must have a unique network ID
- Each host must have a unique host ID
- Every IP address must have a subnet mask
- An IP address must be unique if global routing is in use

The IPv4 address is a 32-bit binary address and provides 2^32 possible addresses. The 32-bit binary address is difficult to comprehend and manipulate, so a short-cut notion is commonly used. The 32-bit binary address is divided into four 8-bit sections, which are referred to as octets. Each octet represents one byte of data. The octet is converted from binary to a decimal format and each octet is separated by a decimal point to form the dotted-decimal expression format.

Behind the mask

The IPv4 address is actually comprised of two parts that specify the network address and the host address components. Recall that each IP address must have an address mask. The IP address mask determines where the separation point between the network address and the host address occurs. The mask for an IPv4 address is also a 32-bit address also expressed in dotted-decimal format such as 192.168.100.254.

The original implementations of IPv4 addressing utilized a class system to organize the entire range of possible IPv4 addresses ranging from Class A to Class E. Address classes A, B, and C are intended to be used for internetworking, and each class has a default mask address pre-determined and referred to as the default mask. Class A address space provides a smaller number of network addresses, but a large number of host addresses are available. Class C address space provides a large number of network addresses with a small number of available host addresses. The subnet mask became implied based upon the address class determine by the numerical value of the first octet. And since the boundaries were fixed, optimal address allocation was impossible.

Thus, Classfull addressing has been abandoned today when public address space is involved. The address mask could no longer be implied and had to be explicitly stated with each IP address.

The ability to specifically state the mask for each IP address allowed flexibility in the right-sizing of the number of networks and the hosts per network to better fit the specific network deployment. Variable-length subnet masks (VLSM) allowed the subnet mask to be specified on a bit-by-bit basis for the 32-bit IPv4 address mask.

Classless Inter Domain Routing (CIDR) was developed and routing protocols quickly updated to reflect the growing and widespread use of classless IP addressing. CIDR provided a shorthand ability to explicitly express the address mask. A slash notation scheme was developed as a short-hand approach to fully expressing the mask in dotted decimal notation. The CIDR notation technique allowed an IP address such as 192.168.100.254 with an address mask of 255.255.224.0 to be expressed as 192.168.100.254/19. The slash notation at the end of the IP address indicates the number of bits contained in the dotted-decimal address mask. See Figure 1. When IPv6 addressing is involved, CIDR notation is exclusively used. The subnet mask must now be explicitly stated and is the key for the IP host device to properly determine the network and the host portions of the IP address.

Learning is a continuous process for the broadcast engineer. Take advantage of SBE professional development events to learn a new technology, enhance your current skills, or add a certification to your personal professional portfolio. Continuous learning is a key trait of the successful technology professional and the SBE Education Committee is at work to bring you quality professional development programs covering relevant broadcast industry topics delivered in different mediums to meet your needs. Your comments, ideas for future programs, and feedback are always welcome!
Recognition of Milestones

The SBE is made up of a multitude of volunteers. There are seven employees who work at the National Office, but the real momentum of the SBE is because of those who dedicate their personal time to further the goals and objectives of broadcast engineering through the SBE. This includes, but is not limited to, the Board of Directors, all the various SBE committees in addition to the Certification Committee, and the local chapters including the chapter certification chairmen.

Every year at the annual membership meeting during NAB Show, the SBE recognizes the local certification chairmen who devote volunteer time to the Program of Certification. These local certification chairmen receive a plaque on the recurring five-year anniversaries. What follows is a list of those who will be recognized in April. Thank you very much to all of the volunteers who devote so many hours to the SBE and the certification program.

The annual SBE Membership Meeting will be held at the 2016 NAB Show on Tuesday, April 19, from 6 to 7 p.m., in Room S225 of the Las Vegas Convention Center.

During the Membership Meeting, we will also present certification chairman pins to the following local certification chairmen who are in their first year of service.

1 Year Recognition

Paul Kaminski, CBT; Chapter 1
Robert Reite, CBT; Chapter 2
Ronald Rockrohr, CBTE; Chapter 59
Kenneth Colwell, CSRE, DRB, CBNT, CBT; Chapter 65
David Brett, CBT; Chapter 122

This year we also celebrate six anniversaries for members of the National Certification Committee.

25 Years
Doug Garlinger, CPBE, 8-VSB, CBNT

20 Years
Ralph Hogan, CPBE, DRB, CBNE
Rick Ryan, CPBE

15 Years
Joe Snelson, CPBE, 8-VSB
Larry Wilkins, CPBE, AMD, CBNT

The permittee of a non-directional AM or FM station, or a non-directional or directional TV or Class A TV station, may begin program tests upon notification to the FCC in Washington, DC, provided that within 10 days thereafter, an application for a license is filed with the FCC in Washington, DC.
April 2016

SBE Certification Achievements

CONGRATULATIONS

LIFE CERTIFICATION
Certified Professional Broadcast Engineer®
Richard Klein, Waterford, NY - Chapter 58
David Raymond, Nashua, NH - Chapter 110
Cliffton Tillman, Cordova, TN
Certified Broadcast Networking Technologist®
Cliffton Tillman, Cordova, TN
Certified Professional 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. The person will continue in his/her current level of certification for life.

NOVEMBER EXAMS
Certified Broadcast Networking Technologist® (CBENT®)
Julian Adamaitis, Seattle, WA - Chapter 16
Certified Professional Broadcast Engineer® (CPBE®)
Lindsay Bold, Liberty, NC - Chapter 84
Carl Swanson, Washington, DC - Chapter 37
Dexter Wilson, Sellersburg, IN - Chapter 35
Applicant must have had 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.

CERTIFIED PROFESSIONAL BROADCAST ENGINEER® (CPBE®)
Timothy Kyobe, Kampala Uganda
Alabama Broadcasters Association
Certified Broadcast Technologist® (CBT®)
Sean Edwards, Bridgton, ME
Dale Ladner, Casco, ME
Jonathan Rodgers, Dothan, AL
Matthew Smith, Norway, ME

SPECIAL PROCTORED EXAMS
Certified Broadcast Networking Engineer™
(CBNE™) - Proctor
Timothy Kyobe, Kampala Uganda
Alabama Broadcasters Association
Certified Broadcast Technologist® (CBT®)
Sean Edwards, Bridgton, ME
Dale Ladner, Casco, ME
Jonathan Rodgers, Dothan, AL
Matthew Smith, Norway, ME

SBE CERTIFIED SCHOOL COURSE COMPLETION
Certified Broadcast Technologist® (CBT®)
Cleveland Institute of Electronics
Joseph Spampinato, Bethel Park, PA - Chapter 20
DINFCS
Kurt Caylor, La Habra, CA - Chapter 131
Sergio Cincoros, San Diego, CA - Chapter 36
Jierron Collins, Chesapeake Beach, MD - Chapter 37

CERTIFIED BY LICENSE
Certified Broadcast Technologist® (CBT®)
Aaron Speer, Stitzlaw, TX - Chapter 134

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

Certified Professional Broadcast Engineer® (CPBE®)
Parth Patel, Jeffrey, Chayenne, WY - Chapter 74
Samuel Cox, Escondido, CA - Chapter 36
Frank Giardina, Hoover, AL - Chapter 68
John Gober, Auburn, AL - Chapter 118
Alan Klinger, Concho Falls, WI - Chapter 80
Samuel Kilien, Hemirco, VA - Chapter 60
William Murdock, La Grange, IL - Chapter 26
Fred Nahl, Fort Saint Lucie, FL - Chapter 88
Robert Russell, Philadelphia, PA - Chapter 32
Thomas Saylor, Troy, ID - Chapter 117
Thomas Weeden, Madison, WI - Chapter 24
Certified Professional Broadcast Engineer® (CPBE®) 8-VSB Specialist (8-VSB®) AM Directional Specialist (AMD®)
Kenneth Drewes, Des Moines, IA - Chapter 109
Certified Professional Broadcast Engineer® (CPBE®) 8-VSB Specialist (8-VSB®) AM Directional Specialist (AMD®)
Larry Wilkins, Pratville, AL - Chapter 118
Certified Professional Broadcast Engineer® (CPBE®) AM Directional Specialist (AMD®) Digital Radio Broadcast Specialist (DBR®)
Wayne Pecena, College Station, TX - Chapter 99
Certified Professional Broadcast Engineer® (CPBE®) AM Directional Specialist (AMD®) Digital Radio Broadcast Specialist (DBR®) Mark Simpson, Marana, AZ - Chapter 32
Certified Professional Broadcast Engineer® (CPBE®) Digital Radio Broadcast Specialist™ (DBR®)
RAH Pestruean, Temp, AZ - Chapter 9
Certified Senior Radio Engineer® (CSRE®) J. Eric Hoehn, Washington, DC - Chapter 37
Certified Senior Radio Television Engineer® (CSRE®)
Thomas Lowther, Twin Falls, ID - Chapter 145
Certified Broadcast Networking Engineer™ (CBNE™)
Ralph Hogan, Tempe, AZ - Chapter 9
Wayne Pecena, College Station, TX - Chapter 99
Mark Simpson, Marana, AZ - Chapter 32
Certified Broadcast Radio Engineer® (CBRE®) Digi
tal Radio Broadcast Specialist (DBR®)
Jon Kasprik, Reno, NV - Chapter 12
Certified Broadcast Radio Engineer® (CBRE®)
Terrence Dupuis, South Montreal, PA - Chapter 55
Roy Ignacio, Springfield, VA - Chapter 37
Ryan Krupa, Rocky Hill, CT - Chapter 14
Eric Schacter, Scottsdale, AZ - Chapter 9
Joseph Torstano, Grants Pass, OR - Chapter 141
Certified Broadcast Television Engineer® (CBTE®)
Douglas Alman, San Marcos, CA - Chapter 96
Toni Baker, Charlotte, NC - Chapter 45
Frank Berman, Melville, NY - Chapter 15
Ernesto Camarena, Riverview, FL - Chapter 39
Horace Murray, Glen Burnie, MD - Chapter 37
Kevin Schrader, Marion, IA - Chapter 103
Trenton Shepard, Vashon, WA - Chapter 16
James Tronolone, Hackensack, NJ - Chapter 15
Donald Vickrey, Boise, ID - Chapter 115
Certified Broadcast Radio Engineer® (CBRE®)
AM Directional Specialist (AMD®)
Jack Roland, Wheat Ridge, CO - Chapter 48
Certified Audio Engineer® (CEA®)
Jon Kasprik, Reno, NV - Chapter 12
Certified Television Operator™ (CTO®)
Glenn Gass, Chattanooga, TN - Chapter 118
Michael Johnson, Chester, PA - Chapter 18
Gary Simonson, Fort Worth, TX - Chapter 67
Deb Sizer, Fort Mill, SC - Chapter 45
Certified Radio Operator® (CRO®)
Mark Schlichten, Sequim, WA
Certified Radio Operator® (CRO®)
Trenton Sheppard, Vashon, WA - Chapter 16
Horace Murray, Glen Burnie, MD - Chapter 37
Douglas Alman, San Marcos, CA - Chapter 96
Toni Baker, Charlotte, NC - Chapter 45
Frank Berman, Melville, NY - Chapter 15
Ernesto Camarena, Riverview, FL - Chapter 39
Horace Murray, Glen Burnie, MD - Chapter 37
Kevin Schrader, Marion, IA - Chapter 103
Trenton Shepard, Vashon, WA - Chapter 16
James Tronolone, Hackensack, NJ - Chapter 15
Donald Vickrey, Boise, ID - Chapter 115
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Glenn Gass, Chattanooga, TN - Chapter 118
Michael Johnson, Chester, PA - Chapter 18
Gary Simonson, Fort Worth, TX - Chapter 67
Deb Sizer, Fort Mill, SC - Chapter 45
Certified Radio Operator® (CRO®)
Mark Schlichten, Sequim, WA
Certified Radio Operator® (CRO®)
SBE Schedule of Events

Saturday, April 16
• SBE Ennes Workshop .......................... 8 a.m.-5:40 p.m.
  Conference registration required
  LVCC South Hall Meeting Room S219
• SBE Frequency Coordination Committee Meeting ........................................... 3 -5 p.m.
  Westgate Resort Conference Room 8
• SBE Certification Committee Meeting ............................................................. 6:30-11 p.m.
  Westgate Resort Conference Room 7

Sunday, April 17
• SBE Board of Directors Meeting ................................................................. 8:30 a.m.-12 p.m.
  Westgate Resort Conference Rooms 7 and 8
• SBE Broadcast Engineering Handbook Press Conference .................................... 3 p.m.
  LVCC exhibit booth L30
• SBE Education Committee Meeting .......................................................... 3-4:30 p.m.
  Westgate Resort Conference Room 7

Monday, April 18
• Fry’s Gift Card Daily Booth Giveaway
  Courtesy of Nemal Electronics

Tuesday, April 19
• SBE Frequency Coordinators Meeting ......................................................... 8:30-10:30 a.m.
  Westgate Resort Conference Rooms 7 - 8
• SBE Certification Exams ............................................................................. 9 a.m.-12 p.m.
  Westgate Resort Conference Rooms 9 - 10
• Fry’s Gift Card Daily Booth Giveaway
  Courtesy of Ka You Systems
• SBE Spring Membership Meeting ............................................................. 6-7 p.m.
  Blackmagic Design Micro Studio Camera 4K giveaway, plus other prizes
  LVCC South Hall Meeting Room S225
• SBE Membership Reception ....................................................................... 7-8 p.m.
  Five $100 B&H Photo Video Pro Audio gift cards giveaway
  LVCC South Hall Meeting Room S225

Wednesday, April 20
• Fry’s Gift Card Daily Booth Giveaway
  Courtesy of Blackmagic Design

SBE Booth Hours
Booth L30
Sunday: 2 p.m. - 4 p.m.
Monday: 10 a.m. - 6 p.m.
Tuesday: 9 a.m. - 5:30 p.m.
Wednesday: 9 a.m. - 6 p.m.
Thursday: 9 a.m. - 2 p.m.
Candidates Sought for SBE Board of Directors

The SBE is governed by a volunteer, elected Board of Directors. Those who have served on the board have worked at broadcast stations, as consultants, for manufacturers, in education and government. They come from across the country.

If you are interested in running for a seat on the national SBE Board of Directors, contact a member of the Nominations Committee by April 25. The annual election will be held this summer. Qualified candidates include voting members (Member, Senior, Fellow or the designated representative of a SBE Sustaining Member) who are in good standing (dues paid). Candidates must hold an engineering level of SBE certification (CBT or higher or CBNE) and, if elected, maintain the certification the entire duration of service on the Board. 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 represent all members, not any one specific region, state, city or chapter. It is suggested that candidates have previous experience as a leader in his or her local chapter, or other volunteer leadership experience, prior to running for the national SBE Board.

Members of the Board are expected to attend two regularly called 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.

For more information, or to express your interest to run, contact any member of the SBE Nominations Committee: Chairman - RJ Russell, Chapter 18, Philadelphia, rjrussell@sbe.org or 215-982-5310; Mark Simpson, Chapter 32, Tucson, mark.simpson@townsquaremedia.com; and Jim Schoedler, Chapter 48, Denver, jschoedler@usa.net.

Chapter 59 Kansas City

Chapter 59 Kansas City met in March and held an open forum meeting. Various discussion topics included the NAB Show, RF interference, ideas for upcoming meeting presentations, transmitter site maintenance, and data service providers.

Chapter 111 Huntsville, AL

The 2015 SBE National Meeting was held in October. Kirk Harnack, CBRE, CBNE, then serving on the Board of Directors, accepted the chapter award for Greatest Growth in New Members on behalf of Chapter 111, and he presented it to the chapter leaders upon his return. Pictured are Chapter Chair Kevin Kidd, CSRE, AMD; Harnack; Secretary Dave Spindle; Vice Chair Rick Korab; and Treasurer Hal Beach.

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have written before about the need to police your own BAS licenses. Yes, it can be expensive to correct a fixed-link license to correct the azimuth or specify a receive-site location because you have to go through the FCC’s ill-conceived prior-coordination-notice process to do so. But it has to be done and it has to be done now.

I have praised my long-time friend Howard Fine for his volunteer crusade to urge licensees to add missing or incorrect receive-site data in fixed, point-to-point link licenses (including aural STLs) and TV pickup licenses. Howard has contacted engineers, licensees and communications lawyers for licensees about this. He knows which licenses are bad and which aren’t, and it is easy to find out in the FCC’s ULS which licenses have missing or obviously incorrect receive sites. Howard is still at it, and good for him for doing so.

He reminded me recently that the SBE frequency coordinators have, in BAS bands such as 7GHz, which are shared with other radio services, protected BAS licensees because they know where every fixed link is. But you cannot rely on these volunteers. You have to register your receive site to be protected against interference to that site. It is as simple as that. Howard reports that his recent survey of the database that still more than 15 percent of licenses were either missing receive site data altogether or reflected other obviously incorrect license data. Many, for example, show the same coordinates in both Locations #1 and #2. Location #2 is supposed to be the receive site. Occasionally, a license will transpose the coordinates between locations 1 and 2.

This stemmed from the time that the FCC was manually inputting Part 74 licenses into the ULS database. (Honestly, take it from an old guy, they used to keep these records on 3x5 cards). That was at a time when spectrum wasn’t crowded and we weren’t having to share bands with potentially very incompatible sharing partners, as we are now.

Howard categorizes the “bad license data” into three groups: (1) those with missing receive site data entirely (i.e. no location #2 at all); (2) those in which the bearing (azimuth) does not match the coordinates, or else there is other clearly bad technical data in the license); and (3) the Facility ID number for the main station is missing from the license. Not specifying a Facility ID for the main station creates difficulties in license renewals and it disallows tracking of BAS licenses when a main station is assigned. In addition to these common errors, there are also quite a few duplicate licenses. These arise from a licensee’s relocating a studio, applying for a new license instead of modifying the old one, and then leaving the old one in the database undeleted. This is not a small problem. Howard says that one TV licensee has 99 “bad” licenses (his term) and another licensee has more than 70.

What to Do

The Commission’s policy is to not protect a licensee if the license is not correct, regardless of the reason for it. The Commission’s rules do in fact require a licensee to ensure that the license has correct data in it.

Our sharing partners have been active in this effort as well, for their own reasons. The SBE, NAB and the National Spectrum Management Association (NSMA) have joined with broadcast licensees, consultants, commercial frequency coordinators, fixed service licensees and fixed service engineers have formed a working group to deal with BAS and fixed service sharing issues. The group has had monthly meetings since 2010 and has developed NSMA recommendations for BAS and FS frequency sharing. The group has prepared a presentation to the FCC to address database issues. Its other tasks include development of procedures to ensure compatibility between FS and BAS uses; create interference calculation and coordination methodologies; and to determine geographic separation requirements. The NSMA working group plans a presentation to the FCC soon, with the objectives of enlisting the FCC’s help to correct inaccurate data in the ULS database; add missing data for existing BAS stations; provide ongoing industry awareness, and to enlist the FCC’s cooperation to take constructive steps to provide a positive incentive to licensees that will encourage improvement of the license data. NSMA is not at all focused on enforcement or assessing blame on anyone for the current situation; the group just wants to get the database fixed.

The FCC last issued a public notice about this issue on Feb. 10, 1999. That notice was not seen by a large segment of the industry because online monitoring of FCC releases was not as widespread then as it is now. Among the actions the group will ask the FCC to take include issuing a new public notice; sending a letter to approximately 1,000 licensees requesting data correction, and to withhold enforcement, so as to encourage broadcasters in a positive way to make necessary corrections of licenses. For the SBE’s part, we will continue to encourage licensees to fix the databases. To some extent, this is a self-correcting problem because interference to a TV pickup receive site or a fixed BAS link receive site is the penalty for not doing this. But that is the hard way around. Let’s not wait that long.
FOCUS ON SBE

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

I

April 2016

Renew Your SBE Membership and Stay Connected

It’s not too late to renew your membership in the SBE. Those in the Member, Senior, Student, Associate and Fellow membership categories may renew online at www.sbe.org. Click on “Renew Membership” in the upper right-hand corner of the main page.

The online system is available 24/7, is secure, and accepts Visa, MasterCard and American Express. The system automatically generates a receipt that will be sent to your email address. You’ll 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. An automated email message is sent to the renewing member confirming renewal and payment.

You may also renew by completing and returning the renewal form 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.

If you have questions about your renewal, or if you did not receive a renewal reminder in February, contact Scott Jones at the SBE National Office at 317-846-9000 or kjones@sbe.org.

SBE Co-Presents NAB BEC for 22nd Year

It’s April, which means it’s time for the annual NAB Show in Las Vegas. Elsewhere in this issue of The Signal, you’ll find information about the SBE’s participation in the show, including the Spring SBE Membership Meeting and Reception, information about the SBE exhibit booth, the meeting of SBE and affiliated frequency coordinators and more.

The SBE’s participation also extends to the annual NAB Broadcast Engineering Conference (BEC), held as a part of the NAB Show. This six-day conference is the longest in length and longest running conference at the show and is recognized as the largest and most important conference for broadcast and media engineers and technicians in the world. The SBE is pleased to be a co-presenter of the conference for the 22nd consecutive year.

The conference is managed by the NAB Technology Department and guided by the volunteer BEC Committee, which includes a number of SBE members. They include BEC Chairman Alan Jurison, CPBE, AMD, DRB, CBNE, of iHeartMedia; Jim Leifer, CPBE, also of iHeartMedia; RJ Russell, CPBE, of Fox29 Philadelphia; Kim Sacks, CBT, of www.optimod.fm; and Milford Smith of Greater Media. Also serving on the committee are Pete Sockett of Capital Broadcasting, Ted Stoner of Univision Communications, and Ray Thumber of Scripps Media. Representing the Ennes Educational Foundation Trust and the SBE is Fred Baumgartner, CPBE, CBNT, of Nautel, who plans and chairs the day-long Ennes Workshop program held the first day of the BEC.

Committee members determine BEC session topics, select papers from hundreds of submissions and moderate the sessions. Our thanks to these volunteers and staff for their efforts to make this the preeminent broadcast technical conference in the world.

Contract and Consulting Engineers

A significant number of SBE members make part or all of their living providing consulting or contract engineering work. The SBE provides support for these members specifically aimed at their special needs. We announced last August that, after four years without, a new professional liability insurance program was now available, designed for those in the broadcast engineering field. This coverage, underwritten by a unit of Lloyds of London, is available through the Hays Companies of Washington, DC. For more information, contact Henry Cifuentes at 202-263-4018 or hcfuentes@hayscompanies.com.

The SBE also offers an inexpensive way for contractors and consultants to advertise their businesses. The SBE Contract and Consulting Engineer Directory is an alphabetical listing by state and name that includes information about the services offered, geographical area served and contact information. The directory is located at the SBE website, Membership Directory section under “Contract Engineers.” About 60 members are currently listed. The directory is accessible to anyone. For more information or to place your listing, contact Chriss Scherer at cscherer@sbe.org.

The SBE also has available at no charge to members a sample contract written by legal counsel with input from contract engineers. The sample contract includes many of the contract items that contract engineers require. To request a copy of the sample contract, contact Scott Jones at kjones@sbe.org.

Farewell to a Friend

The SBE national office has been located in Indianapolis, IN, since the mid-1970s. Since the SBE first moved here, members of Indianapolis Chapter 25 have helped move the office several times, provided used office equipment to us, and have just been generally very supportive of the staff and our function here. They have also counted the ballots for the annual national board of director’s election each year.

I’m sad to say that we lost one of those long-time Chapter 25 members with the passing of David Fort in February. Dave, who had been ill for several months, was a regular at the annual ballot count and was well known among the local engineering community here, having worked for a number of broadcasters over his 40+ year career. Since 1999, Dave was one of the five local members who made up the NFL Game Day Coordination crew handling the games of the Indianapolis Colts, and had worked on the frequency coordination crew for the 2012 Super Bowl that was held here. The staff of the national office expresses our condolences to Dave’s family and friends.

Dave Fort
Unmanned aircraft systems (UAS) are a hot topic, and their use for station newsgathering has gained a lot of interest. But stations need to know a few things before safely, effectively and legally using them.

The path for broadcasters and digital media to commercially operate a UAS for newsgathering operations is attainable with a dedicated, focused plan. Here are some current tips and facts for a successful UAS FAA application and operation.

- The UAS pilot in command (PIC) must have an FAA airman certificate, Recreational, Private or Commercial with a medical and current Biennial Flight Review (BFR). This could change.
- Seek out an FAA-approved UAS flight school for proper training and procedures. From that training develop a UAS operations manual for your flight operations. This will be needed for FAA certification. This training can help you develop flight operations skills for a two-person operation and determine the best UAS system and quadcopter for your requirements.
- Application and approval for an FAA Section 333 waiver is required to operate commercially. Once an FAA waiver is approved, a certificate of operations (COA) will be issued determining your flight requirements.
  - Determine with risk management your appropriate insurance coverage.
  - Train and operate no different than any flight operation: Safety first!

Recent developments indicate a changing landscape regarding the FAA attitude towards UAS operations.

The News Media Coalition along with the Mid Atlantic Aviation Partnership led by Virginia Tech have submitted to the FAA the results of the Coalition training and development of UAS newsgathering procedures outside Washington, DC, and at Virginia Tech in 2015. Participants for the Coalition include E.W. Scripps, Gannett/TEGNA, Sinclair Broadcast Group, Univision, The Associated Press, The Washington Post, The New Your Times, ABC, NBC/Universal, Reuters, Capital Broadcasting, Getty Images US, and Advance Publications. The recommendations to the FAA from the Phase I and Phase II training sessions suggest journalists can operate safely without a manned pilot’s certificate under controlled conditions with appropriate training.

On Feb. 24 The U.S. Department of Transportation announced the Federal Aviation Administration (FAA) is establishing an aviation rulemaking committee with industry stakeholders to develop recommendations for a regulatory framework that would allow certain UAS to be operated over people who are not directly involved in the operation of the aircraft. The FAA is taking this action to provide a more flexible, performance-based approach for these operations than what was considered for Micro UAS. The committee will begin its work in March and issue its final report to the FAA on April 1.

“The Department continues to be bullish on new technology,” said U.S. Transportation Secretary Anthony Foxx. “We recognize the significant industry interest in expanding commercial access to the National Airspace System. The short deadline reinforces our commitment to a flexible regulatory approach that can accommodate innovation while maintaining today’s high levels of safety.”

Some TV stations have already obtained their Section 33 waiver and are starting newsgathering operation with UAS systems. Stay tuned as this new technology develops as a viable newsgathering tool and the evolving relationship with the media and FAA makes headway.
Member Spotlight: Richard Bach

Richard in front of his collection of press credentials.

Q. What do you find most satisfying in your job?
A. The one overwhelming thing I like about my position is that I get to play with the same stuff I use for my ham TV station. Just after Katrina hit New Orleans we made arrangements for backup transmitters and what was supposed to be a portable studio. What we got was a generator pod and two double-wide trailers. My ham station was on the second floor of my condo, so I hauled a majority of my ham equipment to the double-wides to get us back on the air long before any other station.

Q. When I’m not working I...
A. ...play soccer, dabble in some woodworking and music creation.

Q. Do you have a nickname?
A. I got my Ham ticket in high school and a WWII vet teacher hung the nickname Sparks on me and it stuck throughout school.

2015 SBE Financial Year in Review

The Society of Broadcast Engineers, Inc. completed 2015 with net revenue from all operations of $-65,914. Gross income from all sources was $650,851 while expenses were $716,764. The value of SBE savings and investments as of Dec. 31, 2015 was $1,056,114. Total SBE assets as of Dec. 31, 2015 were $1,067,926, a decrease of $65,640 over 2014. Much of the drop in net-revenue and total assets was due to a drop in the unrealized gain/loss of long-term investments by $40,287. Long-term investment interest and dividends were $34,831 bringing net long-term investments for the year to -$5,384.

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

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Q. What do you enjoy or value most about your SBE involvement?
A. I enjoy finding out about new technologies through the SBE meetings and seminars.

Q. What got you started in broadcast engineering?
A. I got started in broadcasting because a CE was listening to my discussions with one of his engineers about the building of my ham TV station. He listened for years and when he had an opening he called. I told him I had no interest in “fixing TVs,” he then corrected me and said, “No, broadcast TV.” I said, “Sure; I have not tried that yet.” He then said to show up at WVUE and I would have the job. When I asked about an interview, he said “I have been listening to you for years, just do not barf on my desk and you’re hired.”
NEW MEMBERS
Michael J. Amato, Jr. - Haddon Township, NJ
Ruben Araza - Vail, AZ
Thomas W. Backus - Knoxville, TN
John M. Banks - Kerrville, TX
James M. Brownell - Huntsville, AL
Ann E. Braun - Tulsa, OK
Christopher D. Burns - Cincinnati, OH
Christopher M. Carnes - Palm City, FL
Amr Abdel Dayem - Thousand Oaks, CA
Sheldon B. DeFez - Lilburn, GA
Felimen B. Dula Cruz - Doha, Qatar
T. Lee Delaney - Lexington, KY
Shawn D. DeVeord - Grand Rapids, MI
Joseph W. Ducote - Fremont, CA
Sean C. Edwards - Bridgton, ME
Kelly Ethridge - Sachse, TX
Bret M. Falsetto - Springfield, MO
Steve Floyd - Fairfax Station, VA
Eric French - Columbus, OH
Gary E. Gallinger - Indianapolis, IN
Brandon J. Gibson - Maineville, OH
Jon W. Grubbs - Wheeling, IL
Timmie R. Haverland - Fort Bragg, NC
Stephen D. Hinton - Cincinnati, OH
John W. Hinton - Houston, TX
Joseph Ivanicki - Brooklyn, NY
Gregory Jones - Cincinnati, OH
Eric R. Kaniu - Millbury, MA
Paul W. Lockhart - Huntsville, AL
Rick Loesch - Naga Head, NC
Luke J. Lukofahr - St. Genevieve, MO
Mike MacKenzie - Phoenix, AZ
Marcus Marshall - Silver Spring, MD
Michael T. Nah - Monrovia, Liberia
Darryl W. Niederbauer - Harrison, OH
Steven M. Pacheco - Romeoville, IL
Michael J. Petz - Fairview Heights, IL
Ward Presley - Huntsville, AL
Kevin J. Quick - South Glens Falls, NY
Brian Reilly - Nashville, TN
John Roberts - Lewiston, OK
Jonathan W. Rodgers - Dothan, AL
Mitchell Savini - Evans, GA
John W. Schueler - Colora, MD
Zach Shore - Washington, DC
Matthew P. Smith - Norfolk, NE
Joseph W. Spanipinato - Bethel Park, PA
Aaron C. Speer - Slibben, TX
Joshua Taylor - Pontotoc, MS
Michael B. Travis - Odenton, MD
James K. Vanaman - Viera, FL
James R. Waltrip - Seattle, WA

NEW STUDENT MEMBERS
Charles G. Arbogast - Little Elm, TX
Chi Wing Chong - Hong Kong, China
Michael M. Davis - Hueytown, AL
Michael Frushour - Brookfield, IL
Gavin S. Hornak - Long Grove, IL
Hon Chung Lam - Hong Kong, China
Cheuk Hong Lam - Hong Kong, China
Chun On Lee - Hong Kong, China
Hui Chung Leung - Hong Kong, China
Ying Kit Ling - Hong Kong, China
Wai Leung Pok - Hong Kong, China
Tsz Hei So - Hong Kong, China
Yee Sum To - Hong Kong, China
Pang Chun Yeung - Hong Kong, China

NEW ASSOCIATE MEMBERS
Dale S. Ladner - Casco, ME

RETURNING ASSOCIATE MEMBERS
Joel Roth - Lakewood, WA
Brian R. Walker - Warren, OR

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FOUNDATION TRUST
The trust offers scholarship and educational programming and grants that benefit broadcast engineering and the broadcast community. 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.

THANKS TO THE FOLLOWING SUPPORTERS FOR THEIR CONTRIBUTIONS
Ennes Scholarship
Thomas Aliderson, Spokane, WA
Jamie Bauman, San Antonio, TX
Hai-jong Chon, Woodbridge, CT
Jorge Condie, Guayama, PR
Barry Grossman, Hoboken, NJ
Rachel Johnson, Milwaukee, WI
Britt Lockhart, Yukon, OK
Larence Oaks, Indianapolis, IN
Timothy Parish, Sacramento, CA
Stephen Pougl, Madison, WI
Kishore Persaud, Catonsville, MD
SBE Chapter 3, Kansas
Robert Sleight, Apex, NC
Richard Thomas II, Okemos, MI
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David Tummure, Pocatello, ID
Battison Scholarship
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Youth Scholarship
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Save the dates: August 9-11 • Atlanta
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Register now for this premier learning event.
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WELCOME TO THE SBE

R. Ferguson is now system support engineer at the Telos Alliance. He is based in the Dallas/Ft. Worth area.

Will Shifflet, CBTE, has accepted a job at Oklahoma State University as engineer for the School of Media and Strategic Communications.

Andrew Lombard, CBTE, is director of engineering for Fox Television in Phoenix.

Michael Streby, CBTE, 8-VSB, CBNE, is now chief engineer of KDRT-TV, Sioux Falls, SD.

Richard Friedel of Fox Networks has been elected the board chairman of the ATSC for 2016.

Keith Kintner, CPBE, CBNT, has retired from the University of Wisconsin Oshkosh Radio-TV-Film department, where he has worked for the past 12 years.

Steve Griesbach has been named market director of engineering for the Las Vegas cluster of Beasley Broadcast Group stations.

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

Recruit a new SBE member during the 2016 SBE Membership Drive. More info on page 3.
<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Details</th>
</tr>
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<tbody>
<tr>
<td>SBE Membership Drive Begins</td>
<td>March 1, 2016</td>
<td>sbe.org</td>
</tr>
<tr>
<td>2016 NAB Show</td>
<td>Las Vegas</td>
<td>May 16, 2016 sbe.org/webinars</td>
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<td>Dayton Hamvention</td>
<td>Dayton, OH</td>
<td>May 20 - 22, 2016 hamvention.org</td>
</tr>
<tr>
<td>SBE Membership Drive Ends</td>
<td>May 31, 2016</td>
<td>sbe.org</td>
</tr>
<tr>
<td>SBE Certification Exams</td>
<td>2016 NAB Show</td>
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<tr>
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<td>Las Vegas</td>
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<td>June 3 - 13, 2016 sbe.org/certification</td>
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<td>June 3 - 13, 2016 sbe.org/certification</td>
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<td>TAB Convention</td>
<td>Austin, TX</td>
<td>Aug. 10 - 11, 2016 tab.org</td>
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Application deadline is March 18, 2016.
Application deadline is April 15, 2016.
Application deadline is April 15, 2016.
Application deadline is June 3, 2016.