THE signal

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Society of Broadcast Engineers

SBE 50 YEARS 1964-2014

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www.sbe.org

Best Engineering Practices is Ennes program at 2014 NAB Show

By Fred Baumgartner, CPBE, CBNT, Ennes Trustee

Exactly 50 years ago *to the day* of this year's SBE/Ennes Broadcast Engineering program at NAB, the SBE was being born at a much smaller NAB conference held in Chicago. I do wonder if anyone at that first SBE meeting could have imagined that there would be a few hundred Broadcast Engineers attending a day long program in a very large room with giant TV screens learning about everything from TV drones to IPX. I'd like to think they would be amazed, impressed, and proud of the whirlwind that those first butterfly wing beats set in motion.

I'll be honest, the part of this year's program I'm maybe most looking forward to is that John Poray is going to forgo his usual greeting and SBE update

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Las Vegas Convention Center once again will host the annual NAB Show

SBE announces this year's Leadership Development Course

Planning for the 2014 SBE Leadership Development Course has begun. This professional development course is a three-day intensive study of successful leadership and management. Participants will be challenged to refine their leadership skills as they better understand and improve how to interact with others.

Engineers are often confronted with communicating their department's needs to upper management, especially when it comes to big projects and significant budget requests. This course, designed specifically for broadcast engineers, offers insight into the type of personality you have, and how to communicate with others who have personalities that may differ from yours. Attendees will take a leadership style assessment to help identify their leadership behaviors and learn how to utilize that style when leading others. Through significant interaction and exercises, students will also explore

LEADERSHIP, page 6

The 2013 SBE Leadership Development Course class.

IN THIS ISSUE

Candidate Nominations Open for SBE Fellows

Troy Pennington, CSRE, CBNT, Chair, SBE Fellowship Committee

Fellow membership is the highest level of SBE membership. It's a form of recognition for someone who has contributed significantly to the society, the field of broadcast engineering or its allied professions, or by disseminating their broadcasting knowledge and promoting its application in practice. Seventy-four members have been recognized with the honor in the society's 50 years of existence. The SBE is now accepting nominations for 2014.

Do you know a member who has made a difference in your SBE chapter over an extended period of time; or someone who has exhibited a dedication to the advancement of the field of broadcast engineering and the Society of Broadcast Engineers? Consider nominating him or her for the SBE Fellow rank of membership.

To nominate a member, write a letter of nomination that explains the nominee's professional qualifications and accomplishments. The nominee must be a member of the SBE in good-standing. Letters should be addressed to the chairman of the SBE Fellowship Committee. The nomination letter must be submitted by a voting member of the society. It also must include written endorsements of at least five other voting members of the SBE. All nominations are to be kept confidential. No others besides the nominators and the members of the national Fellowship Committee should be aware of the nomination. Moreover, the nominee should not be made aware that he or she has been nominated.

Nominations for 2014 must be received no later than March 14, 2014 for consideration. The Fellowship Committee will bring the names of nominees to the board of directors for consideration and election at their meeting on April 6, 2014. The SBE secretary will notify those elected. Awards will be presented at the SBE National Awards Dinner during the 2014 50th Anniversary SBE National Meeting, to be held in Verona, N.Y. on October 8.

Submit nominations to Fellowship Committee Chair, Troy Pennington, CSRE, CBNT, 6156 Hampton Hall Way, Hermitage, TN 37076 or to troy.pennington@cumulus.com.

Larry Wilkins, CPBE, AMD, CBNT addresses the crowd after receiving the SBE Fellow honor at the 2013 SBE National Awards Dinner.

SBE at the 2014 NAB Show

New booth location!
Las Vegas Convention Center, South Hall, north end of the second floor lobby area.

SBE Membership Meeting
Tuesday, April 8, 5:30 -6:30 pm, LVCC Room S-225

SBE 50th Anniversary Reception for members and guests
free beverages and hors d'oeuvers
Tuesday, April 8, 6:30 to 8:30 pm, LVCC Room S-219

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in favor of a reminiscence of half-a-century ago (he was 8 that year). There will be more SBE anniversary events and nostalgia over NAB week, but there is something almost spiritual about being in a room with hundreds of Broadcast Engineers at exactly that moment, doing the work of personal and professional development that was envisioned a lifetime ago.

Here's a little preview of this, the 19th Ennes program that the SBE has done at NAB:

Ever wonder how ratings in Radio and TV really work? You might have asked only to hit a wall. Long time and active SBE member Paul Kempter does know, having worked deeply in the technology with Nielsen and Arbitron and the resulting standards, people meters, etc.

Historically, we'll take a quick peek at the Shure Model 55, which was 25-years old when the SBE formed (I'm sure you can do the math). We'll also take a side trip to the ESB… Empire State Building today.

In the need to know category, our opening tutorial is all about what engineers need to know about finance, and now, how digital media is monetized. I've asked Paul Latham, my director of finance here at KMGH, to answer dozens of questions on everything from P&L management, to depreciation and refresh cycles and the tax laws and business conditions that impact this. Paul has experience with radio and TV, small and large markets, and while he's never spoken to engineers before, what he knows will help you a great deal.

Burkes Young runs this mysterious world where income comes from digital places outside of running spots as many TV stations that have seen their revenues build from spots to retransmission fees, to digital. Digital will have more and more to do with operations of both radio and TV in the future… good to know how it gets paid for.

4K might not be on your immediate radar, but planning for it probably ought to be. At least understanding the options of getting this kind of resolution through your facility is useful. Stan Moote does a compact tutorial on the subject. By then, Robert Seidel and CBS will have had some experience with UltraHD SIow Motion at the Super Bowl. "HEYEpervision" records 300-frames a second, and with six camera locations, some amazing results are likely. I'll be looking forward to hearing about how they put this together, and how it changes the way we do sports.

If you work in this business, even in TV, you almost certainly read ***Radio World*** regularly. One of the first two pieces I read is John Bisset's and Mark Person's articles on good versus not-so-good engineering practice. One rule of engineering is that we learn more from our mistakes than from our successes, and sometimes it is enormously valuable to look at our errors. I've seen some of these slides, and I can't take my eyes away. Good stuff for any of us with transmission lines, towers, power supplies, computers, connectors, etc.

The program is Saturday, April 5th. It's part of the full admission NAB package which you can get at a discount through SBE, if your employer is not already a member of NAB. It is also part of your PBS TECHCON admission through the courtesy of NAB and SBE. Just ask anyone who has attended this program how far out of their way they would go to attend. I hope that you are lucky enough to attend.

A standing–room-only crowd attended the SBE Ennes program during the 2013 NAB Show in Las Vegas.

LETTER FROM THE PRESIDENT

by Joe Snelson, CPBE, 8-VSB
SBE President
jsnelson@sbe.org

You Can Tell by the Name

Before I begin on my topic for this issue I want to say a belated Happy New Year to all. I hope everyone had an enjoyable holiday season. We have now entered 2014 and it will be interesting to see what develops on the industry front with the number of things that are going on. The SBE will be following these closely, participating and giving updates to our members along the way. We will closely follow the regulatory initiatives to provide improvements to the AM band and the sharing of the 2 GHz BAS spectrum with the Department of Defense and its impact on frequency coordination.

In addition to watching the regulatory front the SBE has a number of educational opportunities we will offer. We have a number of subcommittees that will be working on executing their strategic planning assignments. We will also continue the celebration of the SBE's 50th anniversary including activities at the 2014 NAB show and culminating into the final event at our national meeting in October. We will keep you informed as the year progresses. Now to my topic for this issue.

I remember seeing an insert inside the package of a well-known condiment titled, "You can tell by the name." It talked about how names are unique and define a specific person, product or service. The name establishes a "brand" that immediately triggers in the mind of the person hearing it as to what it means. I was reminded of this when I thought about the work of a committee I chaired last year for the SBE, a committee that was tagged the "rebranding" committee. I would like to briefly explain the committee's goal, how it accomplished its task and then share the results.

The committee was formed as a result of the strategic planning meeting held in 2012. The charge given to the committee was to determine if the name of our society is still applicable today and what changes should be made to either the name or logo. As you can imagine this was a tall order and one that needed to be approached carefully and methodically.

A committee was formed with four members plus myself as chairman. Several meetings were held to determine how to go about arriving to a conclusion for the charge given. The committee decided that a survey would be an appropriate way to gain the answers. It was decided that four groups of individuals should be surveyed. The groups consisted of SBE members, SBE non-members, SBE sustaining members and broadcast industry leaders. Some of you reading this may recall receiving an invitation to participate in this survey since over 2000 SBE members were randomly invited to participate.

The committee gave careful attention to the writing of the questions with particular attention to the phrasing in an attempt to avoid leading questions. We were also sensitive to the number of the questions in the survey. I am sure you have received questionnaires consisting of 50 questions or more for which you simply tossed due to the time required to complete it. Our goal was to target around ten multiple choice type questions that could be answered in about three to five minutes by the respondent.

While some of the questions could be used for any of the four groups previously mentioned there were some that were targeted for each specific group. There were questions asked regarding the SBE name, logo and how both are perceived by the respondent and others. Over 830 responses were received from the four groups. After the survey closed the results were tabulated and presented to the committee.

Now, for the results. The majority of the respondents to the survey either agreed or strongly agreed that the SBE encompasses the duties our members perform. They also felt the brand "Society of Broadcast Engineers" is inclusive of a wider industry definition than only traditional broadcast engineering. The same was true for the SBE logo.

In reading the responses the committee did feel that some marketing of the SBE brand may be in order. This marketing could include minor changes or enhancements to the SBE logo to make it more visible and help lock it into the minds of those seeing it. It was also suggested that a tag line could be helpful. I'm sure all of us can recall tag lines or slogans for products or services.

The committee prepared its report and submitted it to the board at the 2013 SBE National Meeting. The board agreed with the findings of the committee and asked that further study be made into possible logo enhancements and tag lines. As part of my duties as president I have appointed a chairman to a committee charged with looking into further branding of the SBE.

Circling back to, "You can tell by the name," I decided to look up some of the definitions of the words that make up our name. The word society is defined as a "voluntary association of individuals for common ends." The common end for our society is the education and dissemination of knowledge to our membership. We do this through various methods ranging from publications, webinars and, of course, the activities of our local chapters.

The word broadcast is defined as "cast or scattered in all directions". Another definition I particularly like is "one to many". Our members work behind the scenes and support those that are at the microphone or in front of the camera. People sometimes feel broadcast only relates to using a transmitter and antenna to get the audio/video product out to the masses. Of course, we know that is not the case now. Today's broadcast engineer must be capable of using multiple methods of distribution and not just RF. For example, the use of streaming audio and video is common place. The SBE has developed a number of educational materials dealing with all methods of getting the message to the masses ranging from Internet Protocol to RF.

Lastly, I like one of the definitions I found for the word engineer that read, "A person who carries through an enterprise by skillful or artful contrivance." While that sounds like a mouthful I feel it describes what many of our members do. A broadcast engineer possesses a unique skillset in getting entertaining and/or informative material to the masses with high quality and in a reliable manner regardless of the manner of distribution, especially in times of emergency.

Certainly the words in our name tell who our members are, what they do and that they are interested in associating with others that have a common interest. Our committee and board will continue their work to enhance the SBE brand in the coming months and I look forward to sharing the results with you.

LEGAL PERSPECTIVE

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

TRANSLATION, PLEASE!

All anyone wants to talk about these days is the AM improvement docket. And with good reason, because everyone seems to have a different and creative idea about how to accomplish the goal of AM improvement. I am no different, and this column reflects my own opinions and not those of the SBE Board of Directors on this subject. I have always been skeptical about any AM improvement plan based principally on the use of FM translators. The use of FM translators is not a solution because it is inherently inequitable, and in the best case it is only a partial remedy. FM translators are not available for all AM broadcasters in all markets, and those who might need such a solution the most are often left out in the cold. Nothing that the Commission can do can change that. Allowing some AMs to have FM translators when others can't get one because the cost of acquiring one is too high or because there is no FM channel to use in a given market makes the "have-nots" even worse off than they are now, competitively. Furthermore, relying principally on FM translators to allow AM stations to compete in a given radio market is, as I have heard some AM broadcasters put it, the "FM-ization of AM broadcasting." In other words, it is a patch that puts the AM broadcaster into the FM band, rather than a real revitalization plan for AM. It leads listeners even further away from the AM band than they are now.

There is no denying, however, that for those who can find an FM translator, or in whose market there is space for one, rebroadcasting an AM station via an FM translator can be a huge benefit for that more fortunate AM broadcaster. So, if FCC Docket 13-249 is aimed at relaxing the FM translator rules to the point that more AM broadcasters can make use of one, that will provide at least some benefit to some AM broadcasters. That effort, therefore, inequitable or not, deserves some encouragement as part of a comprehensive revitalization plan. But in order for this Docket to provide any real benefit for AM licensees *with respect to the use of FM translators*, it is going to have to get much deeper into the technical issues that make the existing rules unnecessarily problematic than the Commission has done so far.

A tenured engineer friend of mine ("tenured" in this context means that he is at least as old as I am) was discussing this issue with me recently, and he noted one inherent difficulty in the Commission's rules governing FM translator siting. Now, Section 74.1201(j) of the FCC Rules establishes limits on the siting limit of an FM translator which is to provide fill-in service for an AM station. The 60 dBu contour of the FM translator's signal must be contained within the lesser of the AM's daytime 2 mV/m contour, or a radius of 25 miles (40.23 km) from the AM station's transmitter site. My engineer friend is of the view that the translator site distance limit of 25 miles from the AM site should be eliminated. It creates additional inequities in terms of availability of FM translators for AM licensees. Principal among these is that it places an artificial and arbitrary limit on AM broadcasters' ability to derive maximum use of the translator. This applies especially to those with AM stations in locations with comparatively good ground conductivity. On the other side of the coin, the limit provides no benefit generally to broadcasters whose AM stations are sited in areas of poor ground conductivity because rarely does the limit apply to such stations. Prohibiting the 60 dBu contour of the translator from extending beyond the 2 mV/m daytime contour of the AM being rebroadcast is a reasonable standard, without more, for a fill-in translator.

There are many examples of AM stations with both good and poor soil conductivity illustrating the point. Often, an AM transmitter site that is located in relatively good conductivity allows the transmitter site for that AM station to be located well outside the station's community of license. Imposing a 25-mile limit on a translator for that AM station makes it impossible to comply with the distance limit and at the same time place a translator where it can provide a benefit to the AM station's community of license. There would be far greater flexibility and benefit if the siting limit for the translator's 60 dBu signal is the area within the 2 mV/m daytime contour of the AM station. A good example of the problem is a 5 kW-D station in the Midwest with 110 Watts night. The station is surrounded by M-3 conductivity of 15 mmHos/m. The daytime 2 mV/m of this 5 kW Class D AM station extends more than 250 km. Its transmitter site is more than 65 miles away from the community of license. The 25 mile (40.23 km) limit for a translator's 60 dBu contour means that under no circumstance could this AM station utilize a translator to augment its very limited nighttime coverage within the limits of its community of license. The daytime 2 mV/m contour of the AM station covers a population slightly greater than a million people, but there are fewer than 20,000 people living within a 25 mile radius of the station's transmitter site. The licensee of the AM station should have the ability to place a translator so that its 60 dBu signal is within its 2 mV/m daytime contour. There are many similar examples.

Eliminating the 25-mile limit for FM translator siting for use by AM stations would have little impact on stations sited in areas of poor conductivity. For example, a Class C AM station in the Southeast has a 2 mV/m daytime contour that extends only 13 km from its transmitter site, well less than half the distance to a 25-mile (40.23 km) limit. Using the 2 mV/m contour as a lesser limit, the 25-mile limit for a translator's 60 dBu contour does not come into play.

Limiting translator siting to the lesser of 25 miles from the transmitter site or the 2 mV/m daytime contour limit is inherently arbitrary. It fails to take into account the wide differences in distances to the 2 mV/m contour in different parts of the United States. It limits the opportunity of many AM stations to use translators due to propagation, AM siting issues, and soil conductivity that the licensee cannot control. AM transmitter sites are increasingly difficult to find and maintain and it is not, most often, a matter of choice where the AM station is sited. The FM translator siting limit might be limited to the 2 mV/m daytime contour of the AM station as determined by Figure M-3 (Access Figure M-3 at http://www.fcc.gov/encyclopedia/m3-map-effective-ground-conductivity-united-states-wall-sized-map-am-broadcast-stations)

CERTIFICATION UPDATE

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

Year of the Jubilee – A chance to "catch a break"

It is human nature that we often do not appreciate what we have until it is gone. Certification that you have earned in past years has a value that may not always seem as important as it should. One day you wake up and realize, "What was I thinking?", "Why did I let that get away from me?".

Perhaps your reason was financial, or you simply forgot and let it expire. You may have left the industry for a short time and now realize it is tough out there in this economy and "I am better off financially if I return to what I know best". SBE Certification could make the decisive difference in a management lay-off decision, or in a new hire decision. Even if you plan to retire, it could make the difference in picking up some part-time broadcast engineering employment in the market where you plan to retire, where no one knows you or the station you previously worked.

SBE Certification is the only "currency" in the field of broadcast engineering that demonstrates that you know what you are doing and that you have taken the time to certify your skills and competence with the only organization that certifies those skills.

The concept of "Jubilee" is thousands of years old in several cultures. It is a year of forgiveness or atonement, or amnesty….pick your concept. In short, it is an opportunity to "catch a break". It usually occurs in the 50th year. The Society of Broadcast Engineers was founded on April 5, 1964 and this April marks the 50th Anniversary of the SBE. In recognition of that "Jubilee" year, we are offering an opportunity to regain your certification if you have allowed it to lapse after January 1, 1999 through January 2013.

This is a one-time program that is not likely to be repeated until the year 2064 and I would certainly not guarantee that it will be repeated even then.

All Certification Levels are included in the Jubilee Project. If you are an SBE member, then the re-certification fee is $100. However, if you hold the highest level of certification, CPBE, then the re-certification fee is $175.00. As a CPBE you have the option of paying the $100 fee and re-instating your previous senior level CSTE or CSRE rather than your CPBE. If you are not a member of the SBE then there is an additional $75 fee for all levels of certification.

There is a special Jubilee application on the SBE website at http://www.sbe.org/sections/documents/Jubileeapplicationandcredits_000.pdf. Applicants should fill out the Jubilee Application and provide a letter to the Certification Committee outlining what you have been doing the last five years in the Broadcast Engineering field. Fill out the Professional Credits area of the application. In many cases, applicants would have had the necessary credits to renew if they had done so at the time the certification lapsed. In this case, the review of the application by a member of the National Certification Committee is a no-brainer. If you do not have sufficient professional credits, then that is where the letter outlining your broadcast engineering activity in recent years is helpful.

It is nearly always the case that you have more credits than you think. You get credits for being employed in broadcast engineering or allied fields. There are credits for being a member of SBE, SMPTE, AES, ARRL, etc., and credits for attending SBE meetings. There are credits for schooling, training and making a presentation or technical talk, credits for publishing a technical article, credits for attending NAB or online SBE webinars and courses.

It is arguable that this program is somewhat unfair to a person who has faithfully re-certified every five years. That may be true, but this is a program to allow individuals who are sincerely committed to broadcast engineering to "catch a break" and gain forgiveness.

If you value certification, then we hope you will avail yourself of this offer before the April 30, 2014 deadline. Remember, 2064 is a long way off and it won't pay you to wait for this offer to come around again.

LEADERSHIP from page 1

how to motivate others, how generational differences have an impact in the workplace, how attitude plays a vital role in the workplace, how to manage conflict and so much more. Whether you are currently a manager, or striving to take on a leadership role, the SBE Leadership Development Course can help.

Instructing the course for the fifth year will be Rodney Vandeveer, Professor of Organizational Leadership and Supervision at Purdue University. Vandeveer brings more than 30 years of experience in human resources management, training, development and manufacturing. He has been a professor at Purdue University since 1994, teaching classes in Human Behavior in Organizations, Leadership Philosophy and Leadership Strategies for Quality and Productivity. Vandeveer also owns a leadership training business, VanTech Training.

The course will be held in early August over a three day span, in Atlanta, Ga. To register for this professional development opportunity, visit the Leadership Development Course page on the SBE website, under Education. Registration will begin February 1st. If you have any questions contact Kristin Owens at kowens@sbe.org.

Accredited SBE Frequency Coordinators

The Society of Broadcast Engineers began the Accreditation program to provide volunteer SBE coordinators the opportunity to be recognized as part of a standards-based, nationally recognized program of local voluntary broadcast-auxiliary frequency coordinators. The program also makes it possible for SBE to demonstrate to the broadcasting industry the widespread acceptance of a voluntary set of standards guiding local coordination.

Enrique Gonzalez	Raleigh, N.C.	Duke University

CQ

Certification Question
answer on page 15

Some TV receivers have a polarized plug on the AC cord. What safety hazard can be created by replacing this plug with a non-polarized plug?

a. **The chassis and, possibly, some exposed metal on the cabinet may become electrically hot to ground.**

b. **The cord may overheat**

c. **The circuit breaker won't work**

d. **None of the above**

New SBE Certification Achievements

CONGRATULATIONS

LIFE CERTIFICATION

Certified Professional Broadcast Engineers® and certified senior broadcast engineers who have maintained SBE certification continuously for 20 years, are at least 59 ½ years old and are current members of SBE may be granted Life Certification if so requested. All certified who have retired from regular full-time employment and are at least 59 ½ years old may be granted Life Certification if they so request. If the request is approved, the person will continue in his/her current level of certification for life.

Certified Professional Broadcast Engineer® (CPBE®)
Keith Kintner, Oshkosh, Wis. – Chapter 80
Edward Tipler, Ridgecrest, Calif. – Chapter 131

Certified Senior Radio Television Engineer™ (CSRTE™)
Thomas Lambert, Eagle River, Alaska – Chapter 89

Certified Broadcast Television Engineer™ (CBTE®)
Richard Dyer, Virginia Beach, Va. – Chapter 54

Certified Broadcast Networking Technologist® (CBNT®)
Keith Kintner, Oshkosh, Wis. – Chapter 80

Certified Broadcast Technologist® (CBT®)
Dale Podracky, Batavia, Ohio – Chapter 78

NEWLY CERTIFIED CPBE®

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.

Certified Professional Broadcast Engineer® (CPBE®)
Duane Evarts, Parker, Colo. – Chapter 48

John-Erick Rempillo, Yellowknife, NT Canada
Zejnullah Osmani, Port au Prince, Haiti

NOVEMBER EXAMS

Certified Senior Television Engineer™ (CSTE®)
Adam Bull, Elkhart, Ind. – Chapter 30
Scot Krayenhagen, Bartlett, Tenn. – Chapter 61

Certified Senior Radio Engineer™ (CSRE®)
Michael Everhart, Molalla, Ore. – Chapter 124

AM Directional Specialist™ (AMD™)
Philip Harris, Voorhees, N. J. – Chapter 18

Certified Broadcast Radio Engineer™ (CBRE®)
Thor Waage, Woodburn, Ore. – Chapter 124

Certified Broadcast Television Engineer™ (CBTE®)
Ceyhun Ergin, Santa Ana, Calif. – Chapter 47
David Honeywell, Bloomfield, Conn. – Chapter 14
Brian Kroth, Oakland, Tenn. – Chapter 61
Robert Sulecki, Indianapolis, Ind. – Chapter 25

Certified Audio Engineer® (CEA®)
William Craig, The Woodlands, Texas – Chapter 105
Blake Lowry, Taber, Alberta Canada

Certified Video Engineer® (CEV®)
James Powell, Birmingham, Ala. – Chapter 68

Certified Broadcast Networking Engineer™ (CBNE™)
Stuart Joines, Humble, Texas – Chapter 105

8-VSB Specialist™ (8-VSB™)
Kenneth Sell, Phoenix, Ariz. – Chapter 9

Certified Broadcast Networking Technologist® (CBNT®)
Michael Felt, El Mirage, Ariz. – Chapter 9
Mark Finney, Greenville, S.C. – Chapter 86
Eric Kuglin, Chandler, Ariz. – Chapter 9
Michael Leal, Weslaco, Texas – Chapter 136
Stephanie Zimmerman, Seattle, Wash. – Chapter 16

Certified Broadcast Technologist® (CBT™)
Michael Alston, Portland, Ore. – Chapter 124
Chris Ark, Scottsdale, Ariz. – Chapter 9
Jamie Baumann, San Antonio, Texas – Chapter 69
Britny True, Madison, Wis. – Chapter 24

Certified Radio Operator® (CRO®)
Paul Shafer, Durham, N.C. – Chapter 93

Certified Television Operator® (CTO®)
Beresford Daley, Boston, Mass. – Chapter 11
Matt Gaglioti, Huntington Beach, Calif. – Chapter 47
Michael Leal, Weslaco, Texas – Chapter 136
Jake Lee, Rancho Palos Verdes, Calif. – Chapter 47

SPECIAL PROCTORED EXAMS

Certified Broadcast Networking Engineer™ (CBNE™)
Matthew Anderson, Chattanooga, Tenn.

Certified Broadcast Television Engineer™ (CBTE®)
Beau Stenkamp-Strahm, Boise, Idaho – Chapter 115

SBE CERTIFIED SCHOOL COURSE COMPLETION

Certified Broadcast Technologist® (CBT®)

DINFOS
Michael Adetula, Cedar Hill, Texas – Chapter 67
Milcah Villaronga, Lynchburg, Va. – Chapter 78

CERTIFIED BY LICENSE

Certified Broadcast Technologist® (CBT®)
Curtis Gomez, Burbank, Calif. – Chapter 47
Kirk Meyers, Little Rock, Ark.
William Shifflett, Cyril, Okla. – Chapter 85

CERTIFIED RADIO OPERATOR® (CRO®)

St. Ambrose University
Kelly Steiner, Taylor Ridge, Ill.
Thomas Prior, Davenport, Iowa
Alexandria Caves, Davenport, Iowa

Pasadena City College
Gloria Barber, Burbank, Calif.
Cameron Bostwick, Los Angeles, Calif.
Cheyenne Hayes, Santa Fe Springs, Calif.

Arman Khachihyan, Glendale, Calif.
Yiqing Lu, Temple City, Calif.
Alfredo Mayagoitia, Huntington Park, Calif.
Geovany Morales, Montebello, Calif.

Cesar Rodriguez, Los Angeles, Calif.
Jesse Salinas, Pasadena, Calif.
Victor Salinas, III, Alhambra, Calif.
Tera Snow, Pasadena, Calif.

CERTIFIED TELEVISION OPERATOR® (CTO®)

Drake Klemme, Cedar Rapids, Iowa
Scott Stiffler, Cedar Rapids, Iowa

JUBILIEE PROJECT

Certified Broadcast Technologist® (CBT®)
Daniel Ryson, Manassas, Va. – Chapter 37

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 Senior Radio Engineer™ (CSRE®)
Charles Smith, Mooresville, N.C. – Chapter 45

Certified Broadcast Radio Engineer™ (CBRE®)
Mark Fate, Pomona, Calif. – Chapter 131

Certified Broadcast Television Engineer™ (CBTE®)
Robert Dickinson, St. Thomas, U.S.V.I. – Chapter 146
Mark Fate, Pomona, Calif. – Chapter 131
Kenneth Fuller, Studio City, Calif. – Chapter 15
Elizabeth Hamrick, Columbus, Ohio – Chapter 52

Certified Video Engineer® (CEV®)
David Buell, Oak Grove, Mo. – Chapter 59
Mark Friedman, Green Bay, Wis. – Chapter 80

Certified Broadcast Networking Technologist® (CBNT®)
Mark Fate, Pomona, Calif. – Chapter 131
Mark Friedman, Green Bay, Wis. – Chapter 80

Certified Television Operator® (CTO®)
Thomas Bland, Raleigh, N. C.
James Brestin, Indianapolis, Ind.
Philip Brooks, Oklahoma City, Okla. – Chapter 85
Andy Christensen, Raleigh, N.C.
Robert Glover, Randolph, Mass.
Mark Heller, Two Rivers, Wis. – Chapter 80
Charlina Johnson, Altadena, Calif.
Eric Kuglin, Chandler, Ariz. – Chapter 9
Steven Lewis, Oklahoma City, Okla. – Chapter 85
Eric Smith, Springfield, Ill. – Chapter 48
Gary Tann, Raleigh, N. C.

Certified Radio Operator® (CRO®)
Don Dixon, Centennial, Colo.
Robert Hageny, Oswego, N.Y. – Chapter 22
Aniesha Jojola, Centennial, Colo.
Kyle Smith, Los Angeles, Calif.

Nominations for SBE National Awards Now Open

Nominate an SBE member or chapter that you believe goes above and beyond the call of duty in their jobs, the broadcasting industry and to the SBE. Often times these efforts go unrecognized. Don't let that happen this year, nominate a deserving individual or SBE chapter for a National SBE Award.

In the last two years, the SBE Awards Committee, chaired by John Heimerl, CPBE of Suffolk, Va. has added two new awards to better recognize you; Best Social Media Site and Chapter Engineer of the Year. Here is a list of a few more award categories that will be accepting nominations:

Best Chapter Newsletter, Most Interactive Chapter, Best Chapter Website, Best Technical Article, Book or Program by an SBE Member, the Technology Award and Best Chapter Newsletter. The top two awards that are presented each year are the Robert W. Flanders SBE Engineer of the Year and James C. Wulliman SBE Educator of the Year award.

To nominate a worthy individual or chapter, go to the SBE website, www.sbe.org, to download and submit the nomination form. Nominations are due by June 13, 2014. Winners will be notified in July and the awards will be presented during the SBE National Meeting on October 8 in Verona, N.Y., held in conjunction with the SBE Chapter 22 Broadcast & Technology Expo.

All of the national awards were created to recognize the efforts that members and chapters make to better the field of broadcast engineering or the SBE.

For additional information, please contact Megan Clappe at mclappe@sbe.org

Don Heppelmann, CBNT (l), receives the 2013 Chapter 17 (Twin Cities) Engineer of the Year Award from chairman, Joe Conlon, CSTE, CBNT.

A snapshot in time

SBE President, Richard Rudman (r) presents SBE Fellow certificate to SBE founder, John Battison (l) in 1986. SBE's second president, Charlie Hallinan looks on.

New requirements for Life Membership in effect

As announced this past November, new requirements for SBE Life Membership went into effect on January 1. Members applying for Life Membership must be retired from broadcast engineering, be at least 65 years of age and have been a member in good standing at the time of application for Life Membership for at least 15 consecutive years.

A one-time $75 fee is required with the application. Once approved, a Life Member pays no further dues for the rest of his or her life and retains access to full member benefits. Members who attained Life Member status prior to January 1, 2014 are grandfathered under the previous requirements.

Life Membership applications are available at the SBE website under the Membership tab.

Looking back over 50 years of history of the SBE

Recalling earlier days of the SBE

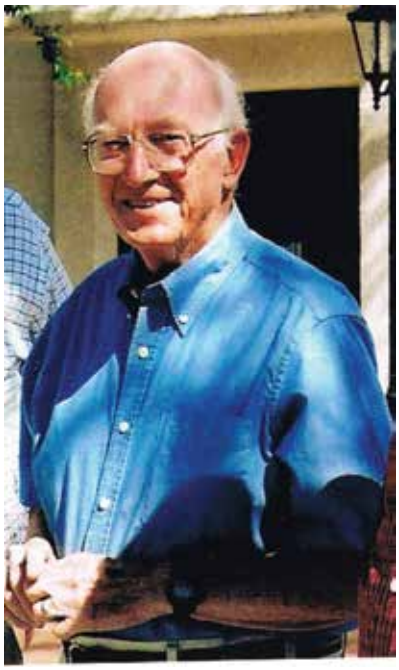
by Jim Wulliman, CPBE

My first meeting with what would become the SBE was in the Penthouse of the Conrad Hilton Hotel in Chicago on April 5, 1964, during the NAB convention. The NAB had forgotten to schedule a meeting room, so we all helped clean up folding chairs and arrange the hotel owner's penthouse area so John Battison could present his suggestions for a new association for broadcast engineers. The idea was well received, so John sent out several thousand letters to prospective members with many applying for charter membership.

Jake Seagraves, of WTMJ in Milwaukee, which is where I worked, suggested that we form an SBE chapter there. He wanted me to be chairman so he could write our chapter newsletter. We developed into a good active chapter with participation from all the stations in our area.

Later, Bob Flanders who was then the SBE president, called to ask me to run for president. I told him I would need approval from my boss, and he told me that his boss was a good friend of my boss and they had already talked, so he knew that I would get the needed approval.

Somewhere along the years, I believe Doyle Thompson was president at that time, there was a suggestion that there should be a name change for the SBE. The idea was not approved by the membership so the idea was dropped. As I review all the ways that the SBE can "broadcast" information now, I think that we are "Broadcasting" in a much wider sense than was thought at that time, so maybe the name change was a forecast for the future.



Jim Wulliman, CPBE

Ben Wolfe believed that the FCC exam should be upgraded for those who were, or wanted to be, a chief engineer, so he and John Wilner wrote a sample exam which they shared with the SBE Board of Directors for evaluation. After many meetings and discussions, this sample exam evolved into the basis for a certification program.

I was made an observer member of the National Engineering Society Certification Commission, so I was able to review certification programs from many of the engineering associations and incorporate their ideas into our SBE certification program. We then presented our program at an "Early Bird" session during the 1977 NAB Convention in Las Vegas. There would be a limited "Grandfather" period to get the program started, and those engineers would take the sample exams for evaluation of the question files. The final certification exams would be "pass-fail" but the "Grandfather" group would receive their grades as a thank you.

Ben and John were experiencing health problems and asked to be allowed to "retire" from their certification work. At an SBE board meeting at Ben's television station in Washington, D.C., there was much discussion of how the SBE might be able to proceed with the program. After a coffee break, Bob Wehrman said that the board had decided that I would not have anything to do when my term as president ended, so I would be able to become the new Certification Chairman. That proved to be a very fulfilling experience as I worked with many good people to accomplish our certification program goals for the SBE.

Jim Wulliman, CPBE, retired as Director of Engineering at Milwaukee's WTMJ in 1985. He is a Charter member of the SBE, Member #105, as well as a Life and Fellow member. He holds Life Certification at the CPBE level and is a recipient of the SBE Lifetime Achievement Award. He served as the society's sixth national president from 1973 to 1975. He also served as the SBE Certification Program's first director and committee chairman for close to 20 years, retiring from that role in 1995. He is now Chairman Emeritus of the SBE Certification Committee. Jim and his wife, Ginny, reside in Green Valley, Ariz.

Time to Renew Your Membership

Annual renewal for most members begins this month. Those who hold Member, Senior, Associate, Student and Fellow membership levels are receiving renewal letters and cards in the mail. In recognition of the SBE 50th anniversary, each member will receive a special 50th anniversary membership card and a commemorative anniversary sticker (the peel-off kind) with their renewal letter. The stickers are suitable for use on vehicles, office windows and other locations. We hope you'll display your sticker proudly and use it as an opportunity to tell people about your professional organization.

There is no change in any of the membership dues levels from 2013. Renewals can be transacted on-line at the SBE website, www.sbe.org. Click on "Renew Membership" in the upper right-hand corner of the main page. The on-line system is secure and accepts VISA, MasterCard and American Express. The system automatically generates a receipt, 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.

Because of their status, Life Members of the SBE don't have to renew their membership. To help celebrate the SBE 50th anniversary, each Life Member will also receive the special 50th anniversary membership card in February through the mail.

Balloting for the next election of the national board of directors will be conducted on-line in July 2014. All voting members receive a unique link to access the electronic ballot. Members who prefer voting by mail may opt out of electronic balloting on their membership renewal (paper renewal or on-line), though we encourage everyone to use the electronic ballot method. There has been a tremendous increase in ballots cast the first two years of electronic balloting, and 90 percent of all ballots cast have been through the on-line system. It's secure, quick, accurate and saves the society the costs of paper, printing, mailing and postage.

FOCUS ON SBE

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

-30! Just Another Day

I'm writing this during the first full week of January, a week that much of the country experienced severe winter weather. Significant snow falls and extreme low temperatures and wind chill all contributed to the closure of schools and businesses, power outages and even flooding in some areas. As I looked out my window at the "winter wonderland" that we were experiencing in Indianapolis, I thought about those of you who were called out into the bad weather to keep broadcast signals on the air, remote news reporters and vehicles on the streets, and countless other tasks that most people never see, nor understand their significance.

I enjoy the work I do. But for most of us, a key motivating factor is that we need to make a living. But many in Broadcast Engineering, in all of today's varieties and definitions, entered the field because of a love for it and approach difficult days as though they are routine; even a challenge. Broadcast engineers work behind the scenes and consequently, much of the viewing and listening public is not aware of your efforts to keep them informed, as well as entertained. Those of us who are aware, appreciate your work and dedication, the time you spend away from home, and other sacrifices you make to keep the broadcast and media infrastructure operating no matter the circumstance.

I hope all of you that have the opportunity to attend the 2014 NAB Show in April will include the SBE Membership Meeting and a special SBE 50th anniversary reception on your schedule. They will be held on Tuesday, April 8. As of this writing, the times were being confirmed but we expect the membership meeting to be from 5:30 to 6:30 pm and the reception to follow, from 6:30 to 8:30 pm. Both will be held in the Las Vegas Convention Center, South Hall, Second Floor. Watch the April Signal, SBE-news and the SBE website for updates on the time and exact location.

Any show credential you have will allow you access to these events. The meeting and the reception are open to members and friends of the SBE. There is no cost and an RSVP is not required for the reception. Just come and meet up with many of your SBE friends, enjoy complimentary beverages and finger foods while we celebrate the SBE's first 50 years.

Sponsorship opportunities for the reception are available to SBE Sustaining Members, broadcast companies and stations. If interested, contact Debbie Hennessey at the SBE national office, at (317) 846-9000 or dhennessey@sbe.org.

For almost a year, the SBE has offered an opportunity for those who have allowed their SBE certifications to lapse, to regain them without taking exams. The SBE Certification Committee calls this the Jubilee Project, in recognition of the Society's 50th anniversary. It ends on April 30, so if you have allowed one or more of your certifications to lapse between January 1999 and January 2013, consider reinstating them soon. Another opportunity may never come. Visit the SBE website, www.sbe.org and click on the Jubilee Project link on the main page for details.

About the time you are receiving this issue of The Signal, most of you will also be receiving your membership renewal invitations in the mail. I encourage you to renew your membership at your first opportunity. And while you're at it, encourage a colleague to join the SBE and invite them to your next chapter meeting. Membership renewal and new membership applications may both be transacted on-line at the SBE website.

50 down, a lot more to come – Help SBE grow

The annual SBE Membership Drive will kick off on March 1st. This year's theme, "Together, Shaping Our Future for Half a Century", ties to the SBE's fifty years bringing the broadcast engineering community the best in certification, continuing education, regulatory policy advocacy and career opportunities.

SBE is the only organization that is devoted to the advancement of all levels and types of broadcast engineering.

Those of you who are members know the benefits of being a part of the SBE. I'm sure you also know colleagues who are not familiar with the SBE but could benefit from membership. Individuals can join the SBE at anytime during the year but from March 1 - May 31, the SBE would like to entice you to be extra vigilant in recruiting new members.

If you recruit a new member during that time period and your name is on the sponsor's line of the membership application, then your name will be entered into the member drive drawing for prizes donated from our Sustaining Members. You will also have the opportunity to win the Grand Prize to attend the SBE National Meeting held in conjunction with SBE Chapter 22 Broadcast and Technology Expo in Verona, N.Y., October 7-8, 2014. Also, for every new member you sponsor, you will receive $5 off your 2015 dues (up to $25).

Send your new member prospects to the SBE website and have them use the on-line application form located there.

So, lead the way, sponsor a new member!

EDUCATION UPDATE

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

Education in the New Year

The New Year is well underway and your SBE Education Committee has been at work developing new programs for 2014. You can look forward to regular webinars that address the diverse skills and knowledge required to succeed in today's Broadcast Engineering world. You can look forward to new SBE University courses that offer in-depth tutorials for the Broadcast Engineer. You can look forward to Ennes Workshops offered throughout the country and of course the premier event on Saturday, April 5, 2014 prior to the opening of the National Association of Broadcasters Broadcast Engineering Conference. The SBE Leadership Development Course returns in 2014 and provides the Broadcast Engineer with essential leadership and managerial skills. And you can look forward to the SBE Technical Presenters Group bringing subject matters experts to you at local, state, or regional Broadcast Engineering conferences.

What About Today?

The Society has numerous education offerings today ranging from SBE University "On-Line and On-Demand" courses, to "Live" and archived webinars available to you.

SBE University offers structured courses that allow you to choose when you are available to complete the courses. Topics range from 8-VSB principals to use of SNMP in broadcast monitoring and control to AM antenna modeling to ENG truck operation. A recent course offering "The New Lifecycle of Media" provides a tutorial of IP and File Based Architecture and Workflow.

Numerous recorded or archived webinars are available. These webinars are less intensive and are usually an hour or so in length. Several are free, based upon generous support of industry sponsors. Others are available to SBE members at a nominal cost. Non-SBE members can take advantage of these educational resources at a higher cost. Topics include various aspects of IP networking, AM antenna modeling, chief operator responsibilities, FCC inspections, a streaming radio tutorial, just to mention a few.

SBE members receive discounts on education and professional development opportunities. Visit www.sbe.org today to review a variety of educational opportunities and/or join the ranks of SBE membership.

How Can You Help?

The Education Committee is comprised of your peer SBE members that volunteer their time, knowledge, and expertise to identify education needs of the membership and industry, determine and review content of programs offered, and select those best qualified to deliver the desired content.

We need your help!

Let the Education Committee know your professional development interests and needs. Suggest presenters that you feel have expertise and knowledge to share with the industry. Volunteer your knowledge and expertise by providing education events to the SBE membership. Remember, the SBE is your society. The committee seeks subject matter experts in many areas of broadcast related technology. Specific areas of interest include: ATSC Handheld/Mobile, CLOUD Technology, AoIP, RF Transmission Systems, TV Spectrum & Channel Re-Pack, Fiber Optics, and ATSC/HD Video Testing.

And finally, consider bringing an Ennes Workshop to your local, state or regional Broadcast Engineering Conference.

For more information on any SBE Education program, contact Kristin Owens, kowens@sbe.org, Education Director at the National SBE office.

Serve your society on the national Board of Directors

Candidates for the national SBE Board of Directors are being sought for the 2014 election. Candidates must be voting members (Member, Senior, Fellow or the designated representative of Sustaining Members) in good standing (dues paid). Candidates must hold an engineering level of SBE certification and hold 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 represent all members, not any one specific region, state, city or chapter.

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.

The national board consists of 17 members, including 12 directors, four officers and the immediate past president. Directors serve two-year terms and officers serve one-year terms. Six directors seats will be contested in 2014 as will all four officer positions. The SBE By-laws limits the 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. The time spent as immediate past president does not count towards the ten-year total.

If you are interested in running for the Board or have questions, please contact Ted Hand, Nominations Committee Chairman at ted.hand@coxinc.com. A slate of nominees will be assembled by the Nominations Committee by April 23. Other qualified members may be nominated by members in good standing no later than July 7.

The election takes place from July 21 through August 21. Candidates elected will be installed during the SBE National Meeting in Verona, N.Y. on October 8.

by Richard Graham
gdsissafety@gmail.com

Global Harmonization of Standards

Better known as "GHS", it adds another acronym to the list that every broadcaster should know. If you are aware that the OSHA-mandated deadline for training employees about GHS-compliant labels and Safety Data Sheets was December 1st, 2013, and you know that you have records showing your people were trained, that's great! If not, you have some work to do.

You might also be thinking: "It doesn't apply to me."

Do you use adhesives, paint, solvents, paint stripper, or lubricants? Of course you do. Broadcast Engineers fix everything! Do your photographers or reporters top off antifreeze and washer fluid when they fuel the vehicle? Does the person who interacts with FedEx and UPS ever touch packages that have the word Warning or Danger on the outside? If you answered "Yes" to any one of these questions, then GHS applies to your facility.

The goal of GHS is that every worker has the resources available to know about the hazardous substances they work with, no matter what country the substance was produced in. To that end, container labels and Safety Data Sheet (SDS) will have the same format. Today, Material Safety Data Sheets (MSDS) used only in the U.S. can vary a lot. The "Required Information" just has to be somewhere on the sheet. First Aid Measures, for example, could be in any section of an MSDS. On a Safety Data Sheet, First Aid Measures will always be in Section 4.

GHS becomes part of the Hazard Communication Standard; 29CFR 1910.1200. Better known as "HazCom", it continues to be among the most-violated standards, year after year. The table below details HazCom citations over the past five years.

YEAR	CITATIONS ISSUED	OVERALL RANKING
2013	6,156	#2
2012	4,696	#2
2011	6,538	#3
2010	7,179	#3
2009	6,378	#3

A standard that's been in existence for nearly 20 years should no longer be a problem. Yet workplaces continue to be found that haven't compiled a Master List of hazardous substances they use, or haven't created a written program, or haven't properly trained their workers about hazardous substances they could be exposed to. HazCom is not a program you can write once and leave on the shelf. The Master List needs to be updated whenever you bring in a new chemical or compound that has the words "Warning" or "Danger" on the label. New substances can present different hazards than you might expect. When that's the case, additional training is also needed. Even if you're just evaluating a new product, demand that an SDS be provided with it.

What else changes? Container labels will have a unified format as well. Hazards of the substance inside will be indicated by Pictograms, and the wording will clearly identify the hazard(s) that the substance presents.

Here is an example of a GHS-compliant label for a product you might already be familiar with:

You can instantly see what's inside, what hazards it presents, how to handle it safely, and what to do in case of emergency. Something else to keep in mind: On the NFPA Diamond and HMIS Bar labels, the number 4 represents the greatest danger. On a GHS-compliant label, numbers may not be present. When they are, the number 1 indicates the greatest danger. We will eventually get used to that, but we need to expect some confusion for a while. We can also expect that the number of citations for HazCom will be even higher for the next few years.

Let's think for a moment about things you do every day, and how HazCom/GHS can apply. I remember watching one of my mentors, who had a habit of holding pieces of solder in his mouth while positioning component leads. I went over the MSDS for solder with him. He suddenly recognized that he had been putting chunks of lead in his mouth for 40 years. He also made the connection that lead particles from solder smoke could end up in his uncovered coffee cup.

A common violation is re-using containers without changing the label. It seems I can always find a pop bottle with something other than soda pop inside. What if a contractor or tower crew brings in something unlabeled, and leaves it behind? You don't know what it is, whether it's hazardous or not, or even what the hazards are if you open it. That could put someone at risk. Do you wear gloves to prevent exposure to transmitter coolant? The Data Sheet will tell you that glycol is absorbed through the skin, and gloves are necessary to prevent that. Following the concepts of GHS and HazCom help you avoid exposures.

We always worry about OSHA, but they aren't the only entity that can force a hard look at safety. Insurance companies can be powerful motivators. As claims increase in cost and frequency, you pay higher premiums for the same amount of coverage. That's because your "Experience Modification Rate" goes up. It can reach a point where your insurer won't renew the policy unless swift changes are made. That always gets Management's attention!

Protecting your workers from hazards is the law, but preventing injury and illness in the workplace is just good business. HazCom is just one of many safety topics that apply to things broadcasters do routinely. Look for things that could get someone hurt. Address them once they are found. Provide safety training for your employees, and keep records of that training. You'll be glad you did.

Here are some links that can help you build a safer workplace:

RESOURCES:

https://www.osha.gov/dsg/hazcom/index.html
https://www.osha.gov/dsg/hazcom/ghs.html
https://www.google.com/search?q=ghs&ie=utf-8&oe=utf-8&aq=t&rls=org.mozilla:en-US:official&client=firefox-a&channel=np&source=hp
https://www.osha.gov/pls/oshaweb/owasrch.search_form?p_doc_type=STANDARDS&p_toc_level=1&p_keyvalue=1910

Rick Graham is a 16-year member of SBE Chapter 74 in Omaha, Neb. He is a former Chief Engineer and former Corporate Safety Director for Pappas Telecasting Companies. He has earned the ASHM certification through the Institute for Safety & Health Management, the Advanced Safety Certificate from the National Safety Council, and the Certified Safety & Health Official (CSHO) from the OSHA Outreach Training Institute. He is authorized to teach OSHA 10 and 30-hour General Industry courses, and is certified by e-Hazard as an Electrical Safety Instructor.

SUSTAINING MEMBERS Support the companies who support the SBE and the industry

AC Video Solutions
Andrea Cummis (201) 303-1303
Consulting, Systems Design/Integration

Advanced Broadcast Solutions • 2012
Arco Groenenberg (206) 870-0244
Systems Integrator

Advanced Electronic Services (AES) • 2012
Eda Gray (336) 719-0755 Ext. 142
Electronic, Hydraulic, Motor Repair

American Tower Corporation • 2000
Peter A. Starke (781) 461-6780
Development/Construction/Management

Anton/Bauer Inc. • 2004
Kyle Dann (203) 929-1100
Manufacturer Portable Power Systems

ATCi • 2012
Anthony Graves (480) 844-8501
Satellite Communications Solutions Provider

Audemat-Worldcast Systems Inc. • 2000
Christophe Poulain (305) 249-3110
Control Manufacturer

AVCOM of Virginia, Inc. • 2010
Warren McElfresh (804) 794-2500 ext. 312
Spectrum Analyzers

Avid Technology • 2011
Rich Griffin (303) 248-3259
Broadcast Products and Services

Belden Electronic Division • 1991
Steve Lampen (800) 235-3361
Cable and Connectivity

Bexel • 2009
John Root (818) 565-4314
Calrec Broadcast and Audio Consoles

Blackmagic Design • 2012
Terry Frechette (978) 337-0991
Switchers, Digital Cameras, Routers

Blonder Tongue Laboratories, Inc. • 2013
Jeff Smith (512) 238-6973
Encoders, Digital CATV, EdgeQAM/IP

Boxx Communications • 2012
Mark Walker (310) 287-1285
HD Wireless Video Transmission

Bracke Manufacturing LLC • 2012
Patra Largent (949) 756-1600
RF & Microwave Components

Broadcast Electronics Inc. • 1978
Tom Beck (217) 224-9600
Radio Equipment Manufacturer

Broadcast Microwave Services Inc. • 1997
Jim Kubit (805) 581-4566
Manufacturer, Transmitters, Receivers, Antenna Systems

Broadcast Supply Worldwide • 1986
Shannon Nichols (800) 426-8434
Audio Broadcast Equipment Supplier

Broadcasters General Store • 2004
Buck Waters (352) 622-7700
Broadcast Audio Video Distributor

Canon USA Inc. • 1985
Larry Thorpe (201) 807-3300, (800) 321-4388
Broadcast Lenses & Transmission Equipment

Cavell, Mertz & Associates Inc. • 2011
Gary Cavell (703) 392-9090
Consulting Services

Chyron Corporation • 2013
Kieran Foster (905) 330-8902
Broadcast Graphics Solutions

Comark · 2013
Joe Turbolski (413) 998-1314
Broadcast Equipment & Manufacturer

Comrex Corporation • 1997
Chris Crump (978) 784-1776
Audio CODECS & Telephone Interface Products

Comsearch • 2004
Tim Hardy (703) 726-5651
Frequency Coordination Services

Content & Communications World (CCW) • 2006
Michael Driscoll (203) 371-6322
HD World, 3D World and SATCON

Continental Electronics Corporation • 1976
Michael Troje (800) 733-5011
AM & FM IBOC Transmitters

Davicom, Division of Comlab, Inc.
Guy Fournier (418) 682-3380
Site Remote Controls

Dialight Corporation • 2006
US Headquarters (732) 919-3119
FAA Obstruction Lighting, L.E.D. Based

Dielectric Communications • 1995
Cory Edwards (207) 655-8131
TV & FM Transmission & Cellular Products

Digital Alert Systems, LLC • 2005
Bill Robertson (585) 765-1155
Emergency Alert Systems

DoubleRadius, Inc. • 2012
Jeffrey Holdenrid (704) 927-6085
IP Microwave STL

DSI RF Systems, Inc. • 2010
Judy Mueller (732) 563-1144
RF Service/Installation/Products

du Treil, Lundin & Rackley, Inc. • 1985
Jeff Reynolds (941) 329-6000
Consulting Engineers

DVEO - Division of Computer Modules Inc. • 2011
Laszlo Zoltan (858) 613-1818
Everything About Transport Streams

e2v • 1997
Mark Strohecker (914) 593-6831
Electronic Components, SATCom Amplifiers

Econco • 1980
Debbie Storz (800) 532-6626 or (530) 662-7553
New & Rebuilt Transmitting Tubes

Elettronika America Inc. • 2010
Maria Quintero (305) 592-4506
High Efficiency FM/TV Transmitter & Exciters

ENCO Systems Inc. • 2003
Kenneth Frommert (800) 362-6797
Digital Audio Automation & Delivery

ERI - Electronics Research • 1990
David White (812) 925-6000
Broadcast Antennas, Transmission Line, Filters/Combiners,Towers and Services

Federal Communications Compliance LLC. • 2012
Jim Purther (202) 670-4322
FCC Public File Compliance

Florical Systems • 2008
Ashley Condon(352) 372-8326
Television Broadcast Automation

FOR-A Corporation of America • 2013
Adam Daniul (305) 773-7608
Innovation in Video and Audio Technology

Fujinon, Inc. • 1986
Thom Calabro (973) 633-5600
Broadcast & Communications Products

Gepco International/General Cable • 1995
Joe Zajac (847) 795-9555
Audio, Video Cable Products

Graham Brock, Inc. • 2012
Marilyn Matheny (912) 638-8028
Technical Consultation - Radio/TV

Harris Broadcast • 1977
Dave Hopson (TV) (513) 445-5243
Mark Goins (Radio) (513) 899-9124
Broadcast Equipment Manufacturer

Heartland Video Systems, Inc. • 2011
Dennis Klas (920) 893-4204
Systems Integrator

Henry Engineering • 2011
Hank Landsberg (562) 493-3589
"We Build Solutions"

High Resolution Systems • 2011
Drew Taylor (888) 742-7690 ext. 108
Systems and Show Control

Image Video • 1997
Zach Wilkie (416) 750-8872 ext. 228
Under Monitor Tally Display Systems, Monitor Design and Manufacture Broadcast Equipment

Inovonics Inc. • 2012
Lukas Hurwitz (831) 458-0552
Radio Broadcast Equipment

International Datacasting Corporation • 2012
Rudi Polednik (613) 596-4120 ext. 2222
Media-aware Content Delivery

JAMPRO Antennas Inc. • 2011
Alex Perchevitch (916) 383-1177
DTV/DVBT & HD Radio-IBOC Solutions

Ka You Systems • 2011
George Gimourginas (301) 585-4302
Audio, Video, IP - Satellite

Kathrein Inc., Scala Division • 1985
Michael W. Bach (541) 779-6500
Antennas for Broadcasting & Communications

L-3 Communications Electron Devices • 2003
Steve Bliek (570) 326-3561, ext. 229
Tubes, Power

Latakoo Inc. • 2011
Paul Adrian (214) 683-0791
Internet Video Distribution

LBA Technology Inc. • 2002
Javier Castillo (252) 757-0279
AM/MW Antenna Equipment & Systems

LYNX Technik • 2007
Steve Russell (661) 251-8600
Broadcast Terminal Equipment Manufacturer

Markertek Video Supply • 2002
Andrew Barth (845) 246-3036
Audio, Video, A/V Broadcast Supply

Maxell Corporation of America • 1991
Patricia Byrne (973) 653-2423
Data/Broadcast Video Media

Micronet Communications Inc. • 2005
Jeremy Lewis (972) 422-7200
Coordination Services / Frequency Planning

Microwave Video Systems • 2011
Warren J. Parece (781) 665-6600
Microwave Equipment Rental, Sales & Service

Middle Atlantic Products • 2005
David Amoscato (973) 839-1011
Equipment, Mounting, Solutions

MoreCom Inc. • 2009
Kyle Moorehead (763) 533-5535
Networking & AV Construction

Moseley Associates Inc. • 1977
Dave Chancey (805) 968-9621
Digital STLs AM/FM/TV

Myat, Inc. • 2013
Dennis Heymans (201) 684-0100
Transmission Line, Filters, Combiners

National Association of Broadcasters • 1981
(202) 429-5340
Industry Trade Association

National Football League • 1999
Ralph Beaver (813) 282-8612
Game Day Coordination Operations

Nautel Inc. • 2002
Jeff Welton (877) 662-8835
Radio Broadcast Transmitter Manufacturer

Nemal Electronics Int'l Inc. • 2011
Benjamin L. Nemser (305) 899-0900
Cabels, Connectors, Assemblies and Fiber Optic

Neutrik USA, Inc. • 2012
Kathy Hall (704) 972-3050
Ruggedized Optical Fiber Systems

NewBay Media • 2013
Thomas Leader (212) 378-0438
Publisher of Broadcast Magazine

NuComm/RF Central • 2009
Don Hoeler (908) 852-3700 ext. 3110
Digital and Analog Video Microwave Systems

Orban • 2011
David Rusch (480) 403-8300
Audio Processing AMFMTV

Pasternack Enterprises • 2001
Christine Hammond (949) 261-1920
Coax & Fiber Products

Potomac Instruments Inc. • 2012
Guy Berry (301) 696-5550
RF Measurement Equipment Manufacturer

ProAudio.com- A Crouse-Kimzey Co. • 2008
Mark Bradford (800) 433-2105 ext. 560
Proaudio Broadcast Equipment Distributor

Progressive Concepts • 2013
Sara Enriquez (630) 736-9822
FM & LPFM Radio Broadcast Equipment

Propagation Systems Inc. - PSI • 2010
Doug Ross (814) 472-5540
Quality Broadcast Antenna Systems

Quintech Electronics and Communications Inc. • 2002
Paul Campagna (724) 349-1412
State-of-the-art RF Hardware Solutions

QVC • 2011
Kevin Wainwright (484) 701-3431
Multimedia Retailer

Radio Frequency Systems • 2013
Martin O'Donohue +61 3 9751 8464
Broadcast Antenna Systems

RCS • 2003
Diana Stokey (308) 284-3007
Audio and Video Content Management

RDL • 2004
Chuck Smith (928) 778-9678, ext. 142
Audio, Video, Control & Test Equipment Manufacturer

RF Specialties Group • 2008
www.rfspecialties.com
Everything from the Microphone to the Antenna

Richland Towers • 2001
Ryan Willaman (813)579-4239
Tower Owner/Management

Rohde & Schwarz • 2003
Dave Benco (724) 852-1332
Broadcast Transmitters, Test & Measurement

Rohn Products • 2013
Mark Allen (309) 566-3000
Towers and Poles

Ross Video Ltd. • 2000
Darren Budrow (613) 228-0688
Manufacturer, Television Broadcast Equipment

Sage Alerting Systems Inc. • 2010
Gerald LeBow (914) 872-4069 ext. 210
Emergency Alert Systems Products

SEG
Chris Childs (913) 324-6004
Supply Chain Products and Services

SCMS Inc. • 2000
Bob Cauthen (800) 438-6040
Broadcast Equipment- New/Used

Screen Service America • 2010
Graziano Casale (212) 695-8341
Broadcast Transmitter & ATSC Mobile

Seacomm Erectors, Inc. • 1997
John Breckenridge (360) 793-6564
Tower/Antenna Erections

Shively Labs • 1996
Dale Ladner 888-SHIVELY
FM Antennas & Combiners

Shure Incorporated • 2012
Bill Ostry (847) 600-6282
Microphones, Wireless Systems, Headsets

Sierra Automated Systems and Engineering Inc. • 2011
Al Salci (818) 840-6749
Routers, Mixers, Consoles, Intercoms

Sigmet • 2008
Ed Portko (610) 783-6666
Broadcast Equipment Support Sales

Signiant • 2012
Doug Prouty (781) 221-4000
Signiant Content Delivery Software

Snell Inc. • 1995
John Shike (818) 556-2616
Video Equipment Manufacturer

Staco Energy Products Co. • 2010
Paul Heiligenberg (937) 253-1191 ext 128
Manufacturer Voltage Regulators, UPS

Stay Online • 2013
Samantha Strazanac (919) 529-3133
Custom Cord Manufacturing

Superior Broadcast LLC • 2013
Jimmie Joynt (972) 473-2577
TV & FM Transmitters, Microwave & Encoders

Superior Electric • 1995
Michael J. Miga (860) 507-2025
Power Protection Equipment

Sutro Tower Inc. • 1989
Eric Dausman (415) 681-8850
Broadcast Tower Leasing

TC Electronic • 2008
Laura Davidson (818) 665-4902
DTV Audio Level Processing

Technostrobe • 2009
Francis Lacombe (877) 578-7623
FAA Lights - High Intensity

Tektronix Inc. • 1977
James Lang (800) 833-9200
Video Test Equipment Manufacturer

Telestream • 2013
Mark Wronski (530) 470-1337
Ingest, Transcoding, Workflow Automation

Telos Systems/Omnia/Axia • 2003
Denny Sanders (216) 241-7225
Telos Systems - Talk-Show Systems

Teradek • 2011
Jon Landman (949) 743-5783
Camera-top ENG Solutions

Terrestrial RF Licensing Company • 2003
Steven Slocum (888) 373-4832
FCC Broadcast Auxiliary Licensing Services

The Durst Organization – 4 Times Square • 2004
John M. Lyons, CPBE (212) 997-5508
TV/FM/Microwave Tower Site

The Switch • 2011
Peter Hartz (323) 645-8011
Fiber Transmission Provider

Tieline The Codec Company • 2003
Mary Ann Seidler & John Lackness (317) 845-8000
POTS, ISDN, Codecs & A/V Products

Tower Engineering Company • 2013
Madison Batt (425) 640-2266
Tower Engineering Analysis & Design

Unimar Inc. • 2001
Thad Fink (315) 699-4400 ext. 307 or (813) 943-4322
Tower Obstruction Lighting Designer, Manufacturer, Distributor

Vislink Broadcast • 1991
Mark Tommey (978) 671-5700
Video Microwave Systems

Ward-Beck Systems Ltd. • 2004
Michael Jordan (416) 335-5999
Metering, Monitoring, Distribution, Conversion

Wheatstone • 2010
Jay Tyler (252) 638-7000
IP Consoles, Routers & Processors

WideOrbit • 2012
Brad Young (214) 923-6337
Broadcast Management Software, Automation and Master Control

Wireless Infrastructure Services • 2006
Travis Donahue (951) 371-4900
Broadcast Microwave, Tower and ENG Installation, Integration Maintenance Services

Members With 25 or More Years of Membership

New Members

Our spotlighted member in this issue is Bill Hubbard, CPBE, CBNT, Director of Academic Technology Services at the University of Wisconsin-Green Bay, in Green Bay, Wis. Bill has been a member of the SBE since 1983 and a proud member of Chapter 80. He's well known in Wisconsin for his long career in broadcasting which includes 25 years in commercial and public television broadcast engineering.

Bill says his entry into broadcast engineering came through his, "curiosity about how electronic stuff works." "As a high school senior, I sat down and talked with upperclassmen in the Radio and TV Broadcasting major at the University of Wisconsin-Platteville. Having a technical interest and some production experience, I knew that this was the right program for me," Bill said. He went on to say, "The curriculum, and engineering emphasis, was outstanding and I had the chance to learn about this field from the best faculty. People like Jack O'Neill (SBE Educator of the Year – 1992) and Joe Thomas both had a strong positive influence on my career."

Bill sites a number of individuals who have served as mentors to him. He said, "From Marsh Williamson I learned the value of SBE Certification. I set a personal goal early on to achieve CPBE certification when Marsh was awarded his certificate at a Chapter 80 meeting. From Gary Mach I learned a valuable lesson. 'Do it right, and do it right ONCE!' From Steve Brown of Woodward Communications, I learned the value of being a professional in this business and interacting with everyone on a professional level in order to be taken seriously."

Bill says that even people who have worked for him have been mentors to him, perhaps without knowing it. He said he's forever grateful to John Pfankuch and Jim Sams for teaching him that there were goals he could accomplish that he did not think were within his reach.

When asked what he enjoys or values most about his involvement with the SBE, he said, "What I enjoy most about SBE is the feeling of camaraderie I share with my fellow Chapter 80 members. The discussions we have and the willingness to share information and help one another is a tremendous benefit of membership in this society. What I value most is the continuing education effort we have here in Wisconsin. The Broadcasters Clinic is an outstanding regional seminar and so is the Summer Engineering Conference. It is a privilege for me to serve on the Wisconsin Broadcasters Association (WBA) program committee for both of these events. In addition, I also help teach and facilitate the WBA Media Technology Institute and conduct a session on the career of broadcast engineering for the WBA Student Seminar. I have acquired a great deal of knowledge through my professional experience and membership in SBE and these events provide me the opportunity to give something back to this noble profession."

Bill says his position at the university no longer requires him to awake for those 2 am emergency phone calls he used to get, something he says he doesn't miss. Though he's proud of his professional accomplishments, he really wants to be best known as a husband and father. He says, "There is no more rewarding experience in life than raising your children to become generous, honest, caring, and productive members of this world. My wife Stephanie and I are truly blessed." He enjoys camping and boating with his family. He says, "Anything outdoors is time well spent. I have been actively involved in the Boy Scout program as a youth and as an adult leader. And when the weather does not allow for that activity, well, let's just say that model railroading is the world's greatest hobby!"

Photo caption: Bill Hubbard in the interconnect room at Lambeau Field, home of the NFL's Green Bay Packers, on the day of quarterback Brett Favre's first retirement press conference. Bill was Engineering Systems Manager at WBAY-TV when this photo was taken. Photo by Rex Marx.

The SBE today

Some of the more than 70 members, family and guests who enjoyed the recent Chapter 16 (Seattle) holiday party. Photo by Jim Dalke.

ENNES EDUCATIONAL FOUNDATION TRUST

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

THANKS TO THE FOLLOWING SUPPORTERS FOR THEIR CONTRIBUTIONS:

Harold E. Ennes Scholarship

Robert Ross, Boonton, N.J.

William Dean, Williamsport, Md.

Youth

Richard Reyes, Honolulu, Hawaii

MEMBERS ON THE MOVE

Andrea Cummis, CBT, CTO is now Managing Partner at AC Video Solutions/AC Construction and Racing LLC.

Douglas Garlinger, CPBE, 8-VSB, CBNT is now Director of Engineering at Linn Television Corporation's WISH-TV/WNDY-TV in Indianapolis, Ind.

Hal Kneller, CPBE, AMD, DRB, CBNT has joined GeoBroadcast Solutions as Vice President of Global Sales and Business Development.

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

CQ

Answer
question on page 6

a. The chassis and, possibly, some exposed metal on the cabinet may become electrically hot to ground.

MARK YOUR CALENDAR

Advanced IP Networking for Broadcast Engineers
March 11, 2014
Clear Channel Communications Bldg., Miramar, Fla.

Certification Exam Application Deadline
March 31, 2014
Exams held at NAB Show in Las Vegas, April 8, 2014

2014 NAB Show and NAB Broadcast Engineering Conference
April 5-11
Las Vegas, Nev.

For more information, visit our website at www.sbe.org.

WELCOME TO THE SBE

NEW MEMBERS

Glenn Axelrod - Framingham, Mass.
Gary A. Miller - Macedonia, Ohio
Cheryl A. Quinn - New York, N.Y.
David L. Malone - Schenectady, N.Y.
Clinton G. Morin - Great Falls, Mont.
Javier A. Pons - Tampa, Fla.
Paul D. Bosak - Waynesboro, Va.
Ron W. Bedoya - Tucson, Ariz.
Gordon T. Jackson - Nashua, N.H.
Patrick R. Neelin - Fulton, Mo.
Ian A. Smith - Albuquerque, N.M.
G. Chambers Williams, III - Murfreesboro, Tenn.
Scott Magennis - Denver, Colo.
Victor J. Bowen - Norfolk, Va.
Ivan Vanchev - Sofia, Bulgaria
Michael J. Case - Reisterstown, Md.
Danny L. Magden - Shoreline, Wash.
Sean P. Vaughn - Alvin, Texas
Evan L Baker - Albuquerque, N.M.
Matthew McMurray - Brooklyn, N.Y.
William Rice - Jacksonville, Fla.
Joseph B. Belton - Upper Marlboro, Md.
Barry R. Clark - Hollywood, Calif.
Aleksandar P. Mihalev - Miami Beach, Fla.
Adam J. Parnau - Hackettstown, N.J.
Jeff Steele - Trinity, Fla.
Phil C. Van Liew - Edmonds, Wash.
Kirk R. Meyers - Little Rock, Ark.
Patrick R. Perez - Los Angeles, Calif.
Steven A. Russell - Noblesville, Ind.
Robert J. Sandoval - Elkhorn, Neb.
Darren St. Laurent - Castle Rock, Colo.
Sonny Reschka - Tucson, Ariz.
Dan Thomasson - San Jose, Calif.
Joel Williams - Burbank, Calif.
Michael O. Adetula - Cedar Hill, Texas
Nils E. Gimberg, III - Leeds, Ala.
Ali Izadshenas - Aliso Viejo, Calif.
Jeffrey Morton - Matamoras, Pa.
Christopher Rusch - Las Vegas, Nev.
Milcah Villaronga - Lynchburg, Va.

NEW STUDENT MEMBERS

Gerald C. Boursiquot - Oceanside, Calif.
William G. Blakeslee - Muskegon, Mich.
Matthew L. Alexander - Lakewood, Wash.
Sean M. Badure - Lake Tapps, Wash.
Silas C. Dore - Tacoma, Wash.
Trevor P. Gilligan - Gig Harbor, Wash.
Tyeler J. Greetham - Spanaway, Wash.
Jamison B. Jensen - Spanaway, Wash.
Riley P. O'Neill - Tacoma, Wash.
Martin T. Patricelli - Edgewood, Wash.
Edward M. Prescod - Tacoma, Wash.
Rebecca M. Schrader - Bryans Road, Md.
Nicholas H. Vanderlinda - Gig Harbor, Wash.
Matthew W. Anderson - San Diego, Calif.

NEW ASSOCIATE MEMBERS

Marty R. Morgan - Mount Vernon, Ohio
Dino J. Bonacasa - Oceanside, N.Y.
Doug Keltz - Smoke Rise, Ga.

NEW YOUTH MEMBERS

Nikolaus J. Pineda - Moreno Valley, Calif.
Mathias A. Helms - Kamiah, Idaho

RETURNING MEMBERS

Kenneth Manri - Egg Harbor Township, N.J.
Julian P. Adamaitis - Seattle, Wash.
Joseph C. Pollet - New Orleans, La.
Paul H. Thurst - Kerhonkson, N.Y.
Taras J. Stokes - Tallahassee, Fla.
Brendan C. Heddle - East. Northport, N.Y.
Nicholas du Plessis - Reno, Nev.
Fred A. Francis, Jr. - Prichard, W. Va.
Perry E. Talley - Nashville, Tenn.
Bruce R. Hart - Carbondale, Ill.
Arthur Elie - Miami, Fla.
Robert J. Diaz - Baltimore, Md.
Tony L. Abfalter - St. Cloud, Minn.
Timothy K. Ehrlich - Bigfork, Mont.
John D. Mathews - New Bloomfield, Mo.

RETURNING ASSOCIATE MEMBERS

Rob Lewis - San Francisco, Calif.

SBE members qualify for discount NAB Show registration

Through a special arrangement with the NAB, members of the SBE who are not eligible for the NAB member rate through their employers, are able to receive a $100 discount off full-conference registration for the 2014 NAB Show.

Register at the NAB website, www.nab.org. Use the special SBE code, EP06 in the appropriate field when completing your registration. The same code may also be used to get a free exhibits-only registration.

For the 20th year, the SBE is a conference partner with the NAB, helping to produce the NAB Broadcast Engineering Conference at the 2014 NAB Show. The NAB Broadcast Engineering Conference includes six days of educational programming, from Saturday, April 5 through Thursday, April 10. Exhibit days are Monday through Thursday.

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