



Snelson elected next SBE president



Joseph L. Snelson, Jr., CPBE, 8-VSB of Las Vegas, Nev. has been elected president of the Society of Broadcast Engineers. Snelson is vice president of engineering at Meredith Corporation in Las Vegas, Nev. A member of the SBE since 1978, he is completing his second one-year term as vice president of the society. Snelson's one-year term as president, as well as the terms of the other officers and six newly elected directors, will begin on October 30, at the close of the SBE Annual Membership Meeting.

Elected vice president of the society is Jerry Massey, CPBE, 8-VSB, AMD, DRB, CBNT, corporate regional engineer and director of engineering at Entercom Communications in Greenville, S.C. Massey has served as national treasurer since 2011.

Elected to a third term as national secretary is James Leifer, CPBE, of Boynton Beach, Fla. Leifer is director of engineering and IT at Clear Channel South Florida.

Elected treasurer of the society is Andrea Cummis, CBT, CTO of Roseland, N.J. Cummis is a broadcast engineering consultant and operator of AC Video. She is completing a term as a director on the SBE Board of Directors and previously served as national treasurer from 2009 to 2011.

Six directors were elected to the board and will each serve two-year terms. They include:

- **Ted Hand, CPBE, 8-VSB, AMD, DRB**, director of engineering and operations at Cox Media Group – Charlotte, Charlotte, N.C.
- **Kirk Harnack, CBRE**, of Nashville, Tenn., vice president and executive director at Telos Systems
- **Mark Heller, CPBE, CTO**, president and chief engineer of WGBW and WLWB Radio, Two Rivers, Wis.

ELECTED, page 11

Indianapolis welcomes SBE National Meeting

The Society of Broadcast Engineers will stage its 49th annual meeting this month in Indianapolis, Ind., in conjunction with the annual Broadcast Engineering & IT Workshop presented by the Indiana Broadcasters Association (IBA). The events will be held at the Sheraton Hotel and Suites in the Keystone Crossing area of Indianapolis. The SBE National Meeting will be held October 29-30 and the IBA conference is on the 30th. The local SBE host is Chapter 25 of Indianapolis and Central Indiana.

Events at the SBE National Meeting include the SBE



Photo courtesy of Indianapolis Motor Speedway

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NATIONAL MEETING from page 1

National Awards Reception, sponsored by Vislink Broadcast and Dinner, co-sponsored by Nautel, on Wednesday, October 30 beginning at 5 pm. The SBE's major awards will be presented, including the Robert W. Flanders SBE Engineer of the Year award to Edward J. Miller, CPBE and the James C. Wulliman, SBE Educator of the Year award to Dennis Baldrige, CPBE, 8-VSB, AMD, DRB, CBNT. Three new SBE Fellows will also be introduced: Lawrence Behr, CSBE; James Schoedler and Larry Wilkins, CPBE, AMD, CBNT. Chapters and other individual members will be recognized for outstanding achievement in chapter operation and professional accomplishments, respectively.

The dinner's keynote speaker will be Paul Brenner, SVP and CTO of Emmis Communications. Brenner is an innovative visionary and the originator of the HD Radio data distribution consortium business model by which he currently serves as president of the Broadcaster Traffic Consortium, LLC (BTC), a partnership of more than 24 radio companies throughout the United States and Canada, formed to distribute data and advertising via FM and HD Radio® technology. BTC serves millions of consumer devices and automobiles with FM and HD Radio data services.

Brenner's most recent leadership role is related to getting FM Analog and HD Radio standard in Smartphones and using terrestrial radio as the next generation of radio listener and advertiser engagement.

The SBE Annual Membership Meeting, will be live-streamed on Wednesday, October 30 beginning at 4 pm ET (1 pm PT). The one hour program will include the induction of national officers and directors, updates on the society's programs and services. There will also be an update on regulatory issues, including 2 GHz band sharing, spectrum for wireless mic use, among others. Sponsors of the Annual Membership Meeting that are making the live stream possible are Blackmagic Design, DVEO, Orban and Teradek.

Other activities during the national meeting include a meeting of the national SBE Certification Committee, and the fall meeting of the national SBE Board of Directors on Tuesday, October 29. On Wednesday, the annual SBE Fellows Breakfast will take place at 8 am, sponsored by the Scala Division of Kathrein.

The IBA Engineering and IT Conference includes a full day of technical presentations and a trade show, consisting of industry manufacturers and suppliers. Session topics and speakers include:

- **How to Replace ISDN With IP**, Mary Ann Seidler, Tieline
- **New Technologies for TV Distribution**, Paul Rumo, Northeast Broadcast / Satellite Sales
- **Structural Evaluation of Pipe Leg Tower Structures and Engineering and Executing Controlled Demolition of Guyed Structures**, James Ruedlinger, P.E., Electronics Research, Inc.
- **Ensuring Your AoIP Infrastructure Stays in Place During Disasters**, Mary Ann Seidler, Tieline
- **Facility VoIP Phone Systems**, Mike Johnson, Director Architecture Solutions, Logicalis
- **Bonding Technologies**, Bill Nardi, Dejero
- **50 Things You Forgot When Designing a New Facility**, Steve Lampen, CBRE Belden

The sessions, trade show, breakfast, lunch and the awards reception and dinner, are all included in the very reasonable fee of \$100. The newly renovated Sheraton Hotel and Suites has extended a special room rate of \$109 per night plus tax. The hotel is attached to the Indianapolis Fashion Mall and is close to many restaurants. Free parking is available in the hotel's parking garage.

To register, visit the IBA website, www.indianabroadcasters.org. Click on "News" and then, "Engineers". Everyone is invited to attend, but especially if you live in Indiana or neighboring states, don't miss this opportunity to take part.

National Meeting Sponsors





LETTER FROM THE PRESIDENT

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

All Good Things Must Come to an End

For the past two years, I have thoroughly enjoyed representing the 5,000 plus members of the society. This issue of The Signal will be my last column as president of the SBE. As I look back over my term, we have accomplished much within the society.

The SBE held a special national strategic planning session on Saturday, June 23, 2012, in Indianapolis, Indiana. The meeting ran a full day, from 9 am to 9 pm. Attending were 36 members and staff from across the country. There were 15 SBE members representing chapters, 14 directors, five members of the SBE staff and two facilitators participating in the day-long event. The SBE enlisted the services of a professional independent facilitator team of Charlene Sullivan and Kenneth Harling to lead the group through the strategic planning process. The facilitators helped us to recognize and articulate the society's needs while building a consensus on the best ways to chart the SBE's course into the future.

At the October 2012 board meeting, the board reviewed reports on each of the six action steps identified during the strategic planning process. The six steps include: Revamping the SBE National Awards Program, Rebranding the SBE, Increased Support to Chapters, Who Should Our Members Be? The SBE 50th Anniversary Celebration and Outreach to Youth.

The revamping of the SBE national awards program, under the leadership of board member John Heimerl, CPBE, is complete and the first chapter level engineer of the year awards have been awarded. The rebranding task group, under the leadership of Vice President Joe Snelson, CPBE, 8-VSB, conducted surveys from individual SBE members, our Sustaining Members and from industry leaders, to gain a sense and learn the perceptions that people have about the SBE brand. Board member Tim Anderson, CPBE, DRB, CBNE led the Membership and Outreach to Youth task group, to find out who we are and what the makeup should be of our membership. Chris Imlay and I are chairing the society's 50th Anniversary Task Group. A special logo has been chosen and the task group is using this opportunity during 2014 to demonstrate to the broadcast industry and the public the importance that our members play in this business and show that the SBE continues to change to meet the needs of its members.

We have taken steps to involve more members in the process of electing members to the national board of directors. 2012 was the first year in which the society offered online voting. There was a 64 percent increase in member participation from the previous year with more than 1,300 ballots cast. Ninety percent of the ballots cast were done so via the society's web-based balloting system.

On August 28, 2012 we were saddened with the news of the death of John Battison. Most members of the SBE recognize him best as Member #1; the SBE's founder

and first president. Many of us also knew him as a great broadcast engineer who exhibited a colorful personality and a dry wit. He led a long and productive life - he was almost 97 when he died.

2013 marked the first time that the society published its SBE Membership Directory and Buyers' Guide electronically. This web-based member service provides a fast and accurate way to locate other members, suppliers and information about the SBE. The new SBE Membership Directory and Buyers' Guide is located at the SBE website, www.sbe.org and contains member and chapter roster search systems, a chapter locator, a directory of contract and consulting engineers, an alphabetical listing of Sustaining Members (suppliers) as well as a classified section searchable by the services and products these companies offer. The supplier classified listings include names of sales representatives, live website and email links and telephone numbers.

During the past year, we have strengthened our education and outreach efforts under the leadership of Wayne Pecena, CPBE, 8-VSB, AMD, DRB, CBNE, education committee chairman; Kimberly Kissel, former education director; and Megan Clappe, certification director. Our education and certification programs continue to grow stronger every year. The education program provides affordable education to our members using various instructional methods. These on-line SBE University and webinar programs are designed to help broadcast engineers keep up with the ever changing demands of the job and the industry. They also help prepare participants to become SBE certified, and earn credits to recertify.

SBE Certification is recognized nationally and internationally. The SBE has been contacted on various occasions to help develop other certification programs in allied fields outside of the United States. We offer certifications from the operator level to the Certified Professional Broadcast Engineer. There is a certification level for every broadcast engineer and technician. The Certified Broadcast Networking Engineer certification is our latest offering from the certification program. If you have been putting off being certified, speak with your local chapter certification chairman to see what level would be appropriate for your training and experience. Also helpful to you is the SBE's Career Advancement Newsletter, emailed to the membership each month. It's a source of information on upcoming educational opportunities, how to obtain and maintain SBE certification and access the SBE job seeking tools, the SBE JobsOnline and SBE Resume Bank.

One area that has not gained much traction during my tenure is the SBE mentoring program. I will, with the new president's support, continue to foster this initiative as a service to the membership.

We have a strong society and must be diligent in the

protection of BAS spectrum for broadcast engineering use. The Government Relations and Frequency Coordination committees have been working tirelessly to ensure that our voice is heard along with NAB at the FCC and in Congress. The congressional broadband plan and spectrum auctions are current issues driving the broadcast industry.

The incoming president Joe Snelson, CPBE, 8-VSB will find SBE is progressing in a world of change. I look forward to working with him and supporting his goals.



Members of Chapter 25, Indianapolis gathered Aug. 27 to tabulate national board of director election ballots at the SBE National Office. (l-r) James Bryant, Michael Goode, CPBE; Charlie Sears, CPBE; Jake Robinson, (chairman); Schyler Wood, CTO; Bill Cherry; Tom Weber, CPBE, CBNT; Dave Fort, CPBE; Dale Smiley, CPBE and Larry Oaks.

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LEGAL PERSPECTIVE

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

Is That a Healthy Glow You Have?

This past March, the FCC revisited (after a ten-year break) its rules governing radiofrequency (RF) exposure. In its *First Report and Order, Further Notice of Proposed Rule Making and Notice of Inquiry* in Docket 13-84, FCC proposes to reexamine its rules and procedures for conducting environmental reviews under the National Environmental Policy Act (NEPA) as they relate to the guidelines for human exposure to RF electromagnetic fields. This is a follow-up on a proceeding commenced in 2003 to revise aspects of FCC rules governing safety issues by regulation of emissions from radio transmitters. It also proposes in the *Further Notice of Proposed Rule Making* to further update procedures governing RF exposure and to “treat all services equally” with respect to RF exposure evaluations. While the Commission intends to “ensure that [its] measures are compliant with [its] environmental responsibilities and requirements and that the public is appropriately protected from any potential adverse effects from RF exposure as provided by [its] rules,” it also seeks to avoid “any unnecessary burden in complying with these rules.” Finally, in the *Notice of Inquiry*, the Commission asks for input to help it determine whether the RF exposure limits and policies should be reassessed, in light of current scientific developments; i.e. whether current rules and policies should be unchanged, relaxed or tightened.

This is a popular proceeding. It has triggered, in total, well more than 750 comments. Many of these are from people who are very much afraid of RF energy. It is an emotive subject among those who don't understand it. There are comments from people who believe, for example, that the low amount of RF from automatic meter reading devices affixed to utility meters at their homes is dangerous and exposes them to serious illness. This is certainly not an unfamiliar subject to readers of *The Signal*, however, because broadcast engineers have studied this subject in detail for decades. SBE has sponsored regular educational seminars on RF safety taught by top professionals in the field. There is, frankly, no excuse for any broadcast engineer or broadcast technical professional to be uninformed about the topic by this time. We all have our RF safety signs at transmitter sites, etc. We are protecting ourselves, our co-workers, and protecting the public. Broadcasters have a good track record in the area of RF safety. In this area, a lot of knowledge is a very good thing.

There are aspects of the current FCC rulemaking that are a bit troubling however. FCC is now proposing - without any record indicating the need to do so - to change the exposure limits for “transient persons” in controlled environments. As of now, FCC

rules dealing with RF exposure for transient persons are relatively clear to both licensees and the public. Proposed rules contained in FCC's Further Notice of Proposed Rule Making in this docket, however, are not as clear. And it stands to cause big headaches for broadcasters and broadcast engineers.

As you know, there are two levels of exposure limits now: (1) general population/uncontrolled exposure limits; and (2) occupational/controlled exposure. These are based on a combination of American National Standards Institute and Institute of Electrical and Electronic Engineers (ANSI/IEEE) guidelines, and recommendations the National Council on Radiation Protection and Measurements (NCRP) issued in 1987. The less restrictive occupational/controlled exposure limit applies where employees have knowledge of their potential exposure and the means to control their exposure. The First Report and Order in this docket held that workers in controlled environments have to be made aware of their possible exposure by verbal or written communication and must receive “training” on controlling RF exposure. (For those of you who are radio amateurs, by the way, members of the household of the licensed ham are considered to be in a controlled environment, but the immediate neighbors are not). The stricter general population/uncontrolled exposure limits apply, in general, where members of the public or employees have no or little knowledge of potential exposure and are assumed to not have the knowledge or ability to limit their RF exposure.

FCC has, since 1996, applied its occupational/controlled exposure limits to “transient” exposure, which includes “incidental passage through a location where exposure levels may be above the general population/uncontrolled limits.” Transient individuals could include employees of broadcast licensees who are not trained regarding RF safety, or hikers near a broadcast transmitter site; in other words, members of the public. These persons must be informed, either verbally or via written communications such as signs, that they may be exposed to RF emissions and their exposure must be “brief” and “non-repetitive.” The transient exception only applies to “controlled” environments, such as “fenced areas near tower sites or antennas on rooftops with locked access.” This is pretty clear: the transient exposure exception recognizes special circumstances whereby brief and non-repetitive exposure to an RF source is allowed so as not to “unnecessarily inhibit activities” such as HVAC or electrical work at a transmitter site or New York tourists standing on a tall building near a television antenna. It is possible to make transients aware of possible RF exposure so that they can limit their time in the affected area.

Now, the FCC's Further Notice of Proposed Rulemaking essentially proposes to apply a new “general population/controlled” limit. This would reduce the allowable RF exposure limits for transients in a high RF area, because occupational/controlled exposure limits are measured using six-minute time-averaging criteria, while general population/uncontrolled exposure limits are measured using 30-minute time-averaging criteria. As the rules read now, a transient person near an RF emitting source in a controlled environment is subject to occupational/controlled exposure. This seems to include the six-minute time-averaging criterion for measuring those limits. The FCC Further Notice, however, proposes as follows:

“[W]e propose the definition of transient exposure with respect to averaging time to mean general population/“controlled,” that is, transient exposure should not exceed the general population limit considering 30-minute time averaging in a controlled environment. Additionally, we propose that transient exposure should not exceed the continuous occupational limit at any time, accounting for source-based time averaging.”

This is apples and oranges and it is hard to understand. But that is not all. The FNPRM states that transient persons should be supervised “by trained occupational personnel within the controlled area where the general population limit is exceeded.” Huh? Suppose I am hiking along the Appalachian Trail and trek through a scenic transmitter site (I think they are scenic...). Is a broadcaster obligated to send a “trained employee” to the transmitter site full time to make sure that I am not in the area too long? Are fences to be the only alternative solution? How are these trained employees supposed to “supervise” me, or a hiking club? It is a conundrum. Let's hope that FCC clarifies these things in a further order. Please.

RF Safety expert Richard Strickland provides his perspective on this topic on page 12.

Watch the live stream of the
SBE Annual Membership Meeting

Wednesday, October 30,
4 pm ET (1 pm PT)

A link will be provided at the SBE website



CERTIFICATION UPDATE

Jim Bernier, CPBE, CBNT
Chairman, SBE National Certification Committee
jim.bernier@sbe.org

Passing the Baton

For the last eight years, I have had the honor of serving four presidents of the Society as chairman of the national certification committee. Little did I realize back in 1993, when I first became a Certified Broadcast Technician, the road that laid ahead for me and the certification program.

I remember well the day I was encouraged to become certified by then certification chairman Jim Wulliman and certification secretary, Linda Baun (then Godby). It was at NAB 1993 and I was working at a TV station in Syracuse, N.Y where I was also the chapter chairman. I had my FCC First Class Radiotelephone License, by then converted to the lifetime general class license, so all that was required was an application and a fee.

The following year, I was encouraged to test for the senior TV engineer exam by the same two people. If I had looked closely, I probably would have seen the twinkle in their eye as they laid out a plan that I would soon learn. After passing the senior exam, Jim invited me to join the certification committee.

NAB 1995 marked my first committee meeting which, if memory serves me correctly, is always held on the Saturday evening before the show floor opens. That year, we were reviewing questions for inclusion in the exam database. The meeting went on and on and on. I think I actually fell asleep briefly, having just flown in to Las Vegas from Syracuse. But between the coffee, Diet Pepsi, and cookies, I was fully initiated into the committee.

Since 1976, when the certification program was started, the committee has had only five chairmen. Jim Wulliman was the first chairman followed by David Carr, Terry Baun, Chriss Scherer, then me. Jim Wulliman has the distinction of being the longest serving chairman. I now have the distinction of being the second longest serving chairman.

And now the time has come to pass the baton to a new chairman. But as I leave this post, I would like to pass along some thanks.

First, I would like to acknowledge my employer, Turner Broadcasting, and my supervisors, Naveed Aslam and Ron Tarasoff, for their support during my tenure as chairman. Without it, I would not have had the time or resources to do this job.

During the almost 18 years I've served on the certification committee, I have been surrounded by some of the most dedicated men and women to the purposes of the certification program as well as the Society. I would like to acknowledge each of the committee members I have had the pleasure of working with these past eight years. These members bring their respective concerns, experiences and expertise into many discussions. They are constantly looking forward while maintaining the history of the art and science of broadcast engineering. The current members of the committee are: Cris Alexander, Terry Baun, Dane Ericksen, Doug Garlinger, Ralph Hogan, Hal Kneller, Troy Pennington, David Priester, Rick Ryan, Chriss Scherer, Joe Snelson and Larry Wilkins.

During my tenure as chairman, I could not have asked for more committed assistance than that which I received from former certification director Linda

Baun, present certification director Megan Clappe and certification assistant Carol Waite. Without these ladies, past and present, I could not have performed my duties as chairman. They are, and have been, the conscience of the certification program - supporting me, the committee and, most important, you as they have tried to help countless individuals through the seemingly hazy process of certification and recertification. Ladies, I thank you very much.

I'd like to recognize my family, my daughters Megan, Sara, and Abby for their support and encouragement over the years. And my wife, Kendall, who indulged my periodic travel to committee and board meetings as well as the time at home, spent reviewing recertification applications, new applications, and grading essays when I could have been working on things around the house. Thank you very much.

Lastly, my thanks to you, the members of the Society. Without your support of the SBE, all of the various programs that Society has to offer would cease to exist. It has been my pleasure to serve you these past eight years as chairman.



Certification Question

answer on page 15

You are asked to install a UTP network horizontal cable run which will be 345 feet in length.

- a. This is permissible using 100BASE-Tx cable.
- b. This is 17 feet in excess of the permissible length for 10BASE-T cable.
- c. This is permitted only if CAT-6e cable is employed.
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SBE CERTIFICATION

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Leslie Mathson, Brookfield, Wis. – Chapter 28

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Jonathan Rice, Bessemer, Ala. – Chapter 68
Adam Sandler, Las Vegas, Nev. – Chapter 128
John Scruggs, Pelham, Ala. – Chapter 68
Dustin Sledge, Rome, Ga. – Chapter 5

Kourtney Thomas, Prairieville, La. – Chapter 72
Yasir Waqar, Decatur, Ga. – Chapter 5
Certified Television Operator® (CTO®)
Joseph Norris, Fulton, Miss.

CERTIFIED BY LICENSE

Certified Broadcast Technologist® (CBT®)
Keith Nolen, Birmingham, Ala. – Chapter 68
Carl Sene, Pago Pago, American Samoa – Chapter 63
David Smith, Roseville, Calif. – Chapter 43

JUBILEE PROJECT

Certified Professional Broadcast Engineer® (CPBE®)
William McBride, Martinsburg, W.V. – Chapter 37
Certified Senior Television Engineer™ (CSTE®)
Tom Padwa, Warren, R.I. – Chapter 11
Certified Broadcast Radio Engineer™ (CBRE®)
Patrick Roberts, Oklahoma City, Okla. – Chapter 85
Certified Broadcast Television Engineer™ (CBTE®)
Richard Miska, Southbury, Conn. – Chapter 14
Paul Pedziwiatr, Raleigh, N.C. – Chapter 93
Certified Broadcast Networking Technologist® (CBNT®)
Tanja Eitel, Menifee, Calif.
Richard Miska, Southbury, Conn. – Chapter 14
Paul Pedziwiatr, Raleigh, N.C. – Chapter 93
Randal Smith, Denton, Texas – Chapter 67

Certified Broadcast Technologist® (CBT®)
Vincent Atwood, Laurel, Md. – Chapter 46
Tanja Eitel, Menifee, Calif.
Joel Gascot, Severn, Md. – Chapter 132
Joseph Kees, Durham, N.C. – Chapter 93
Certified Television Operator® (CTO®)
William Gilbert, East Greenbush, N.Y.
Doug Maulden-Locke, Sterling, Va. – Chapter 37

CERTIFIED RADIO OPERATOR® (CRO®)

Daniel Costello, Centennial, Colo.
Tim Dimas, Humble, Texas
Iris Herbert, Houston, Texas
Theodore Woods, Long Beach, Calif.

CERTIFIED TELEVISION OPERATOR® (CTO®)

Todd Gima, Paradise, Calif.
Jessica Eckhardt, Boulder, Colo.
Robert Haisch, Lincoln, Neb.
David Moore, Greensboro, N.C.
Jake Proud, Boulder, Colo.
Justin Sparks, Boulder, Colo.
Ken Witkoe, Marshalltown, Iowa

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®)
Robert Springer, Elkhart, Ind. – Chapter 126
Certified Senior Radio Engineer™ (CSRE®)
Allen Sherrill, Raleigh, N.C. – Chapter 93
Joseph Soucise, Plaistow, N.H. – Chapter 11
Curt Yengst, Allentown, Pa. – Chapter 120
Certified Senior Television Engineer™ (CSTE®)
Thomas Alderson, Spokane, Wash. – Chapter 21
Emir Hadziahmetovic, Columbia, S.C. – Chapter 101
Frederick Lewis, Houston, Texas – Chapter 105
Certified Senior Radio Television Engineer™ (CSRTE™)
Brian Hoover, South Bend, Ind. – Chapter 30
Certified Broadcast Radio Engineer™ (CBRE®)
James Ferguson, Mount Vernon, Ohio – Chapter 52

David Joseph, San Jose, Calif. – Chapter 40
David Moberg, Hudson, Wis. – Chapter 17
Chris Wygal, Lynchburg, Va. – Chapter 78
Certified Broadcast Television Engineer™ (CBTE®)
David Boyer, Menifee, Calif. – Chapter 131
Jay Caldwell, Plain City, Ohio – Chapter 52
Brad Cope, Spencer, Tenn. – Chapter 113
Donald Dobbs, Keller, Texas – Chapter 67
Michael Nudi, Oakdale, Pa. – Chapter 20
Kevin Olden, Adrian, Mich. – Chapter 104
Brian Ryel, Oklahoma City, Okla. – Chapter 85
Michael Shovan, Newburgh, N.Y. – Chapter 58
Vladimir Tuzkov, Fountain Valley, Calif. – Chapter 47
Certified Audio Video Engineer™ (CEAV™)
David Erickson, Anchorage, Alaska – Chapter 89

Certified Audio Engineer® (CEA®)
James Bigwood, Owings Mills, Md. – Chapter 46
Certified Broadcast Networking Technologist® (CBNT®)
Manuel Esteve, South San Francisco, Calif. – Chapter 40
David Moberg, Hudson, Wis. – Chapter 17
J. Gibson Prichard, Nashville, Tenn. – Chapter 103
Nandini Sen, Chapel Hill, N.C. – Chapter 93
Certified Broadcast Technologist® (CBT®)
Gregory Ardrey, Thornville, Ohio – Chapter 52
Kathryn Crum, Wilmington, Ohio – Chapter 33
Robert Fields, San Antonio, Texas – Chapter 69
Tyler Godsmen, Edmonton, Alberta Canada
Paul Hadley, Tucson, Ariz. – Chapter 32
Andrew Levine, N. Shirley, N.Y. – Chapter 15
Paul Lohman, Florissant, Mo. – Chapter 55
Michael Orto, Youngstown, Ohio – Chapter 122

James Pollock, Mount Laurel, N.J. – Chapter 18
Randal Smith, Denton, Texas – Chapter 67
Gary Spangler, Omaha, Neb. – Chapter 74
Russell VanderHorst, Goffstown, N.H. – Chapter 110
David Vermaak, Pasadena, Md. – Chapter 37
Bruce Whitsel, Canton, Ohio – Chapter 70
Certified Television Operator® (CTO®)
Andrea Cummis, Roseland, N.J. – Chapter 15
Matt Dohney, Portland, Ore.
Jeff Smith, Portland, Ore.
William Thun, Portland, Ore.
Santiago Torre, Miami, Fla.
Elizabeth Vega, Hialeah, Fla.
Certified Radio Operator® (CRO®)
Arthur Mistretta, Riverside, Calif. – Chapter 131
Tom Smith, Landking, N.J.

Three awarded Ennes Trust scholarships

The Ennes Educational Foundation Trust, the non-profit, charitable arm of the Society of Broadcast Engineers, has awarded three scholarships to broadcast engineering and technology students for 2013.

Adria McGhee, of Federal Way, Wash., is receiving the Harold E. Ennes Scholarship. Raised in Omaha, Neb. where she found a passion for media, McGhee then relocated to Washington where her goals and interest changed. She currently attends Bates Technical College in Tacoma, Wash. She never thought she would enjoy learning about engineering and how current flows. McGhee is an active officer of Bates' student government and this fall she will begin her position as student body president. She is a member of Bates' ham radio club and sits on two of Bates' committees. McGhee will complete her Associate Degree in the spring of 2014. She is eager to put her training to good use and is looking forward to the future and how technology changes.

Rachel Johnson is receiving the Robert D. Greenberg Scholarship. Johnson has been working on operations at various stations in the Milwaukee area since 2001. She has been at WISN since 2003, working every position, as well as some special projects. She is in her final year at Milwaukee Area Technical College, working to expand her skills and knowledge beyond operations into engineering maintenance. Johnson is hoping that her academic program and the scholarship will help to increase her value in the broadcasting industry and

open up new employment opportunities in her future.

In recognition of the SBE's founder, John Battison, who passed away in August 2012, the Ennes Educational Foundation Trust created a new scholarship; the John H. Battison SBE Founder's Scholarship. The first recipient of this scholarship is Christopher Brochon, of Dillwyn, Va.

Brochon began his broadcasting career in 1996 at WFLO and still works at the station. He has worked as a sales representative, in the business office, traffic and copywriting areas, finally landing as operations director and assistant engineer. Brochon has always had a great fascination in science and electronics. When the opportunity came for him to work beside the engineer at WFLO and learn how the older vacuum tube transmitter worked as well as the new solid state equipment, he jumped at the chance. Brochon will use the scholarship to take classes offered by the Cleveland Institute of Electronics (an SBE certified School).

The Ennes Educational Foundation Trust was originally initiated by SBE Chapter 25 of Indianapolis, Ind. in 1980, in memory of Harold E. Ennes, author of many textbooks for broadcast and broadcast-related communications training and a member of the Indianapolis chapter. Ennes was a member of the SBE National Certification Committee and made many contributions to the early development of the Certification Program. To encourage greater growth, Chapter 25 transferred the trust to



Adria McGhee

Rachel Johnson

Christopher Brochon

the SBE national organization to administer in 1981. Scholarships presented by the Ennes Trust are made possible by donations from members and chapters of the SBE and by companies within the broadcast industry.

Those wishing to make a contribution to the scholarship fund may send donations to: Ennes Educational Foundation Trust, 9102 N. Meridian Street, Suite 150, Indianapolis, IN, 46260. Checks should be made payable to: Ennes Educational Foundation Trust, with the specific scholarship name written on the memo line. The Ennes Educational Foundation Trust is a 501(c)3 charitable organization. Contributions by most individuals are tax deductible. More information on the Ennes Educational Foundation Trust can be found at the education section of the sbe.org.

Infrastructure

the underlying foundation or basic framework of a system



openGear

The power of choice and flexibility:

openGear® 3.0 is the evolution of the industry's first and only open hardware and software platform. The next generation openGear® frame, OG3-FR combines function, flexibility and power with advanced features like high powered 450 watt redundant power supplies, Gigabit Ethernet access to every card slot, 20 openGear® card slots, dedicated 21st and 22nd card slots for network control and internal reference distribution, and a front LCD display for easy frame, IP address and fault identification.

NK Routing Systems

Routing on any budget:

Ross Video's NK Series Routing Systems are a comprehensive family of routing solutions. NK Series offers a wide variety of matrix sizes & types, flexible control panels, and a powerful control system to tie everything together. Whether it's a small utility router, or a large mission critical facility system, NK Series offers a solution to fit your budget and needs.

MC1 Master Control

Robust, Simple, Affordable:

The world's most affordable master control switcher is also the easiest to use! Intuitive DashBoard operation allows for an easy transition, and brings users up to speed quickly. The modular approach, using openGear and NK routing, offers flexibility with scalable, multi-channel solutions. Attracting viewers in a highly competitive market is not getting any easier, but strengthening your brand can help. A variety of branding solutions for the MC1 can take your brand to the next level.

SBE Chapters present their Engineers of the Year

Twelve members were selected to receive their chapter's Engineer of the Year Award earlier this year. Each winner was presented with a certificate from the SBE National Office during a chapter meeting. This is the first year of what will be an annual program. Our congratulations to all of the winners! (A photo of Donald Heppelmann, CBNT of Chapter 17, Minneapolis, Minn. was unavailable at press time.)



Ralph Hogan, CPBE, DRB, CBNE (I) receives the Chapter 9 Engineer of the Year award from chapter chairman, Robert Reymont, CPBE.



Paul Claxton, CPBE, CBNE, winner of the award from Chapter 131, Inland Empire, Calif..



Al Stephens, CSTE, winner of the Chapter 78, Blue Ridge, Va. award.



William Magliocco, CPBE, 8-VSB, CBNT, recipient of the Chapter 5, Atlanta award.



Bill Hayes, winner of the award at Des Moines, Chapter 109.



Charles Stutsman, CSTE, 8-VSB, CBNT (r) receives the Chapter 54, Tidewater, Va. award from chairman, Ray Lenz.



Chairman Antonio Castro presents the Chapter 38, El Paso chapter award to Warren Reeves.



Ed Miller, CPBE receives the Chapter 70, Cleveland/Akron award. Miller was also chosen as this year's national winner.



William Hubbard, CPBE, CBNT, of Chapter 80, Fox Valley, Wis. receives his award from chairman, Steve Konopka, CBRE, surrounded by fellow members of the chapter.



Gary Stigall, CPBE (I) receives the Chapter 36, San Diego award from chairman, Doug Alman, CBTE.



Conrad Trautmann, CPBE (I) receives the Chapter 15, New York City award from chairman, Jeff Smith, CPBE.



EDUCATION UPDATE

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

The Education Update begins with an introduction to Kristin Owens. Kristin is the new Education Director on the SBE headquarters staff. She comes to SBE with over ten years of volunteer management experience specializing in recruitment and training in the health care industry where she was responsible for a volunteer staff of over 500 individuals. Kristin holds a degree in Psychology and Non-Profit Management from Franklin College, in Franklin, Ind. She replaces Kimberly Kissel, who held the position for the last four years and has moved on to new career opportunities this past summer. I am glad to have Kristin on-board the SBE staff. Please join me in welcoming her to the SBE family.

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

On October 22, 2013, the SBE will offer a webinar on "AM Rule Changes". Cris Alexander, CPBE, AMD, DRB from Crawford Broadcasting will present this webinar, which will detail rule changes that will be of special interest to those responsible for directional AM station operation, maintenance, and construction. One area of focus will be the rule changes that dealing with AM pattern protection and mechanisms for dealing with AM pattern interference. If you are involved in AM directional arrays or expect to be involved in the future, you will not want to miss this webinar.

The AM Rule Changes webinar is presented free to SBE members and is available for \$49 to non-members. Further details and registration is available under the "Education" tab on the SBE website: www.sbe.org

The SBE will offer an Ennes Workshop on November 7, 2013 in Worcester, Mass. in conjunction with the New England Broadcast and Cable Expo and the 16th annual Media Educators of America (formerly Video Educators of New England) fall conference. For those in the northeast, you do not want to miss this event. Further program details and registration is available under the "Education/Ennes Workshops" tab on the SBE website: www.sbe.org

You can include a 2014 ENNES Workshop in your Regional Conference & Society Chapter Plans!

The Ennes Workshop held each year at the National Association of Broadcasters (NAB) annual convention is one of the premier professional development offerings of the SBE in cooperation with the NAB. Are you aware that regional Ennes Workshops are held during the year at various locations throughout the country?

Consider bringing a regional Ennes Workshop to your state broadcasting association meetings, regional conferences, or your local chapter conferences. Ennes



Part of the crowd attending the SBE IP Networking seminar in Los Angeles.

Workshops feature multiple topics and speakers that provide television and radio engineers with the latest information in broadcast technology.

Are you aware that the SBE Technical Presenters Group (TPG) is available to bring qualified speakers to events in your area? Presentations can be arranged to fit your event and current presentation topics and presenters include:

- **FCC Enforcement Actions – an Analysis of Broadcast Violations**, with Dennis Baldrige, CPBE, 8-VSB, AMD, DRB, CBNT
- **Understanding the FCC Self-Inspection Checklists**, with Dennis Baldrige, CPBE, 8-VSB, AMD, DRB, CBNT
- **Chief Operator Responsibilities - What should I be doing?**, with Dennis Baldrige, CPBE, 8-VSB, AMD, DRB, CBNT
- **Networking Technology for Broadcast Engineers**, with Wayne Pecena, CPBE, 8-VSB, AMD, DRB, CBNE
- **Lightning Protection, Power Issues, Increased Power Line Noise, etc.**, with David Brender

I have had the opportunity to attend state broadcast association events in Oklahoma, Alabama and Tennessee over the past few months and provided tutorials on IP Networking Technology and CBNE certification preparation. Presentations ranged from ½-day, full-day and 1-1/2 day formats. In late August, NBC Universal, in conjunction with SBE Chapter 47 in Los Angeles, hosted a full-day tutorial on "IP Networking for Broadcast Engineers". Fifty SoCal broadcast engineers endured an intensive day of IP Networking technology instruction. The SBE TPG presenters are ready to assist in your technical presentation needs. Please contact the SBE national office for further information and scheduling.

The 2013 SBE Leadership Development Course was held in Atlanta this past summer. This highly interactive and unique professional development

program focused upon preparing the broadcast engineer for leadership and management roles in the industry. Purdue University professor Rodney Vandever inspired, motivated and shared his people skills with twenty-one broadcast engineers from across the country. This three day, highly interactive course challenges you to refine your leadership skills as you better understand and improve how you interact with others. Subjects included understanding the dynamics of leadership, a leadership behavioral style assessment, communications, effective motivation techniques, building winning teams and much more. The course was filled with exercises, including challenging workplace scenarios in an effort to help students work through difficult interpersonal situations. Consider adding the 2014 SBE Leadership Development Course to your future professional development plans.

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

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

A few of the comments received from the NBC Universal / SBE Chapter 47 "IP Networking for Broadcast Engineers" tutorial held on Aug. 30 included:

The seminar was well presented by a knowledgeable instructor who knows how to teach.

Overall, definitely gained very valuable knowledge. Presentation very well organized and presented.

A great introductory class; not intimidating at all for the newbie or an old-timer that wants to begin to learn about how all of this IP networking stuff works.

Very informative and relevant to our everyday work. You have taken some of the mystery of these black boxes and given me the eagerness to delve deeper.



FOCUS ON SBE

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

5,000 Friends as Close as Your Keyboard

Early this year we unveiled the new web-based SBE Membership Directory and Buyers' Guide. It's a great tool that I want to be sure that all members are aware of. It replaced the print directory that we had published each year since 1995. Facilitating member networking and providing a central source for members to locate products and services are fundamental services that members of the SBE benefit from. The on-line directory provides these opportunities in an easy to use electronic format.

Members can access names and contact information for other members, as well as lists of members in each chapter. Alphabetical listings and a classified directory of more than 100 industry suppliers provides a quick resource to find products and services from companies, we call them SBE Sustaining Members, that value and support the SBE and its members. The listings include links to company websites, phone numbers and names of sales representatives and their email addresses.

One member advantage of a web-based directory over print is the ability to update the listings as members and companies notify the SBE of a change to their information. The SBE directory is updated almost every business day, making it virtually never out of date.

A special education opportunity I also would like to be sure you are aware of is a webinar, free to SBE members, at 2 pm ET on October 22 that will cover the recent changes made by the FCC to AM radio station rules. SBE member Cris Alexander, director of engineering at

Crawford Broadcasting, will explain these changes and how they impact AM stations and the engineers who maintain them. More information on this webinar is available at the SBE website, www.sbe.org. Click on the Education tab and then Webinars Live & Recorded..

It's become an annual event, the live streaming of the Annual SBE Membership Meeting each fall. The SBE will stream the one-hour meeting and we hope all members will make time to tune in. The membership meeting is a part of the SBE National Meeting, which this year emanates from Indianapolis, Ind. The program will begin at 4 pm ET. You'll be able to access it by going to the SBE website and clicking on the Membership Meeting icon that will be placed there several days before the event.

With the annual meeting, come changes within our national officers and directors. I would like to express my thanks to Ralph Hogan, whose second term as SBE president will end on October 30. Ralph has provided a steady hand at the helm while leading us through an important strategic planning process, the results of which will be felt long past his term. I'd also like to express my thanks to several others on the board whose terms will also be ending this month. They include immediate past president Vinny Lopez, past president Ray Benedict, and directors Paul Burnham, David Priester and Gary Stigall. I also look forward to working with newly elected president, Joe Snelson and the rest of the returning and new officers and directors.

National Office Staff Updates

I'm pleased to announce that Kristin Owens has joined the SBE national staff as Education Director. Kristin comes to the SBE from Franciscan Health Network where she was responsible for recruiting, training and managing more than 500 volunteers at three hospital locations in the Indianapolis area. Her background also includes staff positions with other non-profit organizations. She holds a B.A degree in Sociology and minors in Psychology and Non-Profit Management. Kristin replaces Kimberly Kissel, who left the SBE at the end of July for a position at another association. Kimberly did a great job in her four years with the SBE, working with our Education Committee to grow our education program. We wish her well as she pursues new challenges.

I also want to take this opportunity to recognize Megan Clappe, Certification Director at the national office, who celebrated ten years with the SBE on September 2. Megan, who began as certification assistant and has been the director for the past seven years, does a great job working with many of you supporting your pursuit to apply and maintain your SBE certifications.

That's all for this time. I encourage you to attend your local chapter meeting this month. If no chapter is nearby, connect through the SBE Roundtable (subscribe by request to sbe@sbe.org), or through the SBE's social networking outlets – Facebook, LinkedIn and Twitter. All can be found at the SBE website.

ELECTED from page 1

- **Ched Keiler, CPBE, 8-VSB, CBNT**, of Ft. Lauderdale, Fla., broadcast engineering consultant
- **Tom R. Ray, III, CPBE, AMD, DRB** of New Windsor, N.Y., president of Tom Ray Broadcast Consulting
- **Dennis Wallace, CBTE** of Waldorf, Md., managing partner of consulting firm, Meintel, Sgrignoli & Wallace

The newly elected officers and directors will join five other directors who are in the middle of two-year terms:

- **Tim Anderson, CPBE, DRB, CBNE**, of Covington, Ky., manager, strategic radio market and product development at Harris Broadcast
- **John Heimerl, CPBE**, of Suffolk, Va., is vice president of strategic technologies for WHRO-TV, WHRO-FM, WHRV-FM
- **Gary Kline, CBT, CBNT**, senior vice president of engineering, Cumulus Media in Atlanta, Ga.
- **Scott Mason, CPBE, CBNT**, west coast director of engineering, CBS Radio in Los Angeles, Calif.

- **Wayne M. Pecena, CPBE, 8-VSB, AMD, DRB, CBNE**, director of engineering, Texas A&M University-Educational Broadcast Services in College Station, Texas.
- Completing the board is **Ralph Hogan, CPBE, DRB, CBNE**, who serves as immediate past president.

The election was conducted from July 26 through August 27. Voting was available via the Internet and through the mail. A total of 1,240 ballots were cast with 1,111 of them cast electronically.

The national board of directors of the SBE is responsible for the development of policy and determines the programs and services the society provides to its more than 5,000 members.

The SBE Annual Membership Meeting is conducted during the SBE National Meeting, which is being held in 2013 in conjunction with the Indiana Broadcasters Association's Broadcast Engineering and IT Workshop at the Sheraton Indianapolis Hotel and Suites, October 29-30. The Annual Membership Meeting will be streamed live.



Jerry Massey, CPBE, 8-VSB, AMD, DRB, CBNT



James Leifer, CPBE



Andrea Cummis, CBT, CTO



Ted Hand, CPBE, 8-VSB, AMD, DRB



Kirk Harnack, CBRE



Mark Heller, CPBE, CTO



Ched Keiler, CPBE, 8-VSB, CBNT



Tom Ray, CPBE, AMD, DRB



Dennis Wallace, CBTE



ENGINEERING PERSPECTIVE

Richard Strickland
RF Safety Solutions
rstrick@rfsafety.com

Comments on New FCC RF Radiation Rules

The Federal Communications Commission (FCC) made some minor changes and added clarifications to their rules and regulations regarding exposure to RF radiation. The rule changes were issued on June 4, 2013, and became effective on August 5, 2013. Those that follow this subject are probably aware that the FCC first issued a Notice regarding these changes in 2003. In fact, I filed comments regarding spatial averaging and measurement uncertainty back in December 2003 with the thought that the new rules were going to go into effect by the middle of 2004.

The FCC's summary states that:

The Commission clarifies evaluation procedures and references to determine compliance with its limits, including specific absorption rate (SAR) as a primary metric for compliance, consideration of the pinna (outer ear) as an extremity, and measurement of medical implant exposure. The Commission also elaborates on mitigation procedures to ensure compliances with its limits, including labeling and other requirements for occupational exposure classification, clarification of compliance responsibility at multiple transmitter sites, and labeling of fixed consumer transmitters.

As you can see from the summary, much of the FCC's document focuses on low-power devices, including medical implants and cellular phones, and how they should be evaluated. Although broadcasters

are probably interested in the safety of any portable devices they might use, none of this has direct impact on their operations.

Issues that Impact Broadcasters Directly

Clarification of Application of Occupational Exposure Limits.

The Commission specifies that:

... for individuals exposed as a consequence of their employment, using the occupational/controlled limits, written and/or verbal (orally-communicated) information must be provided, at the discretion of the responsible party as is necessary to ensure compliance with the occupational/controlled limits. In addition, with the exception of transient individuals, appropriate training regarding work practices that will ensure that exposed persons are "fully aware of the potential for exposure and can exercise control over their exposure is required to be provided."

There are four important points to this ruling:

- The Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled exposure are not only 20 percent of the MPE limits for Occupational/Controlled exposure (except in the AM radio band), they are instantaneous—time averaging is not allowed!
- The only way to be fully aware and able to exercise control is to have received appropriate RF safety training.

- "Training is not required for transient individuals, but they must receive written and/or verbal information and notification (for example, using signs) concerning their exposure potential and appropriate means available to mitigate their exposure."
- The term "transient individual" applies to visitors and people traversing the site, not to third-party workers performing maintenance on the site for an extended period." Therefore, most subcontractors will be subject to the training requirement.

Responsibility for Compliance at Fixed Sites with Multiple Transmitters. The Commission did not make any changes and the "Five-Percent Rule" still applies at sites with multiple licensees. The ruling states:

The Commission notes that when routine evaluations are required at such sites, all relevant co-located licensees are responsible for compliance. . . . All licensees that exceed five percent of the RF exposure limit at any non-compliant location are jointly and severally responsible, and the Commission may impose forfeiture liability on all such licensees.

Richard Strickland is a nationally known expert and consultant in RF safety and is a frequent instructor for the SBE on RF safety regulations, practices and procedures. Visit his website at www.rfsafety.com.

Moseley
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AM/FM/TV

(805) 968-9621
www.moseleystb.com

- 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
- ATGi • 2012**
Anthony Graves (480) 844-8501
Satellite Communications Solutions Provider
- Audemat-Worldcast Systems Inc. • 2000**
Christophe Poulain (305) 249-3110
Control Manufacturer
- AVCOM of Virginia, Inc. • 2010**
Warren McElfresh (804) 794-2500 ext. 312
Spectrum Analyzers
- Avid Technology • 2011**
Rich Griffin (303) 248-3259
- 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 Engineering Magazine • 1984**
Bradley L. Dick (913) 341-1300
Journal of the Broadcast Industry
- Broadcast Microwave Services Inc. • 1997**
Jim Kubit (805) 581-4566
Manufacturer, Transmitters, Receivers, Antenna Systems
- Broadcast Supply Worldwide • 1986**
Shannon Nichols (800) 426-8434
Audio Broadcast Equipment Supplier
- Broadcasters General Store • 2004**
Buck Waters (352) 622-7700
Broadcast Audio Video Distributor
- Canon USA Inc. • 1985**
Larry Thorpe (201) 807-3300, (800) 321-4388
Broadcast Lenses & Transmission Equipment
- Cavell, Mertz & Associates Inc. • 2011**
Gary Cavell (703) 392-9090
Consulting Services
- Chyron Corporation • 2013**
Kieran Foster (905) 330-8902
Broadcast Graphics Solutions
- Comark • 2013**
Perry Priestley (410) 750-2165
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
- 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
- DVE0 - 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
- Electronika 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
- Floralis Systems • 2008**
Ashley Condon (352) 372-8326
Television Broadcast Automation
- Fujinon, Inc. • 1986**
Thom Calabro (973) 633-5600
Broadcast & Communications Products
- Geppo 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 Corporation • 1977**
Dave Hopson (TV) (513) 445-5243
Mark Goins (Radio) (513) 899-9124
Broadcast Equipment Manufacturer
- Heartland Video Systems, Inc. • 2011**
Dennis Klas (920) 893-4204
Systems Integrator
- Henry Engineering • 2011**
Hank Landsberg (562) 493-3589
"We Build Solutions"
- High Resolution Systems • 2011**
Drew Taylor (888) 742-7690 ext. 108
Systems and Show Control
- Image Video • 1997**
Zach Wilkie (416) 750-8872 ext. 228
Under Monitor Tally Display Systems, Monitor
Design and Manufacture Broadcast Equipment
- Inovonics Inc. • 2012**
Lukas Hurwitz (831) 458-0552
Radio Broadcast Equipment
- International Datacasting Corporation • 2012**
Rudi Polednik (613) 596-4120 ext. 2222
Media-aware Content Delivery
- JAMPRO Antennas Inc. • 2011**
Alex Perchevitch (916) 383-1177
DTV/DVBT & HD Radio-IBOC Solutions
- Ka You Systems • 2011**
George Gimourginas (301) 585-4302
Audio, Video, IP - Satellite
- Kathrein Inc., Scala Division • 1985**
Michael W. Bach (541) 779-6500
Antennas for Broadcasting & Communications
- L-3 Communications Electron Devices • 2003**
Steve Blik (570) 326-3561, ext. 229
Tubes, Power
- Latakoo Inc. • 2011**
Rod Taylor (512) 825-8709
Internet Video Distribution
- LBA Technology Inc. • 2002**
Javier Castillo (252) 757-0279
AM/MW Antenna Equipment & Systems
- LYNX Technik • 2007**
Steve Russell (661) 251-8600
Broadcast Terminal Equipment Manufacturer
- Markertek Video Supply • 2002**
Andrew Barth (845) 246-3036
Audio, Video, AV Broadcast Supply
- Maxell Corporation of America • 1991**
Patricia Byrne (973) 653-2423
Data/Broadcast Video Media
- Micronet Communications Inc. • 2005**
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 Amoscat (973) 839-1011
Equipment, Mounting, Solutions
- MoreCom Inc. • 2009**
Kyle Moorehead (763) 533-5535
Networking & AV Construction
- Myat, Inc. • 2013**
Dennis Heymans (201) 684-0100
Transmission Line, Filters, Combiners
- Moseley Associates Inc. • 1977**
Dave Chancey (805) 968-9621
Digital STLs AM/FM/TV
- 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
- NewBay Media • 2013**
Thomas Leader (212) 378-0438
Publisher of Broadcast Magazine
- Nemal Electronics Int'l Inc. • 2011**
Benjamin L. Nemsler (305) 899-0900
Cables, Connectors, Assemblies and Fiber Optic
- Neutrik USA, Inc. • 2012**
Kathy Hall (704) 972-3050
Ruggedized Optical Fiber Systems
- NuComm/RF Central • 2009**
Don Hoeler (908) 852-3700 ext. 3110
Digital and Analog Video Microwave Systems
- Orban • 2011**
David Rusch (480) 403-8300
Audio Processing AMFMTV
- 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
Broadcast Antenna Systems
- RCS • 2003**
Diana Stoekey (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**
Eddy Vanderkerken (469) 713-5322
Broadcast Transmitters, Test & Measurement
- Rohn Products • 2013**
Mark Allen (309) 566-3000
Towers and Poles
- Ross Video Ltd. • 2000**
Kyle Luther (613) 652-4886
Manufacturer, Television Broadcast Equipment
- Sage Alerting Systems Inc. • 2010**
Gerald LeBow (914) 872-4069 ext. 210
Emergency Alert Systems Products
- 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**
Cam Eicher (818) 840-6749
Routers, Mixers, Consoles, Intercoms
- Sigmat • 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**
Jim Higgins (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
- Telos Systems/Omnia/Axia • 2003**
Denny Sanders (216) 241-7225
Telos Systems - Talk-Show Systems
- Teletream • 2013**
Mark Wronski (530) 470-1337
Ingest, Transcoding, Workflow Automation
- Teradec • 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 & AV 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



Dave Ohmstede, CPBE

has been a television engineer for 41 years. What's the secret to his longevity in the business? "Maintaining the station as if I owned it," he says. His brother Jim, himself in broadcast engineering for 46 years, was instrumental in getting Dave interested in the field.

Ohmstede has been a member of the SBE since 1991 and is chief engineer at ION Media Networks' KFPX-TV in Des Moines, Iowa. He's worked at four different television stations during his career; all in the Midwest. He's known as "Doc" around the station; likely due to his ability to cure the stations technical ills when they crop up. He says his trusty company

laptop is his favorite gadget because it lets him diagnose technical problems at the station.

Ohmstede is an active member of SBE Chapter 109 in Des Moines and has served the chapter in the past as chairman, secretary and treasurer. He lives in Newton, Iowa, about 30 miles east of Des Moines.

Asked what his favorite past-time is, Ohmstede says, "Going to car shows with my Pulse that I have owned since 1986. There were only 347 of them manufactured." He's pictured here with his. Looks like fun!

CHAPTER SPOTLIGHT

Chapter 43, Sacramento, Calif.

In July of this year, some of the members of Chapter 43 in Sacramento, Calif. made a special trip together to attend the annual, "Radio Day by the Bay" in Berkeley. The group traveled by Amtrak to the Emeryville station, then walked to the museum from there. Chapter 43 chairman, Bob Hess, CPBE, provides a recap of the day.

Several of us from Chapter 43 in Sacramento, along with a few wives (mine included), joined the many broadcasters, Hams and antique radio enthusiasts at the annual Radio Day by the Bay, on Saturday, July 20. The event is held at the historic KRE Radio building in Berkeley. This is an annual benefit day for the California Historical Radio Society, The Bay Area Radio Museum & Radio Hall of Fame and The Society of Wireless Pioneers.

This was my first time attending this annual event.

It included a large number of swap tables, an antique radio auction, tours of the museum, exhibits and a wonderful re-enactment of the first episode of The Lone Ranger, complete with sound effects. Very entertaining! The readers were all well known Bay Area radio personalities.

The KRE building itself, however, was the high point of the day. The building includes the radio studio featured in the movie American Graffiti. (Wolfman Jack was in that studio in the movie.) There is also a working Ham radio station in the building and it was operating all day as W6CF, a special event station.

Also inside the building is a large assortment of antique Ham radio equipment and some of the best restored antique broadcast radios I have ever seen. A beautifully equipped workshop and a very large technical library are inside the building, along with a small gift shop. Outside the building were some very

clean World War II military radios. The auction was held outside and food concession was available.

This event was really worth attending! If you're in the area, I recommend you attend next year.



Checking out a classic floor model radio at the Radio Day by the Bay event in Berkeley, Calif. Photo courtesy of California Radio Historical Society.

MARK YOUR CALENDAR

Wisconsin Broadcasters Clinic October 8 – 10

Madison Marriott West Hotel, Middleton, Wis.

Cost: Any two days - \$130; all three days - \$150

AM Rule Changes Webinar October 22

Instructor, Cris Alexander, CPBE, AMD, DRB

Cost: FREE to SBE members; Non-members - \$49

SBE National Meeting/IBA Engineering & IT Workshop October 29 – 30

Sheraton Hotel and Suites, Indianapolis, Ind.

Cost: SBE and IBA members - \$100 (Includes all events and 3 meals)

Certification Exams held in local chapters November 1 – 11

(Application deadline has passed)

New England Ennes Workshop November 7

DCU Center, Worcester, Mass.

Cost: SBE members - \$30; Non-members - \$50

Certification Exam Application Deadline December 31

Exams held in local chapters, February 7-17, 2014

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

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THANKS TO THE FOLLOWING SUPPORTERS FOR THEIR CONTRIBUTIONS:

Harold E. Ennes Scholarship

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Chapter 136, Rio Grande Valley, Texas
John Schaab, Denton, Texas

John H. Battison SBE Founders Scholarship

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Robert Greenberg Scholarship

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Youth Scholarship

Chapter 24, Madison, Wis.

MEMBERS ON THE MOVE

John Arndt, Jr., CPBE, AMD, DRB, CBNT of Philadelphia, Pa. is now director of engineering at United Stations Radio Networks.

Burk Technologies has made two recent personnel announcements involving members of the SBE. **Matt Leland** is now director of sales and **Tom Ray, CPBE, AMD, DRB** has joined the company as sales representative.

George Kowal, CBNT of Kenilworth, N.J. has been named engineering manager at Press Communications LLC for their radio stations, WBBO, WBHX, WHTG, WKMK, WTHJ and WWZY.

Barry Thomas, CPBE, DRB, CBNE has been named director of engineering for Wilks Broadcasting Group, Denver, Colo. The group includes 21 stations in six markets.



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b. This is 17 feet in excess of the permissible length for 10BASE-T cable.

WELCOME TO THE SBE

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John D. Bryant - Miami, Fla.
Joseph A. Boehnlein - Indianapolis, Ind.
Bryan Gillenwaters - Colorado Springs, Colo.
Javier Jimenez - Austin, Texas
Christopher L. Kenny - Isleton, Calif.
Adam Nichols - Bristol, Conn.
Tim A. Perry - New York Mills, N.Y.
David V. Atkins - Phoenix, Ariz.
Justin P. Toney - Lake Charles, La.
Larry Haley - Woodbury, Tenn.
Patrick D. VanBuren - APO, AE
Michael T. Francis - Allen, Texas
Jeffrey Heins - Omaha, Neb.
Michael I. Real - Roscoe, Ill.
Byron J. Johnson - Washington, N. Car.
Isaac Peterson - Sanford, N. Car.
Ken Seymour - Beaverton, Ore.
Anthony W. Babin - Baton Rouge, La.
William Dagostino - Las Vegas, Nev.
Carmen A. Hall - Antioch, Tenn.
Allen E. Jackson - Las Vegas, Nev.
Gregory A. Jarrell - Las Vegas, Nev.
John P. Scruggs - Pelham, Ala.
Cory Wynn - Jackson, Miss.
Brendan L. Cline - Alexandria, Va.
Marcelo Soto - Moseley, Va.
Darrell E. Cheney - Richmond, Va.
Alex Martin - Mechanicsville, Va.
Eddie L. Miller, Jr. - Parrot, Ga.

Wanetta Isaac-Rachels - Mathews, Ga.
Bradley C. Taylor - Fort Myers, Fla.
Robert T. Boelke - Clearwater, Fla.
James A. Mearns - Carmel, Calif.
Zachary W. Davis - Amarillo, Texas
Andy Parker - Radford, Va.
William J. Cherry - Indianapolis, Ind.
Richard A. Jones - Valrico, Fla.
Eivind H. Engberg - Oppegard, Norway
Aaron A. Archuleta - Meridian, ID
O'Bryan L. Curtis - Helena, Ala.
Miles C. Hudson - Oneonta, Ala.
Wade E. Kaseberg - La Grande, Ore.
John Nakahira - Waialua, Hawaii
Courtney Payne - Gardendale, Ala.
Cary M. Pederson - Hanover Park, Ill.
Jim R. White - Elk Creek, Mo.
Cole Studstill - Peru, Ill.
William Hackbarth - Duluth, Minn.
Alex R. McKenzie - Hays, Kan.
Carl Sene - Pago Pago, A.S.
Raymond H. Mayberry, III - Richmond, Va.
Chris Arnesen - Aloha, Ore.
Michael P. Sliwinski - Charlotte, N.C.
Kourtney R. Thomas - Prairieville, La.
Blake D. Lowry - Taber, Alb., Canada
Walter Palmer - Lewes, Del.
David L. Smith - Roseville, Calif.

NEW STUDENT MEMBERS

Jorge F. Rodriguez - Miami, Fla.

Andrew Bevacqua - Mullica Hill, Pa.

NEW ASSOCIATE MEMBERS

William J. Cleveland - Winder, Ga.
Adam J. Sandler - Las Vegas, Nev.

Vera A. Didenko - Parma Heights, Ohio

NEW YOUTH MEMBERS

Lonnie O. Watson - Indianapolis, Ind.

RETURNING MEMBERS

Paul E. Burt - Baton Rouge, La.
David B. Thomas - Powhatan, Va.
Max P. Sitero - Inverness, Fla.
Ken P. Witkoe - Marshalltown, Iowa
John S. Martin - Empire, Mich.
Stephanie L. Zimmerman - Seattle, Wash.
Randy Cranford - Cochran, Ga.
Nelson E. Goewey - Southington, Conn.
Joel A. Gascot - Severn, Md.
Nathan H. Beran - San Antonio, Texas
Richard L. Danysh, Jr. - San Antonio, Texas
David L. Haralambou - Marlborough, Mass.
Randal E. Smith - Denton, Texas
John R. Hettish - Shelbyville, Tenn.
Craig C. Koster - Boise, Idaho

Augustine C. Saydee - Fort Meade, Md.
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Russell S. VanderHorst - Goffstown, N.H.
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Roel H. Saenz - Laredo, Texas
Cody L. Blount - Belton, Texas
Richard A. Sharp, Jr. - Greenville, Mich.
Diane L. Streett - Torrance, Calif.
Jeffrey W. Pearce - Penn Yan, N.Y.
Matthew L. Shea - Albany, N.Y.
Michael Kozdrey - Temecula, Calif.
Robert A. Smith - Springfield, Mass.
Derek C. Young - Jersey City, N.J.

RETURNING STUDENT MEMBERS

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Alvaro Rodriguez - San Antonio, Texas

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