



Society seeks new membership connections

New members are the future of the Society of Broadcast Engineers. Sponsor a new member during the 2012 Membership Drive and help connect the society's present with the future.

Members of the SBE, who recruit a new member during the drive, are entered into a drawing to win a trip to the SBE National Meeting in Denver and prizes donated by Sustaining Members. Members earn one entry for each new member and five entries for each new Sustaining Member.

The grand prize winner of the SBE Membership Drive is granted a trip to the SBE National Meeting in Denver, Colorado, October 23-24. The prize package includes round trip airfare for one; all SBE National Meeting registration fees; and two nights at the Crowne Plaza Hotel.

In addition to the prizes all sponsors receive \$5 off 2013 membership dues for each new recruit, up to \$25. The current member must be listed as the sponsor on the application to be eligible for discounts and prize entries.

Additional prizes include a \$50 American Express gift card courtesy of Henry Engineering; an Ebtech Swizz Army cable tester courtesy of Broadcast Supply Worldwide (BSW); a 10-pack of Report-it licenses courtesy of Tieline; a Leatherman New Wave Multi-Tool With Nylon Sheath courtesy of Broadcast Microwave Services (BMS);

and five copies of *Networking for Dummies*, 9th Edition by Doug Lowe courtesy of John Wiley and Sons.

CONNECTING OUR FUTURE



To learn more and for copies of the membership application visit the SBE website at <http://www.sbe.org>. The 2012 Membership Drive ends May 31. Applications must be received before the deadline for sponsor prize eligibility.

Membership meets during NAB Show

Each year in April, many who make their living in the broadcast and media industry converge in Las Vegas for the annual NAB Show. That includes many members of the SBE who take part in the NAB Broadcast Engineering Conference, walk the show floor to view many of the more than 1,000 exhibits and spend some time meeting up with old friends. The SBE will have plenty of activity at the 2012 show with the highlight being the spring membership meeting on Tuesday, April 17.

The SBE will recognize 25 members who have reached incremental service milestones

in volunteer service as the certification chairman for their local chapter. The names of those being recognized appear on page 6 of this issue. Also being recognized are two five-year members of the national SBE Certification Committee, Cris Alexander, CPBE, AMD, DRB and David Priester, CPBE. The meeting agenda also includes updates on society programs and developments by SBE President Ralph Hogan, CPBE, DRB, CBNT and several other national leaders.

The membership meeting is scheduled **MEETING, page 9**

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Society of Broadcast Engineers
THE signal

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We had been struggling for about a year to find a reliable audio STL to our transmitter site on top of a mountain in Warrenton, VA. The telco lines degraded every time it rained, causing dropouts in our T1 and ISDN service. This summer, when services that did not rely on the leaky copper cables were finally built out at the site, we tried a pair of BRIC-Links on our new broadband Internet service. We've kept our transmitter on them ever since. We're going to be purchasing more pairs of these units to feed audio to our other sites."

David Kolesar, Senior Broadcast Engineer
Bonnieville International Corporation
WTOP / WFED, Washington, DC

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Pecena opens BEC Ennes Workshop

An important tutorial titled "The Broadcast Engineer in an IT World: What Do I Need to Know and How do I Learn IT?" kicks off the 17th annual Ennes Workshop at the NAB Show on Saturday, April 14. Presenting this session is Wayne Pecena, CPBE, 8-VSB, AMD, DRB, CBNT.

Beyond the traditional broadcast engineering roles needed in audio, video, and RF technologies, how does the broadcast engineer add the intricacies of the IT world to his or her knowledge base? This session reviews the knowledge and talents likely to be necessary in an IP networked broadcast environment. Pecena will examine methodologies and approaches to gain the necessary knowledge and skills, and prepare the manager to perform informed assessments. Knowledge sets of IP Networking, AOIP, VOIP, file based workflow, system administration, security protection, and data center architecture will be reviewed in a "Learn the Terminology" approach. Techniques to achieve the desired knowledge and skills will be presented from the novice to the experienced broadcast engineer.

Pecena grew up in the small Northeast Texas

town of Mt. Pleasant. His interest in electronics began in high school with employment after school at the local radio and TV repair shop, the discovery of amateur radio, and hanging around the local AM radio station, KIMP. Upon graduation from high school, Wayne enrolled in Texas A&M University. While at Texas A&M, he began employment as a student technician for educational TV services where his primary duties included repairing TV monitors used in campus classrooms.

A few months after becoming a student worker, Pecena was promoted to a full-time broadcast technician for KAMU-TV while continuing his studies. Further promotions included becoming a radio and TV broadcast engineer responsible for the construction of KAMU-FM, and finally to chief engineer of broadcast stations KAMU-TV & FM.

After obtaining BS and MS degrees from Texas A&M, Pecena began teaching telecommunications and IT focused professional development courses for the Texas

PECENA, page 11

Board candidacy deadline approaches

The SBE election begins July 26, 2012. Members who wish to run for the SBE National Board of Directors have until April 30 to be included on the Nominations Committee slate.

The national board of directors consists of four officers that serve one-year terms and 12 directors that serve two-year terms. The immediate past president also serves on the

board, bringing the total to 17 members. All members of the board serve in an at-large capacity and represent the society as a whole.

To be eligible, candidates for national office must be a Member, Senior, Fellow or Life member of the SBE, or be the designated

BOARD, page 12

SBE accepts past due renewal forms

Society members who forgot to renew their membership before the April 1 deadline still have time to renew. Those in the Member, Senior, Student, Associate and Fellow membership categories should return the renewal form or renew online.

There is no increase in membership dues for the 2012-13 year. Dues are \$68 for the April 1, 2012 through March 31, 2013 membership year. Student member dues remain at \$20. Youth and Sustaining Members renew in the anniversary month of their membership with no increase in cost from 2011.

Members who did not receive a renewal reminder by mail should contact Scott Jones at the SBE National Office at (317) 846-9000 or kjones@sbe.org.

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LETTER FROM THE PRESIDENT

by Ralph Hogan, CPBE®, DRB™, CBNT®
SBE President
rhogan@kjzz.org

Members shape SBE future at strategic planning conference

Every five or six years we step back and take a comprehensive look at the approach the society is taking to meet member needs. Progressive developments and additions are essential for the society's future. The SBE will hold a strategic planning conference on Saturday, June 23, 2012, in Indianapolis, Indiana to discuss the direction of the society.

The SBE was formed to support and promote broadcast engineering. The society continues to shape the industry and careers of thousands of engineers working today. Members are invited to discuss the future and plot the course of the Society at an all-day strategic planning conference. Past conferences have been extremely helpful to guide the society, improve member services and focus the energy of the organization toward specific goals.

I invite you and each of the SBE chapter chairpersons to join with the national board of directors and staff to attend this important event. I encourage all chapters, with the financial resources, to consider covering the costs for at least the chapter chairperson to travel to the meeting.

The conference takes place from 8:30 a.m. to 9 p.m. at the Hilton Indianapolis Hotel & Suites, located in downtown Indianapolis at 120 West Market Street. The central U.S. location is expected to make it easier for members from all locations to attend. Participants are invited to a special welcome reception on Friday, June 22 at 7:30 p.m.

The SBE is enlisting the services of a professional independent facilitator to lead the group through the strategic planning process. The facilitator is expected to help all attendees recognize and articulate the society's needs while building consensus on the best ways to chart the SBE's course.

Some of the questions that I anticipate discussing include:

- What are the SBE's most important and least important functions?
- What services should the SBE provide?
- What services should the SBE discontinue?
- What role does/should the SBE play in the broadcast industry?

- What can the SBE do to increase the value of membership and certification?

- What is the skill set of the current broadcast engineer? What skills are needed but are lacking?

- What will the future broadcast engineer be like? What will the future broadcast engineer need to know?

- What can the SBE do to increase awareness and interest in broadcast engineering?

- What can the SBE do to attract more participation from members in local chapters and at the national level?

- How can the national organization better support and work with local chapters?

I urge each chapter to dedicate all or part of a meeting this spring to a member discussion regarding the future of broadcast engineering and the role of the SBE in the industry's future. You might use some of the questions above as the basis for the discussion. Your chapter representative can bring the results generated to the meeting in June or, if no one from your chapter is able to attend, comments may be sent to SBE Strategic Planning Committee Chairman David Priestler, CPBE, by email at dpriester@ithaca.edu prior to the event. I hope the strategic planning conference will result in fresh ideas and a focused course for the Society.

There is no registration fee, but to properly plan, attendees must register in advance. Please RSVP by May 23 using the conference registration form located on the national calendar of the SBE website or email SBE Executive Director John Poray at jporay@sbe.org. A discount room rate of \$109 plus tax per night is available for attendees. To reserve a room, call (800)

315-1906 by May 23. A limited number of rooms are available at the special rate. The SBE will provide breakfast, lunch and dinner on the day of the conference to participants. In addition to the strategic planning conference, a plan to better educate broadcast engineers through an SBE mentor program is underway. The executive committee established a new mentoring subcommittee under the SBE education committee at the January meeting in Orlando. A committee chairperson will be appointed in the near future. Several society members have expressed interest to serve on the mentor committee. Once the committee is formed, it will develop criteria for those who wish to become mentors for the society. Look for more information on this exciting new addition in forthcoming issues of The Signal and other SBE publications. I look forward to your participation in the upcoming events and new programs.

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The road goes on forever: Commercial motor vehicles, radios, and the broadcast engineer

Does your broadcast station have a van or a fleet of vehicles for remote broadcasts? An ENG or SNG truck? Do you drive them? If so, you might want to check to see whether or not you need a Commercial Driver's License (CDL) issued by your state pursuant to the standards set by the Commercial Motor Vehicle (CMV) Safety Act of 1986. If you already have a CDL, you should check to see whether new regulations issued by the Federal Motor Carrier Safety Administration affect you. The 1986 Act set minimum standards for state-issued CDLs. These rules generally affect drivers of larger trucks and buses. The federal standards are minimum standards, which means that the states can enact more rigorous standards for CDLs, but not less stringent ones.

There are three classes of CMV, each essentially applying to either heavy trucks, i.e., gross vehicle weights of 26,001 pounds or more or any vehicle towing a 10,000 pound or heavier vehicle; or a single vehicle or a combination of vehicles that is designed to transport 16 or more passengers or is transporting hazmats. If one of these three classes of CMV is owned by your station and you are going to drive it, you need to have a CDL, regardless of whether you are engaged

in interstate or intrastate or even foreign commerce (broadcasting is by definition interstate commerce in all cases, by the way).

Whether or not you need a CDL is not really the topic for today, however. It is more about radio operating while driving a motor vehicle. You have all heard of the hands-free requirements for operating cellular telephones in many states and even in some municipalities. Some states prohibit all mobile cellular operation. I am sure that most broadcast engineers are prudent drivers and do not get distracted while driving on the job. What, however, can a broadcast engineer do about two-way communication while driving a motor vehicle in the course of his or her work?

State laws are evolving. In many states it is fine to use a hands-free device for your mobile phone while driving. In others, not so, regardless of what kind of motor vehicle is being driven or what kind of driver's license one has. The Federal Motor Carrier Safety Administration has recently created new rules for CMV drivers, which were effective at the beginning of this year. Now, a CDL holder cannot operate a mobile telephone while conducting "interstate commerce". One



LEGAL PERSPECTIVE

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

would normally interpret this to mean that in order to trigger the requirement, one must be driving across state lines. But as I said before, all broadcasting, regardless of service area, is "interstate commerce". So, arguably, all CDL operators driving an SNG truck, for example is conducting interstate commerce, regardless of whether it is going to different states or just around the city of license. OK, so that means that CDL drivers cannot use mobile telephones while operating the vehicle. But what about two-way radios on RPU channels? Land Mobile radios?

CDL drivers can, for mobile radios, use wired or wireless earpieces so they have hands-free operation, using single-button controls on the steering wheel or mounted on the dashboard. That means no touch-tone pads, and no dialing of telephone numbers from the radio. It would be possible for drivers to answer or terminate a call with a

VEHICLES, page 6

Gain approval for leadership development course from employer

Is it difficult to obtain company approval to attend the SBE Leadership Course? The SBE website includes information on how to justify professional development to an employer and attend the July 31-August 2 course in Atlanta, Ga.

Tips on how to approach a company to support participation in this and other courses are listed on the Education section at www.sbe.org. Considerations and discussion points about how to present the opportunity to a manager and a sample memo are available for employees to use. The deadline to

register for the leadership course is July 13.

The SBE suggests that employees present the purpose for his or her attendance in a professional manner. Personal benefits, which also aid organizations, are objectives that one may state. Achievements often made by attendees and valid reasons to attend include specific company benefits, such as findings to increase revenue or decrease cost. Often attendees learn to resolve a current company issue.

The course differs from other management or leadership courses as it is geared towards

broadcast engineers. The leadership training for this specific niche of engineering provides the opportunity for interactive challenges and learning techniques to resolve problems often found in broadcast engineering only.

With registration, attendees receive the Leadership Development Webinar Series to prepare for the course. The cost for members of the SBE is \$590 and \$640 for non-members. Tips on how to budget course expenses are available on the SBE website.

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MEMBERS ON THE MOVE

Kirk Harnack was promoted to vice president of Telos Products, a new position created at Telos Systems.

Ched Keiler, CPBE, 8-VSB, CBNT is the new vice president of engineering for Georgia Public Broadcasting.

Jeff Smith, CSRE is now Chief Engineer NYC at Merlin Media.

Tom Weems, CPBE is the new western regional sales manager/engineer at DNF Controls.



CERTIFICATION UPDATE

by Megan Clappe
SBE Certification Director
mclappe@sbe.org

Kneller, Williams join society's national certification committee

Two recent additions to the SBE National Certification Committee by chairman Jim Bernier, brings the total certification committee members to 14. Hal Kneller, CPBE, CBNT and Ed Williams, CPBE join the national committee.

Jim Bernier, CPBE, CBNT, the committee chairman appointed the members. Kneller currently works for Nautel Ltd., and is a former radio station owner and operator. With a long history of service to industry organizations such as NRSC and NAB technical committees, Kneller brings a depth of multi-faceted experience to the committee.

Williams currently works for KPTX-KPDX in Portland, Ore., and is a 30-year veteran in both radio and television. A large portion of his career was spent designing, building and renovating facilities. Williams led the design and installation effort for Meredith's Phoenix Central Casting Facility at KPHO.

Kneller and Williams join 12 other members

of the National Certification Committee. These committee members work together to improve and maintain the certification program within the ever-changing field of broadcast engineering. They combine their knowledge and experience to uphold the integrity of the program.

Local certification chairmen volunteer their time and serve their chapter. These chairmen and the members of the National Certification Committee spend a vast amount of hours of their own time to administer exams, review applications and write questions.

During the membership meeting the society will recognize the service anniversaries of the certification volunteers, which is done on a recurring five-year cycle. The meeting takes place on April 17 at 5 p.m., in Room S225 of the Las Vegas Convention Center.

Members who currently serve as the local certification chairmen for their chapters, with service anniversaries this year are listed below.

25-Years	Chapter 47 Chapter 61	Richard Burden, CPBE Eddy Arnold, CSTE
20-Years	Chapter 11	Mark Quella, CPBE
15-Years	Chapter 14 Chapter 26 Chapter 74 Chapter 89 Chapter 116 Chapter 118	John Reno, CSBE Gordon Carter, CPBE, DRB, CBNT James Leedham, CPBE, CBNT Terry Reynolds, CPBE, CBNT Noel Richardson, CSRE Charles Grider, CBRE, CBNT
10-Years	Chapter 69 Chapter 80 Chapter 131 Canada	Gary Keener, CBTE James Sams, CSTE, CBNT Paul Claxton, CPBE, CBNT K. Terry Horbatiuk, CPBE
5-Years	Chapter 25 Chapter 34 Chapter 40 Chapter 72 Chapter 81 Chapter 85 Chapter 103	David Fort, CPBE Dennis Vigil, CSTE, 8-VSB, CBNT Winston Tharp, CPBE Ernest Harvey, Jr., CPBE Philip Mowbray, CPBE Britt Lockhart, CPBE J. Gibson Prichard, CBNT
1st Year	Chapter 5 Chapter 7 Chapter 54 Chapter 56 Chapter 91	Mark Fehlig, P.E., CPBE, 8-VSB, CBNT Alan Alsobrook, CSRE, AMD, CBNT Richard Dyer, CBTE James Hobbs, CPBE Larry Estlack, CPBE
5-Years	National National	Cris Alexander, CPBE, AMD, DRB David Priester, CPBE

VEHICLES from page 5

single button. Even when the CDL operator's vehicle is stationary, the rule applies.

The problem with all of the state mobile cellular legislation and statutes floating around these days is the definitions. The problem is always trying to figure out what "wireless communications devices" or "mobile telecommunications" are encompassed by the state mobile cellular legislation being interpreted, and therefore what is prohibited and what is not. The CDL rules on mobile phones are no exception. They apply to "commercial mobile radio services" but exclude "two-way or Citizen's Band radio services." Huh? Are we to understand that there is some difference between two-way radios and "Commercial Mobile Radio Services"? Well, actually, there is a distinction that can be applied, but whether it was intended to be a distinction in this context is debatable. Traditionally, in FCC jurisprudence, "Commercial Mobile Radio Services" have always been interpreted to mean those land mobile radio systems that are interconnected with the public switched telephone network. PMRS systems are not interconnected. So, if I have a regular two-way radio or an RPU radio in my SNG truck which is not interconnected, it is at least not subject to the Federal CDL rules. Use of it while driving may still violate your state's mobile cellular law, however. Better check it.

It is best not to use any radio with a touch-tone pad in it while driving a CMV or in any state in which mobile telephones are prohibited. If you have land mobile radio licenses at your station, check the station class code. If it shows a "C" classification, i.e., FB2C, and if the radio system is in fact interconnected to the public switched network, consider it included in the CDL rules. And of course, no texting while driving. Anywhere.



Certification Question

answer on page 11

The DTV dipole correction factor used by the FCC at UHF on field strengths calculated at the UHF geometric mean frequency is:

- A) Minus 7 dB at Channel 14 and plus 7 dB at Channel 69?
- B) Plus 7 dB at Channel 14 and minus 7 dB at Channel 68?
- C) Minus 2.3 dB at Channel 14 and plus 2.3 dB at Channel 69?
- D) Plus 2.3 dB at Channel 14 and minus 2.3 dB at Channel 69?

New SBE Certification Achievements

CONGRATULATIONS

LIFE CERTIFICATION

Current CPBE and Certified Senior Broadcast Engineer members who have maintained the SBE certification continuously for 20 years may be granted Life Certification if so requested. All certified who have retired from regular full-time employment may be granted Life Certification if they so request. If approved, the person will continue in his/her current level of certification for life.

Certified Professional Broadcast Engineer® (CPBE®) J. Steven Bridges, Longview, Texas - Chapter 44 Certified Broadcast Radio Engineer™ (CBRE®) William Wright, Boone, N.C. - Chapter 84	Certified Broadcast Television Engineer™ (CBTE®) Willie Smith, Raeford, N.C. - Chapter 93 Certified Broadcast Networking Technologist® (CBNT®) Willie Smith, Raeford, N.C. - Chapter 93	Certified Broadcast Technologist® (CBT™) Terry James, McLeansboro, Ill. Jon Morgan, St. Charles, Ill. - Chapter 26 Paul Yonge, Syracuse, N.Y. - Chapter 22
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NEWLY CERTIFIED CPBE

Applicant must have had 20 years of professional broadcast engineering or related technologies experience in radio and/or television. The candidate must be currently certified on the Certified Senior Broadcast Engineer level.

Certified Professional Broadcast Engineer (CPBE)	Kenneth Tankel, Malvern, Pa. - Chapter 18
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FEBRUARY EXAMS

Certified Senior Radio Engineer™ (CSRE®) Walter Sewell, Belleville, Ill. - Chapter 55 John Justin Tucker, Charleston, S.C. - Chapter 107 Certified Broadcast Radio Engineer (CBRE) Ken Broeffle, Seattle, Wash. - Chapter 16 Certified Broadcast Television Engineer (CBTE) Francis Obikoya, Grand Prairie, Texas - Chapter 67 Anthony Peiffer, Pleasant Gap, Pa. - Chapter 41 Michael Tody, Manlius, N. Y. - Chapter 22	Certified Audio Engineer® (CEA®) Seth Morth, Marietta, Pa. - Chapter 41 8-VSB Specialist™ (8-VSB™) Brad Jurrens, Green Bay, Wis. - Chapter 80 Certified Broadcast Networking Technologist (CBNT) William Cabral, Jacksonville, Fla. - Chapter 7 Aaron Gauger, Raleigh, N. C. - Chapter 93 Bryan Gordon, Atlanta, Ga. - Chapter 5 Mark Watson, Austin, Texas - Chapter 69	Certified Broadcast Technologist (CBT) Aaron Read, Santa Barbara, Calif. - Chapter 47 Lamonte Tyler, Baltimore, Md. - Chapter 37 Certified Television Operator® (CTO®) Zero DeLoach, Tuscaloosa, Ala. - Chapter 68 Horace Pearson, Richmond, Va. - Chapter 60 Ricardo Velez, Concord, Calif. - Chapter 40
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SPECIAL PROCTORED EXAMS

8-VSB Specialist (8-VSB) James Blackford, Evansville, Ind.	Certified Broadcast Technologist (CBT) Thomas Belcher, II - Mt. Hope, W. Va.	Certified Broadcast Networking Technologist (CBNT) James Blackford, Evansville, Ind.
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COURSE COMPLETION

Certified Broadcast Technologist (CBT)	CLEVELAND INSTITUTE OF ELECTRONICS	Kevin Lapham, North Port, Fla. - Chapter 39
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CERTIFIED BY LICENSE

Certified Broadcast Technologist (CBT)	Mark Pace, Carrollton, Ill. - Chapter 55	Jim Shryne, Tacoma, Wash. - Chapter 16
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RECERTIFICATION

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

Certified Professional Broadcast Engineer (CPBE) David Gooding, Elkhart, Ind. - Chapter 30 Mario Hieb, Salt Lake City, Utah - Chapter 62 John McKinley, Gahanna, Ohio - Chapter 52 Thomas Skubel, Pittsburgh, Pa. - Chapter 20 Thomas Weber, Greenwood, Ind. - Chapter 25 Certified Senior Broadcast Engineer™ (CSBE™) Warren Shulz, Griffith, Ind. - Chapter 26 Certified Senior Radio Engineer (CSRE) Ritchie Bauer, West Jordan, Utah - Chapter 62 Robert Henning, Mishawaka, Ind. - Chapter 30 John Landry, Hastings on Hudson, N.Y. - Chapter 15 Jerry Olson, Cheney, Wash. - Chapter 21 Certified Senior Television Engineer (CSTE) Paul Cohen, Los Angeles, Calif. - Chapter 47 Carl Dole, Williamsburg, Ind. - Chapter 25 Ronald Hacker, Perth Amboy, N.J. - Chapter 15 Jayne Jacobs, Carneys Point, N. J. - Chapter 18 James Kuhns, Clinton Township, Mich. - Chapter 82 Certified Senior Television Engineer (CSTE) 8-VSB Specialist Elvir Hadziselimovic, Cottonwood Heights, Utah - Chapter 62 John Lloyd, Jr., Sandy, Utah - Chapter 62 Certified Broadcast Radio Engineer (CBRE) Michael Hansen, Belgrade, Mont. - Chapter 6 David Maxson, Medfield, Mass. - Chapter 11 Certified Broadcast Television Engineer (CBTE) Joseph Addalia, Jr., Winter Springs, Fla. - Chapter 42	Veronica Mazuca, San Marcos, Texas - Chapter 79 David Miscia, Framingham, Mass. - Chapter 11 Rick Morris, Wilmette, Ill. - Chapter 26 Scott Nielson, Kaysville, Utah - Chapter 62 Larry Rixman, Louisville, Ky. - Chapter 35 Stephen Simmons, Sitka, Alaska - Chapter 89 Tom Wolfersberger, Pembroke Pines, Fla. - Chapter 53 Certified Broadcast Television Engineer (CBTE) 8-VSB Specialist Michael Hansen, Belgrade, Mont. - Chapter 6 Robert Lewis, Park City, Utah - Chapter 62 Certified Broadcast Networking Technologist (CBNT) Michael Hansen, Belgrade, Mont. - Chapter 6 Mario Hieb, Salt Lake City, Utah - Chapter 62 Paul Jonak, Mira Loma, Calif. - Chapter 131 Thomas Taylor, Boise, Idaho - Chapter 115 Thomas Weber, Greenwood, Ind. - Chapter 25 Charles Youngs, Atlanta, Ga. - Chapter 5 Certified Broadcast Technologist (CBT) James Bowman, Jr., Minot, N.D. - Chapter 132 William Dobbs, Hope Mills, N.C. - Chapter 93 Marc Fenton, Moreno Valley, Calif. - Chapter 131 Peter Fountain, Highland Ranch, Colo. - Chapter 48 Rubin Garcia, Aventura, Fla. - Chapter 53 Don Hemenover, Indianapolis, Ind. - Chapter 25 Hexekiah James, Homestead, Fla. - Chapter 53 Stephen Lloyd, Fort Meade, Md. - Chapter 132 Michael Mick, P. E., Gurnee, Ill. - Chapter 26	Michele Muller, San Mateo, Calif. - Chapter 40 Kevin Rotz, Tripoli, Iowa - Chapter 55 John Tucker, Sachse, Texas - Chapter 67 Stephen Tuzeneu, Abilene, Kan. - Chapter 3 Certified Television Operator (CTO) Matthew Antalek, Philadelphia, Pa. - Chapter 140 Stanley Armstrong, Rocky Mount, N. C. - Chapter 93 Anthony Bankston, Los Angeles, Calif. Jeff Barefoot, Woodbridge, Va. Roman Binzburg, Los Angeles, Calif. Craig Claytor, San Diego, Calif. - Chapter 36 David Corpuz, Aurora, Colo. Pamela Eason, Phenix City, Ala. Jerod Getz, Grants Pass, Ore. - Chapter 141 Dale Jones, Grand Junction, Colo. Ed Jones, Johnson City, Tenn. Debbie Kostello Dixon, Washington, N.C. Marla Nefflen, Liverpool, N.Y. Bill Sherwood, Tulsa, Okla. - Chapter 56 Urban Stuess, Los Angeles, Calif. - Chapter 47 Steven Thomas, Little Rock, Ark. Certified Radio Operator (CRO) Robin Bolze, Virginia Beach, Va. Alex Gonzalez, Maywood, Calif. Willis Payne, Jr., Milwaukee, Wis.
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CERTIFIED RADIO OPERATOR

Jeffrey Han, Pittsburg, Kan. - Chapter 3 PASADENA CITY COLLEGE Tamica Davis, Compton, Calif.	ITHACA COLLEGE Daniel Dawson, Ithaca, N.Y. Alex Hardy, Ithaca, N.Y. Ashley Hunter, Ithaca, N.Y.	Andrew Joseph, Ithaca, N.Y. Matthew McCarthy, Ithaca, N.Y. Cassandra Medcalf, Ithaca, N.Y. Tyler Newhouse, Ithaca, N.Y.
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CERTIFIED TELEVISION OPERATOR

Alisa Barbour, Cedar Rapids, Iowa Shane Johnson, Cedar Rapids, Iowa Mike Mulherin, Cedar Rapids, Iowa Eric Williams, San Antonio, Texas	KENT STATE UNIVERSITY Casey Braun, Streetsboro, Ohio Jorge Delarosa, Kent, Ohio Andrew Paulsen, Kent, Ohio	Brian Schieders, Kent, Ohio Ed Smith, Kent, Ohio
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MEETING from page 1

from 5 to 6 p.m. in Room S225 of the Las Vegas Convention Center (LVCC). The first 100 members in attendance will receive a commemorative SBE logo pen. In addition, everyone in attendance will have a chance to win one of three \$25 dinner gift cards and one lucky winner will receive a \$250 gift card to Best Buy. The SBE Membership Meeting is sponsored by Vislink Broadcast. In addition to sponsoring the meeting, the SBE Sustaining Member has also made a generous \$500 donation to the scholarship fund of the Ennes Educational Foundation Trust.

The SBE maintains an active exhibit booth during the NAB Show. Booth L29, located on the second floor Lobby of the LVCC South Hall, will feature broadcast technical books from well-known publishers and those within the broadcast industry. Members are able to renew their membership at the booth and the society also accepts new membership applications during the show. The SBE logo items including shirts, hats, decorative microphones and other items are available for purchase. Information is available about society services including certification, education, JobsOnline, Resume Service, insurance coverage and sample contracts for use by contract engineers.

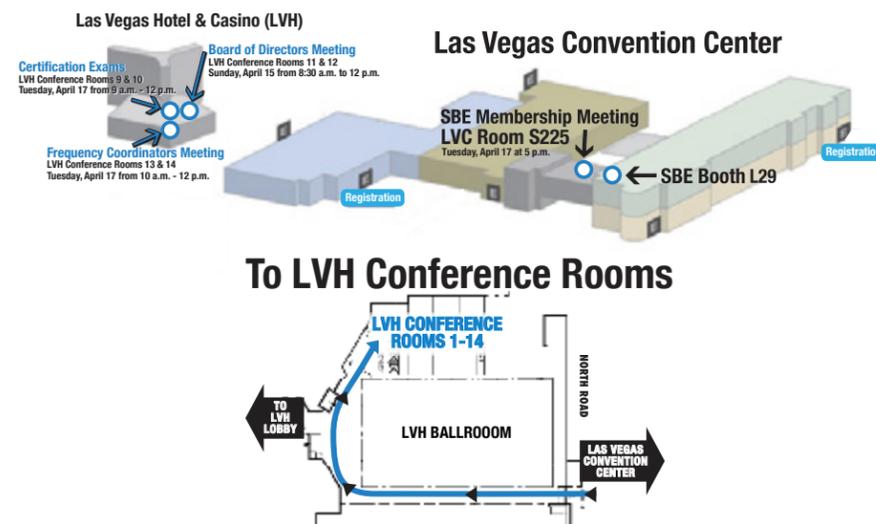
The SBE is proud to partner with the NAB to present the annual NAB Broadcast

Engineering Conference. Saturday, April 14 through Thursday, April 19 dozens of technical papers that cover the spectrum of broadcast and media technology are presented. As part of the conference, the society's Ennes Educational Foundation Trust, in cooperation with PBS, presents the Ennes Workshop on Saturday. The SBE has arranged for special show registration discounts for members who are

not employed by NAB member companies. The SBE Partner Rate, which is \$100 off the NAB non-member rate for either the Smart Pass or Flex Pass registration, or a free Exhibits Only pass, are available. Visit the SBE website, www.sbe.org, and click on the NAB Show icon to register using the special codes. A Smart Pass, Flex Pass or conference day pass is required for the annual Ennes Workshop.

SBE Meeting Locations

Visit <http://www.sbe.org> or see the chart below for more information about the 2012 NAB Show and detailed information about events.



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NABSHOW
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CONFERENCES April 14-19, 2012
EXHIBITS April 16-19
Las Vegas Convention Center, Las Vegas, NV USA
www.nabshow.com

SBE Schedule of Events

Saturday, April 14

Ennes Workshop
8 a.m.-5 p.m.
Conference registration required
LVCC South Hall, 2nd floor, S225

Certification Committee Meeting
6:30-11 p.m.
Conference Room 12

Sunday, April 15

SBE Board of Directors Meeting
8:30 am-12 p.m.
Conference Rooms 11, 12

Education Committee Meeting
3 p.m.-4:30 p.m.
Conference Room 6

Tuesday, April 17

SBE Certification Exams
9 a.m.-12 p.m.
Conference Rooms 9 & 10

Frequency Coordinators Meeting
10 a.m.-12 p.m.
Conference Rooms 13, 14

SBE Spring Membership Meeting
5p.m.-6 p.m.
LVCC Room S225

SBE Booth Hours

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

SBE Booth Location

LVCC South Hall Lobby Booth 29 near the entrance to the second floor exhibit hall. See the SBE web site, www.sbe.org for a floor plan indicating the booth location.

The SBE meetings during the NAB Show are held at the Las Vegas Hotel and Casino (LVH) unless otherwise indicated. Meetings and events that take place in the Las Vegas Convention Center (LVCC) are indicated.

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NABSHOW See the truck on the SSL Booth# C2013.



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EDUCATION UPDATE

by Kimberly Kissel
SBE Education Director
kkissel@sbe.org

Society offers online RF safety training

Safety concerns and contractor requirements make radio frequency safety training an important requirement for organizations and employees. The Society of Broadcast Engineers continues its commitment to offer safety training with the SBE RF Safety Course by Richard Strickland of RF Safety Solutions.

The three-hour course takes place Wednesday, May 24 from 2:30-5:45 p.m. ET. and is a cost- and time- effective way to offer proper training to employees and contractors.

Topics include biological effects of RF radiation and the distinct differences between RF radiation and ionizing radiation; FCC

and OSHA regulations; workplace hazards; transmitter sites; SNG and ENG trucks.

A new section on how to prove compliance at a broadcast site is designed specifically for broadcast station personnel. The SBE recommends this course for chief and assistant chief engineers, transmitter site engineers, ENG and SNG maintenance personnel and management that need to have an understanding of RF safety issues and regulations.

The cost for the course is \$85 for members of the SBE and \$125 for non-members. For more information and to register, visit the SBE website, Education pages. For more



top Richard Strickland of RF Safety Solutions monitors radio frequency on June 17, 2009. The SBE and Strickland have joined to present a webinar on RF Safety Wednesday, May 24.



right Richard Strickland wears a safety harness before work in a bucket truck. Strickland fixed a problem with a large billboard that was picking up energy from a high power AM radio station.

information on Richard Strickland and RF Safety Solutions, visit www.rfsolutions.com.

Computer networking webinar prepares examinees for CBNT

Engineers preparing for the SBE Certified Broadcast Networking Technologist exam are encouraged to take the SBE University course Computer Networking for Broadcast Engineers.

The course covers a broad array of topics to assist the broadcaster in passing the Certified Broadcast Networking Technologist exam. There are several quiz questions at the end of each chapter to help the student ensure that he or she understands the material.

This course covers fundamental concepts of computer networking and includes computer topologies, both physical and logical, media types, the OSI model, and local area networking. In addition, Ethernet, TCP/IP and

other current computer networking protocols are covered. Hardware, such as switches and routers, will be covered and software such as VLAN, VPN, and NAT as well. Some basic troubleshooting, security, and administrative procedures are also reviewed.

Paul Claxton, CPBE, CBNT, the chapter and certification chairman for Chapter 131, wrote this course for the SBE. Claxton is a retired US Navy Master Chief Petty Officer and has been a society member for more than ten years. He holds certifications from Novell, Microsoft, CompTIA and SANS in various computer networking, security, and administration areas and has presented IT subject papers at the

NAB Show engineering sessions.

When asked to complete an anonymous evaluation of the course, a student said, "The Computer Networking SBE University Course is an absolute must for the broadcast engineer who is maintaining the business office AND the computerized file based master control."

The cost for this course is \$99 for members of the SBE and \$139 for non-members. Students have access throughout the course's existence, including any future updates. This course is available on-demand from SBE University. To enroll for this or any course on SBE University, visit the Education section on the SBE website at www.sbe.org.

Webinars by SBE presents 'AM Directional Antenna Modeling'

With the advent of FCC-permitted AM directional antenna performance verification using moment-method computer modeling, broadcast engineers now have a new and powerful tool at their disposal. Webinars by SBE presents, "AM Directional Antenna Modeling" on May 10 from 2 to 5 p.m. EDT.

Qualifying arrays can be modeled and adjusted to the calibrated model parameters in lieu of all the labor, time and uncertainty of adjusting and proofing them using the old cut-and-try method employing field intensity measurements. This SBE webinar provides a detailed overview of the modeling process, including base impedance matrix and sample system calibration measurements, model construction and calibration and derivation of operating parameters from the calibrated model. The FCC requirements for moment-

method license applications are also covered.

Presenting this webinar is Cris Alexander, CPBE, AMD, DRB. Alexander is the director of engineering at Crawford Broadcasting Company. At the start of his career in Amarillo, Texas, Alexander worked to obtain an FCC First Class Radiotelephone License, while he worked in station engineering departments. Alexander moved to Dallas/Fort Worth, where he worked first in television and then radio, landing in his present position in 1984.

The webinar cost is

\$79 for SBE members; \$99 for non-members. For more information and to register, visit the Education section on www.sbe.org.

Who will be the next SBE Engineer of the Year?

JOHN LUFF
2010 ENGINEER OF THE YEAR

AL GROSSNIKLAUS, P.E., CBNT
2011 ENGINEER OF THE YEAR

2012 ROBERT W. FLANDERS
SBE ENGINEER OF THE YEAR

YOU DECIDE NOMINATE A DESERVING MEMBER OR CHAPTER FOR A 2012 SBE NATIONAL AWARD. FIND NOMINATION FORMS AT WWW.SBE.ORG.

Society introduces new publication design, fellowship opportunities through social media

With this issue of The Signal, we debut a fresh new look and layout that is not only pleasing to the eye but I think you will find it easier to read. I hope you like it and continue to stay in touch with society news through The Signal. Our thanks goes to Hannah Trowbridge, communications manager at the SBE national office, who created the new design. The new look for the publication is one of a number of changes to the society's communications plan.

Social Media

In the last two years, the SBE has entered into the realm of social media with a LinkedIn page, a Facebook page and group, and with Twitter. Joining that stable of social

More than 3,500 people are members of the SBE LinkedIn group.

media outlets is the new SBE membership blog. Followers of the SBE blog are connected to information from the SBE national office about new developments in membership, chapter news, certification, education, regulatory issues, the jobs list and discounted technical books. Visit the blog at <http://blog.sbe.org> or use the link to the blog on the SBE website homepage.

More than 3,500 people are members of the SBE LinkedIn group. This is a closed group for members of the SBE and the industry. The SBE Facebook page allows visitors to see society updates and photos, while the SBE Facebook group allows only members of the SBE, who request to join the group. Anyone may visit

PECENA from page 3

Engineering Extension Service, the University of Texas Continuing Education Program in the College of Engineering, and the Center for Distance Learning Research at Texas A&M in addition to his professional duties.

Today, Pecena is the assistant director of educational broadcast services in the Office of Information Technology at Texas A&M

Society's 2011 financial year in review

The Society of Broadcast Engineers, Inc. completed 2011 with net revenue from all operations of \$-42,005. Net revenue from cash operations only, was -\$52,808. Gross income from all sources was \$669,746 while expenses were \$711,751. The value of the society's medium and long term investments as of December 31, 2011 was \$1,048,776, which was \$1,307 greater than at December

@SBEorg on Twitter to see recent posts.

The society also maintains several active email discussion groups where members are able to send and receive messages to other members of the group. Members of the SBE may subscribe to any of these discussion groups:

- SBE Roundtable, an ongoing discussion about engineering and the SBE
- SBE Chat, a general topic discussion forum for members of the SBE
- SBE Exchange, continuous discussion about the Emergency Alert System, open to anyone.

To subscribe to any of these three email lists or the SBE social media outlets, click on the Social Media link under the Membership

category on the SBE website. Creating productive professional relationships with others in the broadcast engineering field and staying abreast of new developments are two primary benefits of membership in the SBE. The society has created these platforms to help you realize those benefits. I hope you will take advantage of these tools.

Sustaining Membership Milestones

I also want to recognize the advertisers whose products and services appear in The Signal each issue. I hope you will consider these companies when making purchasing decisions and let them know you saw their ad in The Signal. Just over ten years ago, the SBE began recognizing companies that have been Sustaining Members of the SBE

University. He serves as the director of engineering of TTVN: The Enterprise Videoconference and Data Network serving the Texas A&M University system and public broadcast stations KAMU-TV and KAMU-FM. He is responsible for leading technology implementation within the broadcast facilities and over 150 data and video sites throughout the Texas A&M University system.

When he is not working, Pecena considers his main hobby to be amateur radio. One of his

FOCUS ON SBE

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



for 25 years. Of the 124 current sustaining members, 14 have now reached that milestone. I would like to recognize four of those members that have now reached 35 years of membership. They include Continental Electronics, Harris Broadcast, Moseley Associates and Tektronix. Continental Electronics, the longest tenured SBE Sustaining Member, has actually reached 36 years. These four companies are familiar names to anyone in broadcasting and we are proud to have them with us. We express our sincere thanks to them for their consistent support of the SBE membership since the mid-1970s.

Visit With SBE Members at NAB

For those of you attending the NAB Show in Las Vegas, I hope you will stop by the SBE booth in the Las Vegas Convention Center. Officers and members of the national board, the national certification committee and national staff will be there to greet you. Plan to attend the society's membership meeting Tuesday, April 17. It is a great opportunity to meet old friends as well as new people. The meeting sponsor, Vislink Broadcast, has again made it possible to give away nice gifts and prizes. I hope to see you there.

CQ Answer question on page 6

C) Minus 2.3 dB at Channel 14 and plus 2.3 dB at Channel 69?

ambitions is to locate a retired Collins or Gates AM broadcast transmitter and restore to operation on the 160m AM bands. In addition, he has an extensive woodworking shop in a 1500 square foot building. Pecena and his wife, Slyck, live on 8 acres in southwest Brazos County, Texas.

Pecena's session at the Ennes Workshop begins at 8 a.m. and again at 9:05 a.m. in the LVCC. To register, visit the SBE website.



MARK YOUR CALENDAR

CERTIFICATION EXAM SCHEDULE

Dates	Location	Application	Deadline
June 1-11	Local Chapters		April 13
Aug. 3-13	Local Chapters		June 1
Nov. 2-16	Local Chapters		Sept. 14

NAB SHOW

See page 8 for booth and meeting details.
April 14-19 in Las Vegas, NV

ENNES WORKSHOP

El Paso, Texas May 18 - hosted by Chapter 38
Cleveland, Ohio June 13 - hosted by Chapter 70

MEMBERSHIP DRIVE

Deadline to recruit new members and be entered into the prize drawing May 31

SBE NATIONAL AWARDS

Nomination deadline June 15

ENNES SCHOLARSHIP

Application deadline July 1

SBE LEADERSHIP DEVELOPMENT COURSE

July 31-August 2 in Atlanta, Ga.

WEBINARS BY SBE

"TV White Space Devices & Wireless Microphones"

May 2 from 2-3 p.m. EDT
members - FREE, thanks to Shure; non-members - \$39

"AM Directional Antenna Modeling"

May 10 from 2-5 p.m. EDT
members \$79; non-members \$99

"SBE RF Safety Course"

May 24 from 2:30-5:45 p.m. EDT
members \$85; non-members \$125

"IPv6 for Broadcasters"

July 11 from 2-3:30 p.m. EDT
members \$49; non-members \$69

BOARD from page 3

representative of an SBE Sustaining Member. All candidates must be in good standing, hold a current engineering-level SBE certification and must maintain the certification through all terms of office.

Members of the board are expected to attend two in-person meetings each year; in the spring during the NAB Show in Las Vegas and in the fall, during the SBE National Meeting. Board members may be appointed by the president to chair or serve on a national committee. Officers are also expected to attend two in-person meetings of the executive committee in January and June. Additional meetings held via conference call for the board and executive committee may be scheduled at a later date.

Members interested in running should contact one of the following members of the nominations committee by phone or email.

- Raymond Benedict, CPBE, nominations committee chairman, Columbia, Md., rcbenedict@cbs.com or (202) 457-4518

- Ted Hand, CPBE, 8-VSB, AMD, DRB, Charlotte, N.C., ted.hand@coxtv.com, (704) 335-4732

- Gary Liebisch, CPBE, 8-VSB, AMD, DRB Powell, Ohio, gary.liebisch@nautel.com, (740) 917-5699.

The committee's slate is submitted to the national office on April 30. Eligible members, not on the nominations committee's slate, may be added to the ballot if nominated by ten or more voting members.

Members will access ballots via email and vote online in the summer of 2012. Ballots are mailed only to members who have opted out of online voting. All ballots, whether cast electronically or by mail, must be received at the national office by 4:30 p.m., ET, August 28.

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.

Thank you to the following supporters for their scholarship funds contributions:

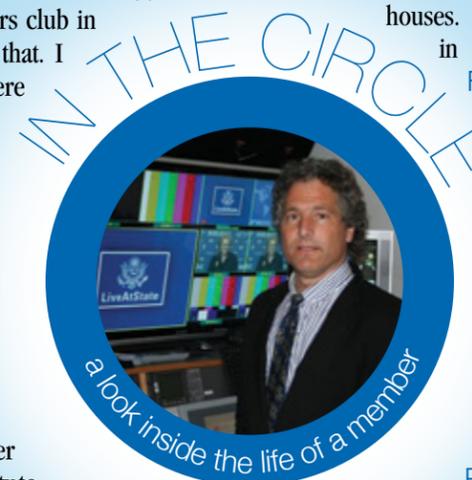
<p>Harold Ennes Scholarship Michael Baker, Glen Burnie, Md. John Batson, Birmingham, Ala. Lawrence Behr, Greenville, N.C. Peter Boyce, New Albany, Ind. Stuart Casteel, Ukiah, Calif. Hai-jong, Chon, Woodbridge, Conn. Jorge Conde, Guayama, Puerto Rico Scott Curts, Aurora, Ill. Edward Damerel, Richmond, Va. Stephen Davis, Coweta, Okla. Alan Eng, Oakland, Calif. Barry Grossman, Hoboken, N.J. Steven Hagerty, Sacramento, Calif. Terry Harper, Auburn, Ala. Kevin Hornberger, Plainfield, Ill. Peter Magee, Poland, Maine</p>	<p>Jerry Olson, Cheney, Wash. Robert Orban, Belmont, Calif. James Pollock, Mount Laurel, N.J. Mark Richer, McLean, Va. Bradford Scott, Cincinnati, Ohio Christopher Thomas, Vienna, Va. Richard Thomas II, Okemos, Mich. Michael Waldman, Chesterfield, Mo. Thomas Wimberly, Bakersfield, Calif. Vislink Broadcast, North Billerica, Ma.</p>	<p>Rick Levy, Cambridge, Ma. Milford Smith, Jr., Lawrenceville, N.J. John Strahler, Santa Barbara, Calif. Ernest Sutton, Jr., Sweetwater, Tenn. Thomas Weber, Indianapolis, Ind. Thomas Wimberly, Bakersfield, Calif.</p>
<p>Youth Scholarship Lawrence Behr, Greenville, N.C. Alfred D'Alessandro, Sea Girt, N.J. Steven Hagerty, Sacramento, Calif. John Harrington, Modesto, Calif. Mark Phillips, Beacon, N.Y. Matthew Saplin, Niskayuna, N.Y. Thomas Weber, Indianapolis, Ind. Thomas Wimberly, Bakersfield, Calif.</p>	<p>Robert Greenberg Scholarship Lawrence Behr, Greenville, N.C. Scott Curts, Aurora, Ill. Steven Hagerty, Sacramento, Calif. Russell Harbaugh, Southfield, Mich. William Harris, Albuquerque, N.M.</p>	

Rick Singer, chief engineer, US Department of State/Office of Broadcast Services in Washington, D.C. Society member since 1996.

Getting Started: I joined adult movie makers club in Union, N.J. when I was 13. Let me rephrase that. I don't mean that they made adult films. They were my first mentors and were blue-collar workers that collected movie making equipment. Several let me use the gear to make 8mm and 16mm films and introduced me to repairing the electronics associated with double system audio recording and synchronization.

After graduating NYU film school in 1978, I drove out to Hollywood and lived out of a van until I got a job transferring Nagra ¼" audio to 35mm and 16mm mag film. I then took a job as a courier for the largest Hollywood movie trailer production house, which gave me the opportunity to explore the back lots of Universal, Warner, MGM, and Fox. Then I worked at film labs conforming negatives to work prints, doing optical color correction and running an optical printer.

I went to Cal State LA for electrical engineering while working nights during the early '80s and made the transition into television



engineering full time. When I moved to D.C. at the end of '83, I was fortunate to find opportunities in the new linear post houses. I owe a lot to what I learned from my colleagues in the engineering department at WTTG-TV.

Focal Point: I appreciate what SBE has done with the certification program, which helps by credentialing of prospective hires for theoretical and practical knowledge, while not discriminating against those who are autodidactic. In health care, curriculum leading to an MD degree is designed to provide a medical education that prepares graduates for residency training, which prepares them for continuous learning. Same thing applies for academic engineering. You're training to be continuously self-trained.

Pictured Here: I am shown managing the upgrade of the US Department of State television operations center from 480i to 1080i. Space in the DoS headquarters building is even scarcer than funds for equipment acquisition, we are undertaking the upgrade of the 24/7 operation in place, without relocation. "It's like refitting a seagoing vessel while it's underway."

CHAPTER SPOTLIGHT

by Tony Roccanova, SBE Chapter 48 chairman

Chapter 48 offers fellowship, education, diversity

SBE Chapter 48 members have a long collective history of volunteer service to the society and the local broadcasting community. The chapter continues to provide unparalleled camaraderie to a vast area of broadcast engineers thanks to the presence of society frontrunners and alliance with the local SMPTE chapter.

Early members worked closely with Jefferson County, Colo., home to the majority of the Denver area's TV and FM transmitters, to create a master telecommunications plan and master antenna system for Lookout Mountain. Several members were instrumental in the creation of the earliest frequency coordination databases, a tradition that continues today thanks to the efforts of Jim Schoedler, the local frequency coordinator, who works tirelessly during NFL seasons and major events including the 2008 Democratic National Convention.

Three chapter members have gone on to serve on the National SBE Board of Directors including Bill Harris, Paul Montoya and Fred Baumgartner. Baumgartner remains active with the Ennes Trust and was named the SBE Educator of the Year in 2008-09. Chapter member Cris Alexander, was named the SBE Engineer of the Year in 2007.

In 1999, SBE 48 and the Rocky Mountain Section of the Society of Motion Pictures and Television Engineers (SMPTE) pooled their

resources to become a leading provider of information and fellowship among broadcast engineers in the Denver metro area. While both organizations retain their charters with their respective national organizations, the two groups collaborate to host meetings, seminars, and events and jointly produce a single monthly newsletter. Board members from both groups work together to steer the organization as a whole and maintain a joint website, www.smp-te-sbe48.org.

Like many other chapters, the Denver chapter's founding members were primarily radio engineers who gathered at a local studio to informally discuss their ideas. The collaboration between the organizations has allowed the chapter to grow into a diverse group of engineers from various disciplines including traditional television and radio broadcast, cable, satellite, and new media disciplines. The diversity of the chapter's membership allows us to attract a wide array of seminar presenters and a generous amount of support from local and national corporate sponsors. With the help of those sponsors, the chapter recently began an initiative to encourage SBE certification and started to reimburse testing fees to its members who successfully pass SBE certification exams.

The chapter typically presents eight to 10



Members of Chapter 48 tour the Lake Cedar transmitter site in July 2008 in Denver, Colo. Chapter members and guests toured the facility after the annual picnic on Lookout Mountain.

informational programs annually. Recent meeting topics included Using IP Networks for HD Video Transport, The Impact of IPv6 on Broadcasters, CALM Act Solutions, and a tour of the Cable Labs research and development facility in Louisville, Colo. In addition to programs, the chapter holds several well-attended annual events including a February banquet in which the chapter honors an individual or organization for their contributions to the broadcast engineering community, a July picnic which takes place amongst the towers on Lookout Mountain, and a November Technology Boot Camp featuring a full day of technology presentations centered around a unified theme. In 2009, the Boot Camp event was presented as an Ennes Workshop under the auspices of the SBE national office.

In October of 2012, Chapter 48 will once again be at the forefront of the industry and proudly welcome the SBE National Meeting to Denver. This event is combined with the chapter's annual Boot Camp and the Rocky Mountain Audio Video Expo, an annual regional trade show, which attracts over 1500 attendees.

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

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

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

AVCOM of Virginia, Inc. • 2010
Warren "Buck" McElfresh
(804) 794-2500 ext. 312
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Avid Technology • 2011
Bill Barton (978) 640-4020
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Steve Lampen (800) 235-3361
Cable and Connectivity

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

Bracke Manufacturing LLC • 2012
Lawrence Pasternack (949) 756-1600
RF & Microwave Components

Broadcast Electronics Inc. • 1978
Ray Miklius - Studio Products
Tim Bealor - RF (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

Communications Laboratories • 2008
Jared Maynard (321) 409-9898
Emergency Management Network

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
Joe Zuba (609) 256-8190
or Matt Leland (207) 655-8139
TV & FM Broadcast Products

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

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

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

ENCO Systems Inc. • 2003
Don Backus (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

Floral Systems • 2008
Jim Berry (352) 372-8326
Television Broadcast Automation

Frontline Communications Corp. • 2000
Stephen Williamson (727) 573-0400, ext. 160
Manufacturer Broadcast Vehicles

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

Gepco International • 1995
Dave Ghaipa (847) 795-9555
Audio, Video Cable Products

Grass Valley • 2000
Andy Jackson (404) 929-5000
TV/Film Production & Broadcast Professionals

Harris Corporation, Broadcast
Communications Division • 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 (626) 355-3656
"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

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

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

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

Kintronix Labs Inc. • 2010
Eric Miramontes (423) 878-3141
AM HD Antenna Systems

KPFF Consulting Engineers • 2004
Madison Batt (206) 926-0508
Tower Engineering, Inspections Design

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
Jerry Brown (252) 757-0279
AM/MW Antenna Equipment & Systems

Lincoln Financial Media • 2007
Barry Thomas (404) 261-2970
Media Group Owner

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

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

Maxell Corporation of America • 1991
Patricia Byrne (201) 794-5900
Data/Broadcast Video Media

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

Micronetixx Communications LLC. • 2011
Bill Ammons (480) 496-0165
Polarized DTV Broadcast Antennas

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

Middle Atlantic Products • 2005
David Amoscatto (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

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

NSOEM • 2010
Robert Sorbet (281) 500-8940
Electrical Equipment Sales

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 AM/FM/TV

OTL • 2010
Sylvain Theriault (450) 444-7009
Tower Lights (Lighting)

Panasonic Solutions Company • 1985
Joe Facchini (201) 392-6183
Professional Broadcast Equipment

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

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

Prime Image Inc. • 1997
Laura Gaines (408) 867-6519
Digital Audio/Video Equipment

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

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

Pulsecom • 2003
Winnie Evans (703) 471-2926
AM, FM and HD STLs, Copper & Optical

Qualis Audio Inc. • 2011
Douglas Ordon (310) 621-4448
Audio and Loudness Monitoring

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

RCS • 2003
Diana Stokoy (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
Tower Owner/Management

Rio Steel & Tower • 2010
Keith Cendrick (817) 225-0890
Turn-key Tower/Antenna Services

Rohde & Schwarz • 2003
Eddy Vanderkerken (469) 713-5322
Broadcast Transmitters, Test & Measurement

ROSCOR Corporation • 1998
Tom Voigts (847) 299-8080
DTV System Integrator

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

Salzbrenner Stageteq Media Group • 2009
(888) 782-4391
Professional Audio Solutions

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
David Allen 888-SHIVELY
FM Antennas & Combiners

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

Solid State Logic • 2011
Steve Zaretsky (212) 315-1111 ext.15
Digital Audio Consoles/Router

SpectraRep • 1998
Mark O'Brien (703) 802-2975
Coverage Maps and Services

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

Stainless LLC/Doty-Moore • 2004
Ed Deetscreek (215) 631-1323
Towers - Engineering - Services - mods

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
Ed Simeone (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

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

TFT • 2011
Darryl E. Parker (408) 943-9323
STL, EAS/CAP, RF Monitors

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

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

The Whitlock Group • 2000
Kevin Thompson (800) 726-9843
Broadcast and Presentation Solutions

Tieline Technology • 2003
Mary Ann Seidler (317) 845-8000
POTS, ISDN, Codecs & AV Products

Trilithic • 2011
Tom Criddle (317) 895-3600
Emergency Alert Equipment (EAS)

TV Magic • 2008
Bob Anderson (858) 650-3155
Broadcast Systems Integrator

Unimar Inc. • 2001
Thad Fink (813) 643-6791 or (813) 943-4322
Tower Obstruction Lighting Designer,
Manufacturer, Distributor

Vantage Technology Consulting Group • 2011
Andrea Cummis (212) 520-8422
Broadcast Consulting Services

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

Voice of America • 2011
Richard P. Barnes, PhD, CBRE (202) 203-4848

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

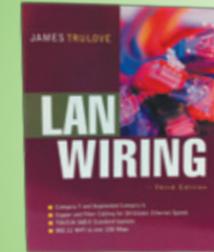
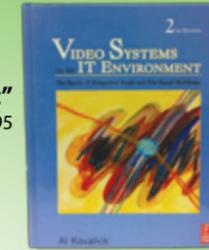
Wheatstone • 2010
Jay Tyler (252) 638-7000
IP Consoles, Routers & Processors

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

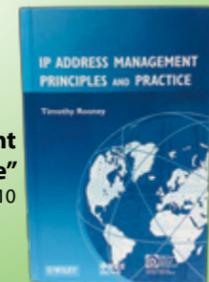
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"Video Systems in an IT Environment"
member \$55.76, non-member \$61.95



"LAN Wiring"
member \$52, non-member \$65



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Joseph Sverak - Plantation, Fla.
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Brian A. Clemens - Kitchener, Canada
Shane A. Godmere - Calumet, Mich.
Thomas M. Koza - Quartz Hill, Calif.
David Spruell - Roanoke, Va.
James J. Comerford - Forsyth, Ill.
William J. Simonds - Reno, Nev.
Eric Johnson - El Segundo, Calif.
Brendan D. McMahon - Ashburn, Va.
Derek Murphy - Madison, Wis.
Richard Santiago - Plainview, Conn.
John Takach - Carmel, Ind.
Marco Velez - Princeton, N.J.
Evangel V. Arcega - Abu Dhabi, UAE
Keith L. Blaisdell - Harrisburg, Pa.
Michael Cole - Tucson, Ariz.
L. David Mann - Wheaton, Ill.
Sean M. Neary - Stafford, Va.
Bob E. Nelson - Frisco, Texas
Daniel R. Rowland - Centennial, Colo.
Ryan J. Wormald - Tustin, Calif.
Tommy L. Goodson - Dallas, Texas
Andrew Humphries - Murfreesboro, Tenn.
Tim Mazzacua - Haymarket, Va.

Kieran Quan - Toronto, Canada
Mark Mamolen - Simi Valley, Calif.
Andrew R. McKenna - Bensalem, Pa.
Phil Biehl - Tigard, Ore.
Eric Morris - Westville, Okla.
Sopheak Yasa - Bladensburg, Md.
Rexford Annor - Woodbridge, Va.
Andrew T. Rozema - Grand Rapids, Mich.
Boyd Baumgartner - Washougal, Wash.
Jose Bolanos - Grand Rapids, Mich.
Krzysztof B. Cichno - Grand Rapids, Mich.
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Eric Fuller - Reston, Va.
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John Workman - Milwaukee, Wis.
Pierre J. Chanu - Fairfax, Va.
Philip P. Tran - Falls Church, Va.
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Astley I. Grant - Newmarket, Canada
Mark Guralnik - Henderson, Nev.
Karl Hillway - Martinez, Ga.
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John A. Wheeler - Huntington Station, N.Y.
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Jimmie A. Rushing - Jonesboro, Ark.

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Michael H. Creager - Albuquerque, N.M.
Christopher K. Home, PhD, PE - High Point, N.C.
Edward P. Dumhoit - Green Bay, Wis.
Bryan B. Catlin - Newport News, Va.
Jeffrey W. Pfister - Wheeling, W. Va.
James P. Kuzman - Windermere, Fla.
Dean S. Davidson - Humble, Texas
Timothy D. Cason - Newnan, Ga.
Juan M. Diaz - Doral, Fla.
Sam Brown - Simpsonville, Md.
Andres G. Garcia - Largo, Fla.
James W. Duchesneau - Lincoln, Neb.
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Carl L. Opie - Yuba City, Calif.
Javier A. Ramos - San Antonio, Texas
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Andrew J. Henderson - Charlotte, Mich.
Huston C. Holston - Las Vegas, N.V.
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Joseph M. Fleming - Rochester, N.Y.
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Louis Libin - Woodmere, N.Y.
Devin T. Smith - Leeds, Ala.
Gary E. Becknell - Suffolk, Va.
Donald R. Russell, Jr. - Waterloo, Iowa
Theodore J. Bordonel - Orange, Texas

NEW STUDENT MEMBERS

Donald Phillips - Smyrna, Ga.
Matthew S. Westfall - Parma Heights, Ohio
Amir Ghali - Orange, Calif.

Darnell Phillips - Powder Springs, Ga.
Jared A. Baehmer - Graham, Wash.

NEW ASSOCIATE MEMBERS

Bryan S. Butler - Port Richey, Fla.
Tom Lawler - Clarksburg, N.J.



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