



the SIGNAL

BIMONTHLY PUBLICATION OF THE SOCIETY OF BROADCAST ENGINEERS

OCTOBER 2009

Volume 22, Number 5

3

SBE National Meeting Schedule

10

Education Update

12

New and improved JobsOnline

13

Ennes Scholarship winners announced

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Lopez elected SBE President



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Current SBE Vice President, Vincent Lopez, CEV CBNT has been elected president of the Society of Broadcast Engineers. Lopez, who ran unopposed, will begin his term during the 4:00 pm EDT October 7 Annual Membership Meeting, following an induction ceremony.

Results of the annual election of national officers and directors for the Society were tabulated on August 27 by a board of tellers consisting of

SBE members from Chapter 25 in Indianapolis and Central Indiana.

Lopez is Director of Engineering for Sinclair Broadcasting Group's WYST/WNYS TV in Syracuse, N.Y. A member of SBE since 1991, Lopez was elected an SBE Fellow in 2004. He has served nine years on the national SBE Board of Directors, most recently as vice president for two terms.

See **ELECTION** on page **10**

National Webcast set for 2:00 PM EDT October 7

All members, friends and prospective members of the Society of Broadcast Engineers are invited to watch and participate in the third annual SBE National Webcast on Wednesday, October 7 from 2:00 pm to 3:00 pm EDT. The program will be streamed live from the Turning Stone Resort and Casino Events Center arena, location of the Chapter 22 Broadcast & Technology Expo.

Chapter 22 of Central New York has arranged for the technical production of the

program. The broadcast will utilize a remote truck and five cameras including three which will be used for remote interviews and features.

SBE President, Barry Thomas, CPBE CBNT and SBE Vice President and President-elect, Vinny Lopez, CEV CBNT will emcee the Webcast and will be joined by other members of the national Board and staff during the course of the program. Special segments will be included on SBE certification and education programs

See **WEBCAST** on page **11**

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the SIGNAL is published bimonthly by the Society of Broadcast Engineers, Inc., 9102 North Meridian Street, Suite 150, Indianapolis, IN 46260. Questions/comments regarding editorial content, or design should be referred to Holly Essex at (317) 846-9000 or hessex@sbe.org, for advertising contact Debbie Hennessey at dhennessey@sbe.org. SBE is a registered trademark of the Society of Broadcast Engineers.

SBE National Meeting October 6-7

The 2009 SBE National Meeting will be held on October 6-7 at the Turning Stone Resort and Casino, located in Verona, N.Y. The Meeting will be hosted by Chapter 22 of Central New York State and held in conjunction with Chapter 22's 37th annual Broadcast & Technology Expo.

The schedule for the National Meeting begins on Tuesday, October 6 with a meeting of the SBE Certification Committee from 2:00 pm to 4:00 pm. The regular fall meeting of the SBE national Board of Directors will be held beginning at 6:00 pm and will run until about 10:00 pm.

National activities on Wednesday, October 7 include the annual SBE Fellows Breakfast from 8:00 am to 9:00 am, sponsored by Kathrein Inc., Scala Division.

The third annual National SBE Webcast will be held beginning at 2:00 pm from the Events Center arena of the Turning Stone Resort and Casino. (*see page 1*)

The SBE Annual Membership Meeting will be held from 4:00 pm to 5:00 pm. The Membership Meeting will include the introduction of the SBE Membership Drive Grand Prize winner, Steve Pietras of Toledo, Ohio and the induction of the new national officers and directors who will serve on the Board of Directors.

SBE National will join in with Chapter 22's big post-exhibits reception from 5:00 pm to 6:30pm. The reception will include hors d'oeuvres and the Tommy Bridges Band.

The finale of the National Meeting will be the SBE National Awards Dinner from 6:30 pm to 8:45 pm, sponsored by Microwave Radio Communications. The dinner program will include special guest speaker, Riley Hollingworth, retired FCC enforcement Bureau special counsel, the presentation of the SBE Broadcast Engineer of the Year Award to Craig Strom,

Assistant Director of Engineering at WLS-TV in Chicago and the SBE Educator of the Year Award to Fred Baumgartner, CPBE, CBNT, of Elizabeth, Colo. of Flo-TV. Two members will be recognized with the highest membership rank awarded by the SBE, the SBE Fellow; John Heimerl, CPBE of Suffolk, Va., chief enterprise officer for the Hampton Roads Education Telecommunications Association, Inc. and Christopher Scherer, CPBE, CBNT of Overland Park, Kan., editor of *Radio* magazine.

Chapters and individual members will also be recognized during the dinner for best technical article, best chapter newsletter, website, regional conference, most certified chapter and chapters with the greatest percentage growth and highest average member attendance at chapter meetings.

Tickets for the SBE National Awards Dinner (a great bargain at just \$14 each) are available to order on-line at the SBE website, www.sbe.org/cal_conv.php or by calling the SBE National Office, (317) 846-9000 between 8:30 am and 4:30 pm EDT, Monday through Friday.

A limited block of rooms have been set aside at Turning Stone Resort and Casino for guests and exhibitors to use should you desire overnight accommodations. The special SBE event rate is \$108 plus tax, single or double occupancy. Contact Turning Stone directly at 1 (800) 771-7711 and specify the SBE Expo event. Rooms are reserved for a limited time and are available on first come, first serve basis. Chapter 22 and SBE National invite any and all SBE members and others interested in broadcast technology to attend.

Thank you for allowing me to serve SBE

BY **Barry Thomas, CPBE, CBNT**
SBE President

This is my final article in *The Signal* as president of the Society. As I come to the end of my second term I am evaluating our accomplishments and the state of the Society as a new president and officers take over. As any president hopes, my desire is to hand over the Society in better shape than I received it; that I built on the successes of prior presidents and laid a foundation for the success of future presidents.

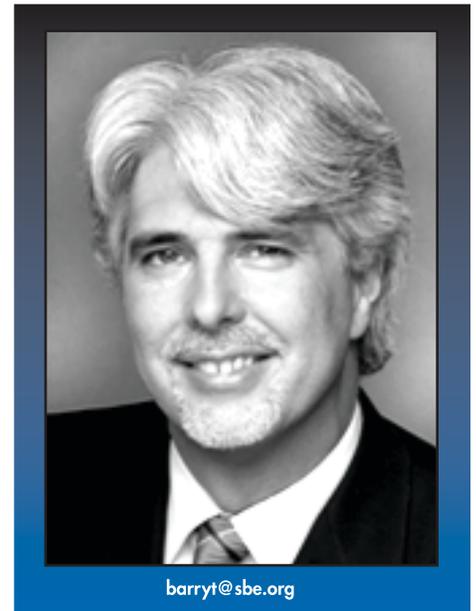
First, let me tell you something you may not know about the job of the president: The duty is not to rule, but to drive. Not to lead so much as to serve. This means the navigation and most of the meaningful effort is done by others. Those others are your leaders on the national board of directors. The job of the president is to clearly understand the mandates, goals and intentions of the board of directors and speak or decide for the Society in their words. It has not been to forward any agenda of mine, but to execute in the most effective way, the agenda of the board of directors. It is a call to serve. To serve the board of directors, who serves and represents you.

Ideally, when a president takes office, he or she will have objectives; certain goals and fundamental accomplishments desired for the term. Success in the role as president would be measured by how well those goals were achieved. Past presidents Richard Rudman and Andy Butler both advised me to keep those goals firmly in mind, lest I be overwhelmed by the minutiae of running the organization. This is probably the best advice I received. It kept me on target and focused. I would like to think my

fundamental goals were met. I'm proud of what we have achieved and think you will be too.

Knowing that my purpose as president is to execute the will of the board, some of my objectives were related to making the board's work more transparent to make it easier for the directors to steer the Society. I sought to involve the board of directors in the strategic operation of the Society at a level never reached before. We made a great many behind-the-scenes changes to the way our board operates so the society leaders have more understanding of issues, more time to debate the questions, and more ability to work on your behalf. We changed the meeting agendas so that more than 70% of our time is spent working with difficult decisions instead of rudimentary mechanics; vastly increasing the level of communication and notification among directors so that they are more informed and aware; taking extra care to check the decisions of the president against the board of directors to make sure we all support the decision; ensuring that the elected members of the board not only are allowed to participate in the communication of the national office, but in many ways are compelled to.

At the same time we completely changed the way we document the meetings and decisions of our board of directors. We post the minutes of our meetings on the SBE website. Those minutes now contain reports from our national committees as well as the transcriptions and outlines from the regular meetings. Committees are, in effect, the information and execution arm of the national board. This means the strategic work of the national organization is done in committee. From these reports and



the new style of minutes you can truly see what the National Society has been doing and just how busy our leaders are: www.sbe.org/bod_minutes.php. Our national leaders are a representation of your needs. These reports show just how true this fact is.

The SBE often gets press about its actions on FCC issues; specifically Broadcast Auxiliary and EAS. These efforts are the most difficult to demonstrate relevance to our members. Honestly, the toughest jobs during the past two years were related to bringing our government relations efforts into alignment with the goals of your leaders and, by extension, you. These efforts are complex and fraught with detail. I cannot thank enough the participants in the Government Relations and EAS committees, particularly their chairpersons (respectively) Past President Richard Rudman, and Clay Freinwald. Our FCC and EAS efforts are more responsive and better reflect your direction than ever before.

Some of my objectives were related to improving our public face. In 2006 we held a strategic planning session in Kansas City. At that meeting and during consultation that followed we discovered ways that the Society can improve how it represents itself and its members. The

information we gathered then laid the groundwork for the creation of a new Public Relations committee, and set the course for improving how we represent ourselves and our members.

We first worked to better publicize the many ways that the SBE increases the value of your membership, represents your needs to the industry and to the public, and works to protect your interests. We created the PR committee to manage those efforts to do a better job of “tooting our own horn.” One method we created to tell you more about the work we do was SBE-news, a twice-monthly e-mail newsletter, sent to more than 4,000 SBE members each issue. This newsletter has connected our members to our regular efforts as never before.

That e-mail newsletter had a side benefit, though. It improved the value and participation with what I call our “24-hour chapter meeting” or “online help line”: The SBE Roundtable. The Roundtable was formed by Past President Chriss Scherer to provide a forum for technical topics among SBE members. We discovered that many SBE members wanted a way to have non-technical conversations with other members, much like the way you might before or after a chapter meeting. To help with that we created the SBE-Chat list as a complement to the SBE-Roundtable. I thank Past President Chriss Scherer who has tirelessly moderated both of those lists

The proudest achievements for the Society during my term are those that provided critical membership benefits; things that make your membership more valuable and our organization more vital. During my term we witnessed the culmination of years of work begun during the presidency of Ray Benedict and continuing through the hard work of Fred Baumgartner and launched by Education Committee Chair Cris Alexander. We launched the SBE University; a selection of on-demand Web-based

courses; Six are now available and many on the way. We've also rededicated ourselves to expanding our educational efforts and even recruited Kimberly Kissell as a member of our national staff, dedicated primarily to our educational efforts. SBE Educational resources are the future of the Society. These advances are just the beginning.

This current climate of hardship has hit our profession hard. In addition to the educational offerings we now offer and our certification program that helps demonstrate the great abilities of SBE members, we have been developing a new, revamped SBE JobsOnline service, providing members with an interactive and efficient way to search for jobs within the broadcast engineering field. This has just now launched. I hope you won't have to use it but, if you do you'll be very impressed. You might already know that my current job as vice president of engineering for Lincoln Financial Media came through the SBE JobsOnline. I'm not only the president, I'm also a client! This new version is more effective than ever!

I want to thank you for allowing me to serve the Society in this way and witness these and many other advances for the Society. Good luck to incoming President Vinny Lopez, and his officers and this exciting new board of directors. I thank you for your membership and your dedication to the singular organization dedicated to promote and support you, the broadcast engineer.

WEBCAST from page 1

along with updates on EAS and regulatory issues. SBE will introduce its new, upgraded JobsOnline service and demonstrate the SBE University of on-line, on-demand broadcast engineering courses.

SBE members are encouraged to reserve this one hour time slot so that you may tune in and participate. Questions to the hosts will be taken from viewers by telephone and via email. The program will also be recorded and posted for later viewing on the SBE website.

To access the Webcast, go to the SBE website and click on the SBE National Webcast icon on the home page. The link will take you automatically to the program. We recommend you access the program five to 10 minutes before it airs. The actual URL to connect is: <http://asx.abacast.com/sbe-sbe2009nationalwebcast-300.asx>.

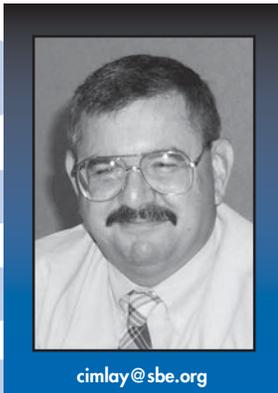
The SBE Annual Membership meeting will also be streamed that same afternoon. Use the same connection. It will begin at 4:00 pm EDT and conclude by 5:00 pm. That program will include the induction of the new national officers and directors of the Board of Directors.

We are pleased to have the following companies underwrite the expenses to produce the SBE National Webcast.

The logo for HARRIS, featuring the word "HARRIS" in a bold, sans-serif font with a stylized arrow pointing upwards and to the right.The logo for MRC, featuring the letters "MRC" in a serif font inside a circular border.

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Leading the horses to water

BY **Chris Imlay, CBT**
SBE General Counsel

There has been a very important discussion on the SBE Government Relations Committee remailer lately, concerning entry of BAS receive site data in the FCC's ULS database. I wanted to provide you with some information about this, so that you can help protect your own station's fixed link auxiliary facilities against interference. Thanks for the insights on this subject go especially to Howard Fine, Dane Ericksen, Dan Ryson and Ray Benedict. The voices of experience, all of them.

Rewind to the late 1980s when the FCC abandoned the use of the old long green paper form 313. Filing that paper form with the FCC required that broadcast auxiliary facilities specify fixed receive locations. Though the Commission's databases were not particularly well-maintained at the time, there was at least a registration of receive sites, and in any case, the local SBE coordinators and affiliated coordination groups knew where the receive sites were anyway, so they could protect them when coordinating new facilities.

Then came the Form 601, which for a long time did not require the entry of receive site information, and the FCC's soon-to-be-replaced ULS system for filing auxiliary applications. Receive site data filing was not even possible for some time. Taking FCC up on its suggestion in ET Docket 01-75 to suggest improvements in the ULS and Form 601, SBE filed (after informal requests to FCC bore no fruit) a rulemaking petition (RM-11308) asking that the ULS and Form 601 be modified in order to permit the addition, at least for TV Pickup and RPU facilities, of receive site data to existing licenses. RM-11308 would simply allow licensees to be able to enter the location(s) and height(s) of their receive only sites in the ULS database. This would facilitate frequency coordination and permit intra-service protection. It was, we argued, long needed in the Broadcast Auxiliary Service. Simply entering the data is all that RM-11308 asked for, or would do. Initially, this met with some opposition from some spectrum sharing partners in those bands, concerned that there might be some substantive interference protection requirements lumped in with the opportunity by broadcasters to add receive locations to broadcast auxiliary facilities that they already had to protect. We explained that this was not the case at all; that what we wanted was to facilitate the ability to protect fixed links that certain sharing partners in the auxiliary bands already had to protect.

Finally, they conceded the point, told FCC so.

Instead of acting on SBE's rulemaking petition formally, however, FCC released a Public Notice almost two years ago, saying that it had decided to modify the ULS to do this. No mean feat, since many services had asked for modifications to the ULS with no success, so we felt that this was a good response to a reasonable request. What has happened since then, however, is a lot of nothing, frankly. Very few licensees whose BAS licenses do not specify receive sites have added them. Howard Fine has ascertained that an alarming number of BAS licenses in the FCC's ULS database lack receive site data. Why is this? Well, as it turns out, there are several reasons. One is that the addition of receive site data is not mandatory. FCC doesn't care whether you add missing receive site data to your license or not. Second, there are strong (and arguably unnecessary) cost and regulatory disincentives to any modification of BAS licenses at all. Third, there is confusion about whether the simple addition of receive site data requires expensive commercial frequency coordination and prior coordination notices to other licensees, etc.

Here, however, is the risk you run by not adding a receive site to an auxiliary license: You may feel that your facility is protected against newcomers if you have a valid license which has been timely renewed and for which no unauthorized or undocumented modifications have been made. After all, your license is a matter of record and newcomers or later modified facilities have to protect existing path(s), right? Not so fast.

As we are all painfully aware by now, after Docket 01-75, all new or modified fixed link applicants have to coordinate with a commercial frequency coordinator and go through the expensive (and in my personal view, no-value-added) prior coordination notification (PCN) process of incumbent licensees. The cost of this "service" is high; when one throws in the FCC application fee, the commercial coordinators' fee, and possibly attorney's fees. The application process, with PCN coordination for BAS fixed facilities is often well over \$1,000 and perhaps as high as \$2,000. Does your current budget allow for such an expenditure for each path? Maybe not.

Commercial coordinators don't have the same familiarity with local markets as do the SBE volunteer coordinators. They don't know where the receive sites are necessarily, other than what is listed in the ULS. While this is a logical problem, anecdotal evidence indicates that some coordinators routinely ignore BAS facilities lacking receive coordinates, believing that

such facilities are “secondary” and do not require interference protection. Even though there are some really excellent search tools around (such as the really cool and free Cavell Mertz broadcast microwave path mapping tool, which you need to check out) the commercial coordinators simply don’t have the data if it is not in the ULS. So they can’t protect the receive sites when they coordinate new or modified fixed facilities, because they don’t know about them. What the more diligent coordinators do in response to this is to spam every licensee in the market with PCN notices. That makes it far less likely that any given licensee is going to pay attention to them, and do an analysis of the effect of the facility proposed in the PCN on that licensee’s own facilities. That process is time consuming, to say the least, and there are so many PCNs received that have no effect on the recipient’s facilities whatsoever. But not reviewing the spammed PCNs means that you will miss the chance to object to a facility that may interfere with your receive site.

So, since the coordinator can’t protect receive sites if they don’t know the coordinates, antenna elevation, and antenna type at that site, and since you are likely desensitized to receiving spammed PCNs because most of them don’t apply to your facilities, sooner or later, you are going to find that someone has been granted a new license on top of your undocumented receive site, even though you are first in time to be licensed. So you complain to FCC. But at least one FCC staff person has indicated that your complaint will fall on deaf ears. Why didn’t you register your receive site? Why didn’t you pay attention to the PCNs that you received from the coordinator of the new offending facility? If there is a conflict between a newcomer station and an older station, and the older station has missing data, the newcomer will win, according to the FCC staff person. So, it is best to (1) fix the missing information, even if it means a new PCN coordination process, a new Form 601 application, and a filing fee; and (2) pay attention to all PCNs you receive; if the proposed facility is local, and co-channel or adjacent channel to you, you must run the numbers or have a consulting engineer do it for you.

Do you really have to go through the expensive and unpleasant PCN coordination process just to add receive site data and nothing more? The FCC speaks with two voices on this subject. The applicable rule, Section 101.103, states in part as follows:

(d) Frequency coordination. For each frequency authorized under this part, the following frequency usage coordination procedures will apply:

(1) General requirements. Proposed frequency usage must be prior coordinated with existing licensees, permittees and applicants in the area, and other applicants with previously filed applications, whose facilities could affect or be affected by the new proposal in terms of frequency interference on active

channels, applied-for channels, or channels coordinated for future growth. Coordination must be completed prior to filing an application for regular authorization, or a major amendment to a pending application, or any major modification to a license.

This rule would require PCN coordination only for new or major modification applications. Arguably, addition of receive site information about an existing facility is not a major modification, but a minor one, and PCN requirements do not exist for minor modifications. Some licensees have been granted modification applications for mere addition of receive site data without PCN coordination.

But there is another interpretation. In the Docket 01-75 Report and Order released in November of 2002, the FCC, with respect to when PCN coordination is required for small changes of less than 5 seconds in latitude or longitude in transmit location of BAS facilities, stated at Paragraph 134:

...the ULS Reconsideration Order clarified that such minor changes are not exempt from the coordination requirement. The Commission explained that an applicant requesting a minor change must still coordinate as required by Section 101.103(d) (2) (ix) prior to implementing the change and that this process is sufficient to ensure that minor changes are properly coordinated to avoid harmful interference, without imposing an unnecessary filing burden on applicants. We find that this procedure will work equally well for Part 74 services.

Actually, it has worked poorly, but that is a different issue for a different day. The point is that the FCC is apparently acting in accordance with the rule’s terms, which do not require PCN coordination for minor modifications, but only for major modifications, and not with the more obscure reference in the Part 74 rules change order from 2002. But there are no guarantees here. Even if the PCN process is applicable to receive site addition mod applications for your BAS facilities, it is a good idea to do it. And while you are at it, cancel those licenses that you don’t any longer use.

Please do consider adding receive data for your BAS licenses. The FCC, as well as the higher authority, helps those who help themselves.

John C. Breckenridge Jr.
President

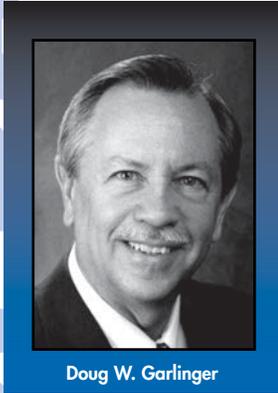
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SBE Certification: Get it and keep it.

BY **Doug W. Garlinger, CPBE, 8-VSB, CBNT**



Doug W. Garlinger

Two points to consider: If you do not hold SBE Certification, you should get it.

If you do hold SBE Certification, you should keep it.

Get Certification

If you have a “job” as a broadcast engineer and you are not SBE certified, your reason for not being certified is likely just that: you have a “job”. Thanks to Jim Wulliman, grandfather of the SBE Program of Certification, who had the vision 34 years ago to turn the “job” of broadcast engineer into the “profession” of broadcast engineer. If you consider yourself as one who performs broadcast engineering work professionally, then it only makes sense that your professional abilities should be Certified by the only professional society that understands your trade well enough to test and certify your professional broadcast engineering skills.

You may feel that you do not need to prove anything to anyone; but in today’s record unemployment, you are wrong! Each of us needs to prove ourselves every day in order to secure our futures and the futures of those who rely upon us. SBE Certification is a major ingredient in demonstrating your competence to your colleagues, your present employer or a potential employer. Certification could make the decisive difference in a management lay-off decision or in a new hire decision. Even if you plan to retire, it could make the difference in picking up some part-time broadcast engineering

employment in your market or in the market where you plan to retire, where no one knows you or the station you previously worked.

I too often get calls from suddenly motivated individuals who wish they had become certified sooner when they learn their job might be in jeopardy; or realize their certification is about to expire and they have not been keeping track of their professional credits for re-certification. Let me assure you, that if you have never been certified but have been successfully and competently working a “job” as a Broadcast Engineer, you can pass the test. It is an open book multiple-choice 50-question test. There are no trick questions and they are based on your actual experience, and in case you missed it, the test is open book. The exception is that the Senior level tests and the Specialist tests have one additional closed-book essay question.

Keep Certification

If you are certified and you are concerned about not having accumulated enough professional credits to recertify, don’t worry, you can take the test again. However, I find it very rare that a certified broadcast engineer has failed to earn enough credits for recertification. Professional credibility is maintained for the SBE Certification Program precisely because the Certification Committee adheres to certain standards for recertification. You need a minimum number of credits from at least four categories. Essentially, the Certification Committee is looking for proof that the person recertifying has continued his or her education in the broadcasting field over the five years of the certification; and the individual has been actively involved in the profession. It is inevitable that if

you have been working successfully in broadcast engineering, you must have continued your education in some way and you will meet the recertification credits and category criteria.

I suggest tracking your credits through the five years of your Certification rather than trying to remember all of them at the last minute. The SBE has a convenient Excel tracker that you can download at www.sbe.org/documents/SBE_RecertPoints.xls

You must earn 20 credits for most levels of certification, with 25 credits needed for Senior Broadcast Engineer and 30 credits needed for Professional Broadcast Engineer. All recertification credits are claimed in one of the 10 categories (A-J).

I always enjoy quickly running over the list of potential credits when I receive those frantic phone calls. It is very rare to find an active broadcast engineer who does not have enough credits. You can refer to the recertification checklist at http://www.sbe.org/Cert_Maint.php Now count your credits as we review the categories.

Category A: You can earn 1 credit per year for just being employed in broadcast engineering. (that’s 5 credits). Another 1 credit per year earned for being employed as a manager or supervisor (that’s another 5 credits). Up to 10 credits can be claimed in Category A.

Category B: You earn 1 credit for each CEU (continuing education unit) in broadcasting or an allied field; and 2 credits for teaching a course. SBE University can also be used in this category.

Category C: You can earn 1 to 5 credits for delivering a talk or paper at a

See **CERTIFICATION** on page **14**

CONGRATULATIONS

New SBE Certification Achievements

LIFE CERTIFICATION

Certified Professional Broadcast Engineers® and Certified Senior Broadcast Engineers® who have maintained SBE certification continuously for 20 years and are current members of SBE 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 the request is approved, the person will continue in his/her current level of certification for life.

CERTIFIED PROFESSIONAL BROADCAST ENGINEER® (CPBE®)

Benjamin Brintzer, Charlotte, NC – Chapter 93
Philip Lerza, Foster City, CA – Chapter 40
Tom Weems, Mission Hills, CA – Chapter 47
Jim Wynn, Austin, TX – Chapter 79

CERTIFIED SENIOR TELEVISION ENGINEER (CSTE®)

Thomas Green, Concord, NC – Chapter 45

CERTIFIED BROADCAST NETWORKING TECHNOLOGIST® (CBNT®)

Michael Flaharty, London, OH – Chapter 52

CERTIFIED BROADCAST TECHNOLOGIST® (CBT)

Ralph Borkman, Phoenix, AZ – Chapter 9
George Dickerson, Huntsville, AL – Chapter 111

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®)

Jessie Balos, Moreno Valley, CA – Chapter 131
Jose Punsalan, Homeland, CA – Chapter 131
Jerald Rathbun, Mesa, AZ – Chapter 9
Randolph Staley, Redlands, CA – Chapter 131
Timothy Stoffel, Reno, NV – Chapter 139

SBE CERTIFIED SCHOOL COURSE COMPLETION

CERTIFIED BROADCAST TECHNOLOGIST® (CBT)

NAPA VALLEY COLLEGE

Michael Calpo, Fairfield, CA – Chapter 43

JUNE EXAMS

“Thank You” CHAPTER CERTIFICATION CHAIRS FOR YOUR ASSISTANCE

CERTIFIED BROADCAST RADIO ENGINEER (CBRE®)

Mark Saia, Painted Post, NY – Chapter 1

CERTIFIED BROADCAST TELEVISION ENGINEER (CBTE®)

Jehan Maheswaran, Miami, FL – Chapter 53

CERTIFIED RADIO OPERATOR® (CRO)

Brian O'Hern, Ashburnham, MA – Chapter 11

AUGUST EXAMS

“Thank You” CHAPTER CERTIFICATION CHAIRS FOR YOUR ASSISTANCE

CERTIFIED SENIOR RADIO ENGINEER (CSRE®)

Michael Patton, Baton Rouge, LA – Chapter 72
Julius Suyat, Mesquite, TX – Chapter 67

CERTIFIED BROADCAST RADIO ENGINEER (CBRE®)

Timothy Hatfield, Lebanon, TN – Chapter 103
Mark Voris, Omaha, NE – Chapter 74

CERTIFIED BROADCAST TELEVISION ENGINEER (CBTE®)

Mark Fate, Pomona, CA – Chapter 131
Brandon Graham, Clearwater, FL – Chapter 39
Edward Rupp, Austin, TX – Chapter 79

CERTIFIED AUDIO ENGINEER® (CEA®)

Philip Altenburg, West Orange, NJ – Chapter 15
Timothy Hatfield, Lebanon, TN – Chapter 103

CERTIFIED VIDEO ENGINEER® (CEV®)

Mike Frezzo, San Jose, CA – Chapter 40

8-VSB SPECIALIST (8-VSB)

Dana Cole, Stillwater, OK – Chapter 85

CERTIFIED BROADCAST NETWORKING TECHNOLOGIST® (CBNT®)

Andrew Bloustein, Chicago, IL – Chapter 26
David Dybas, Buffalo Grove, IL – Chapter 26
Michael Flaharty, London, OH – Chapter 52
Stuart Joines, Tucson, AZ – Chapter 32
Anthony Kee, Lawndale, CA – Chapter 47
Mark Miller, West Hollywood, CA – Chapter 47
Wayne Murphy, Wildomar, CA – Chapter 131
David Nguyen, Temple City, CA – Chapter 47
Asa Sourdiffé, Colchester, VT – Chapter 110
Michael Watson, Tallahassee, FL – Chapter 7
Roy Wu, Diamond Bar, CA – Chapter 47
David Yim, Pasadena, CA – Chapter 47

CERTIFIED BROADCAST TECHNOLOGIST® (CBT)

Jeff Crews, Lake Wales, FL – Chapter 39

CERTIFIED RADIO OPERATOR® (CRO)

Matthew McGraw, Tucson, AZ – Chapter 32
CERTIFIED TELEVISION OPERATOR® (CTO®)
Jason Henderson, Forty Fort, PA – Ch. 2

SPECIAL PROCTORED EXAMS

CERTIFIED SENIOR TELEVISION ENGINEER (CSTE®)

George Parson, Canton, CT – Chapter 14

CERTIFIED BROADCAST TECHNOLOGIST® (CBT)

John Mothershed, Tucson, AZ

CERTIFIED BROADCAST RADIO ENGINEER (CBRE®)

John Marcon, Christiansted, USVI

CERTIFIED BROADCAST NETWORKING TECHNOLOGIST® (CBNT®)

Chon Gammill, Grand Prairie, TX

CERTIFIED BY LICENSE

CERTIFIED BROADCAST TECHNOLOGIST® (CBT)

Michael Englehaupt, Campbell, CA – Chapter 40
Barry Glasser, Fishkill, NY – Chapter 15
Steven Pingelski, Cohoes, NY – Chapter 58
Kevin Potter, Walland, TN – Chapter 113
David Shantz, Rocklin, CA – Chapter 43
Michael Stover, Polk City, IA – Chapter 109
Schyler Wood, Franklin, IN
Joshua Wyatt, Ft. Bragg, NC – Chapter 93

CERTIFIED RADIO OPERATOR® (CRO®)

CERTIFIED RADIO OPERATOR® (CRO)

Michael Brinks, Tucson, AZ
Gregory Cypin, Van Nuys, CA
James Garner, Rockville, MD
Andrew Havlovick, Oshkosh, WI – Chapter 80.1
Schyler Wood, Franklin, IN

CERTIFIED TELEVISION OPERATOR® (CTO®)

CERTIFIED TELEVISION OPERATOR® (CTO®)

Yvette Cardenas, Houston, TX
Charles Edwards, Hixson, TN
Larry Enroth, Big Bear City, CA
Mark Fate, Pomona, CA – Chapter 131
Andrew Havlovick, Oshkosh, WI – Chapter 80.1
Martin Loertcher, Houston, TX
James McCarron, Jr., Salem, NH
Donald McWilliams, Moreno Valley, CA
Mary Martini, Reno, NV
David Morgan, Linwood, NC
Florentin Polmolea, Santa Maria, CA
Rohan Shand, Lynwood, CA
Allen Simmons, Columbus, GA
Susan Strand, Falls Church, VA
William Truax, II, Aurora, CO
Will Washington, El Cajon, CA

KENT STATE UNIVERSITY

Abigail Carter, Kent, OH
Matthew Schlosser, Cuyahoga Falls, OH

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®)

Winston Hawkins, Blacksburg, VA – Chapter 78
Michael Snyder, Albuquerque, NM – Chapter 34
Ansis Straupe, Lakewood, CA – Chapter 131
Merrill Weiss, Metuchen, NJ – Chapter 15
Hong Yi, Riverside, CA – Chapter 131

CERTIFIED SENIOR RADIO ENGINEER (CSRE®)

John Boehm, Homewood, IL – Chapter 26
William Harris, Albuquerque, NM – Chapter 34
Richard Hood, Jr., DeBary, FL – Chapter 42
Fred Morton, Missouri City, TX – Chapter 105

CERTIFIED SENIOR TELEVISION ENGINEER (CSTE®)

Vincent Giordano, Safety Harbor, FL – Chapter 39

CERTIFIED BROADCAST RADIO ENGINEER (CBRE®)

Keith O'Malley, Chesapeake, VA – Chapter 54
Frank Patka, Lockport, IL – Chapter 26
John Valenta, Wheaton, IL – Chapter 26

CERTIFIED BROADCAST TELEVISION ENGINEER (CBTE®)

Ignacio Alomia, Jr., Aurora, CO – Chapter 48
John Garmendi, Old Bridge, NJ – Chapter 15
Donald Jones, Trotwood, OH – Chapter 33
Randolph Kohout, Genoa, IL – Chapter 26
Jerry Kylo, Pullman, WA – Chapter 117
Scott Storkel, St. Louis Park, MN – Chapter 17
Patrick Tobin, Big Rapids, MI – Chapter 102

CERTIFIED BROADCAST NETWORKING TECHNOLOGIST® (CBNT®)

Ignacio Alomia, Jr., Aurora, CO – Chapter 48
Sean Downs, Waukesha, WI – Chapter 28
Randolph Kohout, Genoa, IL – Chapter 26
George Kowal, Kenilworth, NJ – Chapter 15
Tim Parish, Sacramento, CA – Chapter 43

CERTIFIED BROADCAST TECHNOLOGIST® (CBT)

Timothy Annett, Topeka, KS – Chapter 3
John Aughey, Saint Louis, MO – Chapter 55
Paul Curtis, Columbia, MD – Chapter 132
Clifford Erickson, Carrollton, TX – Chapter 67
Charles Grantham, Andalusia, AL – Chapter 118
Gabriel Lopez, Atlanta, GA – Chapter 5
David Meadows, San Diego, CA – Chapter 36
Barbara Rauscher, Syracuse, NY – Chapter 22
Marc Roost, North Sioux City, SD – Chapter 74
Neal Spellman, Encino, CA – Chapter 47
Christian Vang, Rockville, MD – Chapter 55
Westley Zujko, Bellevue, WA – Chapter 16

CERTIFIED TELEVISION OPERATOR® (CTO®)

Cynthia Bozeman, Dayton, OH
Jon Elmore, Ft. Worth, TX
Marc Fenton, Moreno Valley, CA – Chapter 131
Allen Mou, Rowland Heights, CA – Chapter 47
Tony Reina, Houston, TX – Chapter 105

CERTIFIED RADIO OPERATOR® (CRO)

Timothy Parish, Sacramento, CA – Chapter 43

Education Update:

New SBE University Course, Upcoming Ennes Workshop, & Education Survey



BY Kimberly Kissel

SBE Education Director

New Course Added to SBE University

SBE is pleased to announce a new course, called

AM Antenna Systems, has recently been added to SBE University. SBE University consists of online, on-demand courses designed to bring expert instruction on a variety of technical radio and television topics to broadcast engineers at an affordable price. There are now six courses offered through SBE University, with more courses being planned.

AM Antenna Systems Course

This course is designed to provide the student with a good understanding of all facets of AM antenna systems, both directional and non-directional. For many radio engineers, particularly those who have been more involved with FM facilities throughout their careers, AM antenna systems with their "singing" coils and big hardware are often mysterious and many times vexing. AM directional antennas can be daunting to even the most seasoned radio engineers, particularly when something goes awry and the cause is not immediately apparent. Using the materials provided, the student will learn how to construct, troubleshoot and maintain just about any AM antenna system with confidence. This course was written by SBE member Cris Alexander, CPBE, AMD, DRB.

Course Content

1. Introduction to AM Antenna Systems
2. AM Antenna Basics
3. Non-Directional Antennas

4. Current Distribution
5. Vertical Radiation Characteristics
6. Insulated and Grounded Towers
7. Base Impedance
8. Ground Systems
9. Directional Antenna Systems
10. Transmission Lines
11. RM Ammeters
12. Sampling Systems
13. Control Systems
14. Troubleshooting
15. Regulatory Requirements
16. Summary of AM Antenna Systems

The AM Antenna Systems course is available at a special introductory price of \$59 for SBE members and \$79 for non-members. To learn more about all of the courses available or to register for a course, visit the SBE website at www.sbe.org and click on the Courses/Seminars tab under Education.

Ennes Workshop Announced for Colorado: *The New Medias – Emerging Technologies to Mainstream Media*

The Ennes Workshops hit the road once again beginning on Thursday, November 12 at Starz Entertainment. The facility is located at 8900 Liberty Circle, Englewood, Colo. This workshop, hosted

by SBE Chapter 48 of Denver, Colo., will include seminars focusing on new media and emerging technologies. The cost is \$25 for SBE members and \$35 for non-members. Details on the program will be added to the SBE website as they become available.

Interested in bringing an Ennes Workshop to your area? We are now booking winter and spring dates for 2010. Contact Kimberly Kissel at (317) 846-9000 or via email at kkissel@sbe.org.

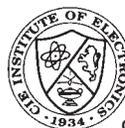
Seeking Experts for SBE Education Offerings

The Society of Broadcast Engineers is currently seeking technical experts to create online courses and present webinars. If you or someone you know is interested, please contact us.

Kimberly Kissel, SBE Education Director, kkissel@sbe.org.

Education Survey – We want to hear from you!

In an effort to better understand and meet member needs related to professional development and continuing education, SBE has created a member survey. Your input will prove incredibly valuable in helping SBE shape future education offerings. The survey has been sent via email. Please take time to complete and return the survey by October 15. If you did not receive the survey please contact Kimberly Kissel at kkissel@sbe.org or 317-846-9000.



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ELECTION from page 1

Upon his election, Lopez remarked, "I am looking forward to continuing the excellent progress the Society has made in the last two years, and expanding programs to bring us the ability to super serve our members in ways we have not done in the past."

Elected to his first term as the Society's vice president was Ralph Hogan, CPBE DRB CBNT, of Tempe, Ariz. Hogan is Director of Engineering for KJZZ-FM/KBAQ-FM. He is a Senior Member of SBE with continuous membership since 1990. Hogan had previously served the Board as treasurer and is a member of the national SBE Certification Committee.

Ted Hand, CPBE 8-VSB, AMD of Charlotte, N. Car. was re-elected to a third term as SBE national secretary. Hand is Chief Engineer of WSOC-TV and WAXN-TV in Charlotte, N.C. He is a Senior member of SBE, having joined in 1982 and has served as a member of the Board of Directors for six years.

Elected treasurer for a first term was Andrea Cummis, CBT CTO. Cummis is a broadcast technology consultant based in Roseland, N.J. She has served as a member of the Board, most recently as chairperson of the Publications Committee, for the past six years.

Six members were elected to two-year terms on the Board of Directors including four members who will be serving for the first time. They include:

Mark Heller, CBRE CTO, President, GM

Elected to two-year terms to the Board:



Mark Heller, CBRE, CTO



James E. Leifer, CPBE



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



David Priester, CPBE



Chriss Scherer, CPBE, CBNT



Joe Snelson, CPBE

& Chief Engineer of WTRW Inc./WGBW Radio Station. *

James E. Leifer, CPBE, Director of Engineering and IT, Clear Channel Communications - South Florida. *

Jerry Massey, CPBE CBNT 8-VSB, AMD, DRB, Corporate Regional Engineer and Director of Engineering, Entercom Communications, Greenville, S.C.

David Priester, CPBE, Director, Technical Operations, Roy H. Park School of Communications, Ithaca College in Ithaca, N.Y. *

Christopher H. Scherer, CPBE CBNT, Editor of Radio magazine in Overland Park, Kan.

Joseph Snelson, CPBE, 8-VSB, Vice President of Engineering, Meredith Corporation, Henderson, Nev. *

* - First time member of the Board

Completing the 2009-2010 Board of Directors will be six directors elected in 2008, who will continue with their two-year terms:

Ralph Beaver, CBT, President and CEO, Media Alert, LLC, Tampa, Fla.

James T. Bernier, Jr., CPBE CBNT, Director, Maintenance, Design and Engineering, Turner Entertainment Networks, TBS, Inc., Atlanta, Ga.

Gary Liebisch CPBE, Regional Sales Manager, Eastern U.S., Nautel, Inc., Milford, Ohio

Scott Mason CPBE, Regional Director of Engineering, CBS Radio, Los Angeles, Calif.

Mark T. Simpson CPBE, AMD, CBNT, Director of Engineering/MIS, KIIM/KHYT/KSZR/KTUC/KCUB, Tucson, Ariz.

Jeffrey Smith CEA CBNT, Supervisor Broadcast Systems, Clear Channel Radio - NYC, New York, N.Y.

Completing the Board will be Immediate Past President, Barry Thomas, CPBE, CBNT of Lincoln Financial Media, Atlanta, Ga.

Four members of the Board have completed their terms of service and we extend our deep appreciation for their dedication and contributions to the SBE. They are:

Cris Alexander, CPBE AMD DRB, Director of Engineering, Crawford Broadcasting Company, Denver, Colo.

Dane E. Ericksen, P.E. CSRTE 8-VSB CBNT, Senior Engineer, Hammett & Edison, Inc., San Francisco, Calif.

Clay Freinwald, CPBE, Entercom, Seattle, Wash.

Hal H. Hostetler, CPBE, Senior Engineer/I.T. Director, KVOA Television, Tucson,

Job search easier, more efficient with new SBE JobsOnline

The biggest overhaul in the 20 year history of the SBE's JobsOnline service will make searching for industry positions easier and more efficient for members. The new SBE JobsOnline was opened in late September at the SBE website, www.sbe.org.

The service is still available to members only. Non-members can see the job postings but the employers and their contact information are not available to them.

The new service uses MySQL database programming which makes possible a search for positions based on user-set criteria. Members are able to register with the site, choose from a half-dozen job specifics such as location, radio, television, salary range, management level, etc. When a job is posted that meets the user criteria, an automated message is sent to the member informing him of the match with a link to view the listing.

Posting a position remains free to employers and is an automated function. Employers that wish to post positions should go to the Career Services page of the SBE website and select "JobsOnline." Jobs must be of a technical broadcast or related nature to be posted.

For more information, contact Scott Jones at the SBE National Office, kjones@sbe.org or (317) 846-9000.

SBE's CertPreview to get major overhaul

The SBE Board of Directors has approved a project recommended by the Society's Certification Committee to develop a new generation of the CertPreview program.

CertPreview is a software program designed to assist people in preparing for SBE certification exams. The program consists of practice questions that are representative of those that appear on the exams. As the user chooses an answer from the multiple choices provided, the program indicates if the answer chosen was correct. If the answer chosen was not correct, the correct answer is displayed. The program is used as a study guide as well as a barometer of how prepared an individual is to sit for an exam.

The new program's administrative function will have more flexibility allowing it to be updated with new questions more easily as technology and regulations change. It will be available on CD as in the past, but also as a download from the SBE website, making it available anytime.

The new program will also make it possible for the Society to create CertPreview programs for the newest SBE certifications as well as any that may be developed in the future. The current program had reached its capacity and the latest certification levels had not been added as a result.

The project is expected to cost approximately \$20,000, which will come from the portion of the SBE's savings that is earmarked for special projects which invest resources back into the Society to the benefit of members.

In support of the effort, the Ennes Educational Foundation Trust has approved a donation of \$3,000 to the SBE towards the creation of the new program. In addition to scholarships and workshops, the Ennes Trust, through financial donations, supports programs that seek to develop the field of broadcast engineering through education.

The new CertPreview is expected to be released by April of 2010. The current program is still available and valid for use in preparation for SBE certification exams.

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Ennes Trust scholarships awarded for 2009

The Ennes Educational Foundation Trust has awarded four scholarships for 2009. Winners are chosen from applications received by July 1, 2009 from the previous 12 months.

The Harold E. Ennes and Robert D. Greenberg scholarships are awarded to individuals interested in continuing or beginning their education in broadcast engineering and technology. The Youth Scholarship is specifically for a graduating high school senior interested in broadcast engineering as a career. Each scholarship awarded this year is for \$1,500.

This year there are two Harold E. Ennes Scholarship recipients; **Marissa Acosta** and **Ruben Berlanga-Randall**.



Marissa Acosta Acosta, from Somerville, Mass., has a Bachelor of Science of Humanities and Science from the Massachusetts Institute of Technology. She is currently enrolled at Cleveland Institute of Electronics majoring in Electronics Technology and Broadcast Engineering. Acosta is the Studio Facility Coordinator at Cambridge Community Television. She will be using the scholarship to further her studies at CIE to help prepare her for a technical leadership role in future career positions.

Ruben Berlanga-Randall, from The Colony, Tex. will also be using



Ruben Berlanga-Randall

his scholarship toward tuition fees at the University of North Texas. He will be majoring in Radio, Television, and Film. He is currently the A/V Technician for the University of Texas, Dallas, and the Audio Engineer for the House of Blues, Dallas.



Russell S. VanderHorst

Receiving the Robert Greenberg Scholarship is **Russell S. VanderHorst** from Goffstown, N.H. VanderHorst has an Associates Degree in Electrical Engineering Technology from the Cleveland Institute of Technology. He will be using this scholarship toward his tuition at World College, where he is majoring in Electronic Engineering.



Jeffrey E. Miller, CTO

Jeffrey E. Miller, CTO, from Parma Heights, Ohio, received the Youth Scholarship. Miller is an SBE Youth Member and is a graduate of Valley Forge High School. He will be attending Cuyahoga Community College to attain an associates degree in Electronic Engineering. He then

plans to transfer to Cleveland Institute of Technology to earn his bachelors in Electronic Engineering.

The Ennes Educational Foundation Trust is a non-profit, charitable organization dedicated to the education of current and future broadcast engineers. It provides scholarships, offers workshops and supports other projects that meet the Trust objectives of training broadcast engineers, as well as preparing a new generation for the field. The Ennes Scholarship Committee congratulates the recipients and wishes them well in future endeavors.

To learn more about the Ennes Educational Foundation Trust scholarships and to apply for the 2010 scholarships, go to www.sbe.org/edu_ennes_scholarships.php.



In the 8-VSB system, Reed-Solomon coding is used primarily to:

- A. Minimize burst errors**
- B. Minimize RMS Random noise errors**
- C. Optimize display linearity**
- D. All of the above**

answer on page 16

SBE Teams with NAB on 2010 NAB Broadcast Engineering Conference

The Society of Broadcast Engineers is pleased to be partnering with the National Association of Broadcasters to be its production partner for the NAB Broadcast Engineering Conference (BEC) to be held at the 2010 NAB Show. The annual convention, the largest media show in the world, will be held in Las Vegas from April 10-15, 2010.

SBE and the Ennes Educational Foundation Trust will present a full day Ennes Workshop to kick off the BEC on Saturday, April 10.

Fred Baumgartner, CPBE CBNT is or-

ganizing the Ennes Workshop. Attendees of the PBS and NPR Engineering Conferences will have the opportunity to attend the Ennes Workshop as the final day of their respective technical conferences.

To attend the Ennes Workshop during the BEC, you must be registered through NAB for the full Broadcast Engineering Conference.

Watch for a complete program description in future issues of The SBE Signal and at the SBE website, www.sbe.org.

A nine member committee is working to plan the six-day Broadcast Engineering

Conference. They include Joe Snelson, CPBE, 8-VSB (chairman), Meredith Broadcasting Group; Dom Bordonaro, CSRE, Cox Radio Connecticut; Michael Cooney, Beasley Broadcast Group; David Folsom, Raycom Media, Inc.; Thomas Hankinson, ABC Network; Jim Kutzner, PBS, Andy Laird, Journal Broadcast Group; Glenn Reitmeier, NBC Universal; Jeff Smith, CEA, CBNT, Clear Channel Radio – New York City.

Registration and hotel information will be available at the NAB website.

CERTIFICATION *from page 8*

local SBE meeting and 2 to 10 credits for delivering the talk or paper at a regional or national meeting.

Category D: Earn 1 to 5 credits for an article published in a local chapter newsletter; 2 to 10 credits for a technical article in a national broadcast periodical. Category E: You earn 1 credit per year as a member of the SBE, (there's 5 credits), and another 1 credit per year as a member of other technical societies, such as SMPTE, AES or ARRL. There is a 10-credit maximum.

Category F: You earn 2 credits per year as an officer or committee member in local or national SBE or other technical society. (Maximum 10 credits.)

Category G: This is the easy one. Earn 0.5 credit for each local SBE or other technical society meeting attended. Earn 1 credit per day for attendance at regional or national meetings, such as the SBE Annual Meeting, regional SBE, NAB, Ennes Workshops and other technical seminars. Check Category G for other credit earning avenues. The number of credits earned in this category

is not limited.

Category H: 1 credit for each 10 contact hours at a factory school or in-station school. This category is often overlooked.

It could be an ENG safety or RF safety course. Gary Sgrignoli's ATSC seminar qualifies as 1 credit in this category. (Maximum 10 credits)

Category I: Home study course. The number of credits is determined by the Certification Committee. If you claim credits here, provide sufficient documentation to substantiate your claim.

Category J: This is the creative one. It is a credit for other activities and can cover the activity that does not fit neatly into any of the other categories. This determination is made at the discretion of the Certification Committee and can at

SBE Certification 2009-10 Exam Schedule

Dates	Location	Application Deadline
November 6-16, 2009	Local Chapters	CLOSED
February 5-15, 2010	Local Chapters	December 31, 2009
April 13, 2010	NAB	March 26, 2010
June 4-14, 2010	Local Chapters	April 16, 2010
August 6-16, 2010	Local Chapters	June 4, 2010
November 5-15, 2010	Local Chapters	September 17, 2010

times supply that pesky fourth category in an application that has a lot of credits in only three categories. Again, provide sufficient documentation to substantiate your claim.

I will bet you have a lot more credits than you thought.

For those of you still unconvinced about the value of SBE Certification, remember; the only real "job" security is your ability to get your next "job." Certification helps!

The Society of Broadcast Engineers would like to welcome its newest members to the organization:

New Members

Marshall H. Behrmann - York, PA
Bob Dodd - Owasso, OK
Andrew Gladding - Northport, NY
Carl Mims - Coral Springs, FL
Todd Mogielnicki - Hudson, NH
Shannon Murdoch - Lakeland, FL
Allan Pelcak - Valley Cottage, NY
Michael C. Walker - Norfolk, VA
Charlie K. Edwards - Hixson, TN
Peter R. Hague - Fort Worth, TX
Evan Statton - Westfield, NJ
Bryan J. Scott - Winter Park, FL
Fred Grace - Reading, PA
Nathaniel Cantu - Edinburg, TX
William E. Cooper - Bothell, WA
Bruce R. Hart - Marion, IL
Ka Fai Lam - Kowloon Bay, Kowloon, Hong Kong
Chris A. Marx - Los Angeles, CA
Robert Sell - Sebastian, FL
Daniel Olewine - Falls Church, VA
Jerome E. Kambic - Harrisburg, PA
Brien Laufer - Torrance, CA
Tom Atkins - West Pawlet, VT
Theresa M. Sarapata - Norfolk, VA
Perry R. Smith - Portsmouth, VA
Barry Glasser - Fishkill, NY
Gerrit D. Bode - Kennewick, WA

Paul Boykin - Green Cove Springs, FL
James W. Brown - Auburn, ME
Tang Chi Shing Boris - Tsuen Wan, Hong Kong
Wong Chi Wing - Tsuen Wan, Hong Kong
Michael Felt - El Mirage, AZ
Daniel C. Heckmann - White Bear Lake, MN
Marty Higgins - Hummelstown, PA
Choy Kam Wing - Tsuen Wan, Hong Kong
Phillip Legate - Marion, IA
Lam Leung Wang - Tsuen Wan, Hong Kong
Christopher Meadows - Anchorage, AK
Fred Ramsey - Parker, CO
Ryan Rissmiller - Easton, PA
Mike Dorris - LeGrange Park, IL
Richard J. Hoar - Humble, TX
David W. Cory - Ivins, UT
William M. Defelice - Monroe, CT
David Orenstein - Culver City, CA
Hidalgo C. Rafael - Winter Springs, FL
Eric Spiegel - Astoria, NY
James E. Stewart - Carnegie, PA

New Student Members

FKoye W. Korbl - Carrollton, GA
Eugene J. Miglio - Troy, NY
Robert Nicolas - Irvine, CA
Ayaaki S. Osawa - Napa, CA

New Associate Members

John Leahy - Coppell, TX
Kimberly N. Kissel - Greenwood, IN

Reinstated Members

Tony Sonnanstine - Los Angeles, CA
Scott E. Arthur - Albuquerque, NM
Donald E. Pulz - Coral Springs, FL
Michael Mallory - Quincy, FL
Robert J. Weinstein - Steger, IL
Jeffrey P. Loughridge - Alexandria, VA
Lawrence A. Montenegro - El Paso, TX
Michael Englehaupt - Campbell, CA
Aaron J. Lundy - Upper Marlboro, MD
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Mitchell L. Doty - Tillamook, OR
Beau C. Stenkamp-Strahm - Boise, ID
Glen Tapley - Odenville, AL
Eric Bergman - Montgomery, AL
Janice D. Reyes - Daly City, CA
Teresa A. Tapp - Vallejo, CA
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Kissel named Education Director

The Society of Broadcast Engineers is pleased to announce the addition of Kimberly Kissel as Education Director on the National Office staff. The education director position was authorized by the Board of Directors earlier this year as a part of the Society's education program expansion.

Kissel comes to SBE with more than six years of experience working with state and national associations in the areas of education and event planning. She previously served as Education Meeting Coordinator with the Indiana Bankers Association, helping to coordinate more



**SBE Education Director
Kimberly Kissel**

than 400 seminars, webinars and web casts a year for that statewide trade association. She also served for five years as Director of Convention and Education for Roller Skating Association International. In that position she was responsible for all of the association's diverse educational programs as well as their annual convention.

SBE Executive Director, John Poray, CAE welcomed Kimberly's arrival. "It's been a long time coming for the SBE to be able to make this commitment of resources and create this position. We are fortunate to have someone of Kimberly's experience join us. She is well suited to carryout the Society's ambitious plans to expand our educational offerings to the benefit of our members," Poray said.

Kimberly is a graduate of Purdue University with a Bachelors Degree in Liberal Arts with Minors in Psychology and Supervision. She is married and has two children.

ELECTION NIGHT



Members of Chapter 25 in Indianapolis served as the 2009 Board of Tellers (l-r): Brian Vetor, Steve Longnecker, Michael Goode, Tom Weber, Dale Smiley, Charlie Sears, Mike Rabey, Phil Alexander, Jim Borgioli, David Fort, Roger Bishop

Questions or comments?
Contact the
SBE National Office at
(317) 846-9000

Office hours:
Monday - Friday:
8:30 am - 4:30 pm, EDT
fax: (317) 846-9120
www.sbe.org

For advertising inquiries contact
Debbie Hennessey at
dhennessey@sbe.org



~ In Memoriam ~

Lewis Zager

*SBE Senior Member and co-organizer of
the Ennes Workshops held at the
2007-2009 NAB Shows.*



Answer:
(A) Minimize burst errors

question on page 13



In the Circle ...

a snapshot of an SBE Member

Joseph Huk, Jr., CPBE, CBNT, AMD

Chief Engineer, Detroit, Crawford Broadcasting; Detroit, Michigan. Joined SBE in 1983

Also known as: Rowdy Joe: A friend and air personality back at our high school radio station gave me this nickname because I was anything but rowdy.

Involvement with SBE: I have been an assistant frequency coordinator in the Detroit area. I am also a Game Day Frequency Coordinator for the NFL. I feel that the society is a great mentor for its membership providing guidance and education.

Pictured here: This picture shows me in the environment I enjoy best, being one with the transmission system.

Job Satisfaction: Finding the root cause of an issue and closing the issue out.

Getting Started: My High school, Southfield High School had a radio program, electronics program, and radio station, WSHJ-FM.

When I'm not working: I enjoy playing radio with my 8 year old son Mikey. He and I have an internet radio station, "HUKFM." It can be found at www.hukfm.com. I also teach broadcast operations at Adrian College, in Adrian, Michigan in my part time (WVAC-FM).

Favorite Gadget: I love my Nuvi GPS. Without it, I am lost.

MARK YOUR CALENDAR

SBE National Meeting

When: Tuesday-Wednesday, October 6 & 7
Where: Turning Stone Resort & Casino Verona, N.Y.
What: www.sbe.org

SBE Chapter 22 Broadcast & Technology Expo

When: Tuesday-Wednesday, October 6 & 7
Where: Event Center at Turning Stone Casino & Resort, Verona, N.Y.
What: www.sbe22expo.org

2009 SBE National Webcast

Hosted by Barry Thomas and Vincent Lopez
When: Wednesday October 7, 2:00 p.m. EDT/11:00 a.m. PDT, LIVE from Turning Stone Resort & Casino in Verona, N.Y.
To access: Go to www.sbe.org and click on the "National Webcast" icon.

SBE Chapter 24 / WBA Broadcasters Clinic

When: Tuesday -Thursday, October 13-15
Where: Marriott Madison West Hotel, Middleton, Wis.
What: Download Clinic Details at www.sbe.org/cal_conv.php

7th Annual Ohio Broadcast Engineering Conference

When: Tuesday, November 10,
Where: Aladdin Shrine Temple, Columbus, Ohio
Register: www.oab.org/engineering

SBE Ennes Workshop

When: Thursday, November 12
Where: Starz/Encore Facility, Denver, Colo.
Register: www.sbe.org/ennes_workshops.php



Members on the Move

Gary Kline of Cumulus Media will receive the 2009 *Radio World* Excellence in Engineering Award from the editors of *Radio World*. Recipients of the award represent the highest ideals of the U.S. radio broadcast engineering profession and reflect those ideals through contributions to the industry. Kline is Vice President of Engineering & Information Technology for Cumulus Media.

Barry Mishkind has launched his own project; the Broadcaster's Desk Reference. Learn more at www.theBDR.net.

Conrad Trautmann is now the Executive Vice President of Technology at Dial Global/Triton Radio Networks. Troutmann was formerly VP of engineering and IT at Westwood One.

If you or someone you know moved, changed positions, or has been honored in some way in the broadcast engineering industry, submit details to Members on the Move at hesssex@sbe.org or to Attn Holly Essex, 9102 North Meridian St. Suite, 150, Indianapolis, IN 46260

ENNES

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The Ennes Educational Foundation Trust would like to thank the following supporters for their scholarship funds contribution:

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The Ennes Educational Foundation Trust offers scholarship, presents educational programming and provides grants for educational projects that benefits broadcast engineering and the broadcast engineer. To make a tax-deductible donation, make your check payable to the Ennes Educational Foundation Trust and mail it in care of the Society of Broadcast Engineers, 9102 North Meridian Street- Suite 150, Indianapolis, IN 46260.

Silver Members, those with at least 25 years of membership, are highlighted with a silver box, New Members are listed in blue

ADC Telecommunications Inc.*1998

Anne-Marie Gunderson (952) 917-3072
End to End Connectivity Solutions

Advanced Broadcast Solutions*2008

Marci Minnihhan (206) 299-9990
Systems Integrator

Advanced Test Equipment Rentals*2006

Martin Jahn (800) 404-2832
Test and Measurement Equipment Rentals

Ai*1995

Mark Polowick (607) 215-0653
UHF TV Broadcast Transmitters

American Tower Corporation*2000

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

Anixter*2005

David Ste-Marie (800) 995-6158
Audio/Video Cable & Interconnect Products

Anton/Bauer Inc.*2004

Paul Dudeck (203) 929-1100
Battery Solutions for ENG

Audemat-Aztec Inc.*2000

Sophie Lion Poulain (305) 249-3110
RDS Generator, Metering, Monitoring,
Remote Control Manufacturer

AXCERA*1983

Mike Rosso (800) 215-2614 ext. 101
Television Transmitters & Exciters

Belden Electronic Division*1991

George Stillabower (765) 983-5200
Cable and Connectivity

Beveridge Consulting, Inc.*2006

Gregory J. Beveridge (720) 810-3464
Broadcast Engineering Technical
Consulting

Bexel*2009

Garrick Lewis (818) 565-4314
Calrec

Broadcast Electronics, Inc.*1978

Ray Miklius - Studio Products
Tim Bealar - 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

Russell Murphy - East / Jim Kubit - West
(540) 932-3660, (805) 581-4566,
(800) 669-9667
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
One Stop Broadcast Store

Canon USA, Inc.*1985

Gordon Tubbs (201) 807-3300, (800) 321-
4388 Broadcast Lenses &
Transmission Equipment

Chyron Corp.*1992

Carol Keane (631) 845-2031
HD/SD Character Generators & MOS

Clark Wire & Cable*1991

Shane Collins (800) 222-5348
Audio, Video & Remote Camera Cables

COMET North America*2005

Steve Claterbaugh (214) 235-6596
Capacitors, Variable & Fixed

Communications Laboratories*2008

Jared Maynard (321) 409-9898
Emergency Management Network

Comrex Corporation*1997

Chris Crump (978) 784-1776
Remote Audio Broadcast Equipment

Comsearch*2004

Tim Hardy (703) 726-5651
Frequency Coordination Services,
Confidential Electronics

Continental Electronics Corporation*1976

Michael Troje (800) 733-5011
AM & FM IBOC Transmitters

Crouse-Kimzey Co.*2008

Mark Bradford (972) 660-6100
Broadcast Equipment Sales

Dataworld*1998

John T. Neff (800) 368-5754
Coverage Maps and Services

Dejero Labs*2009

Bogdan Frusina, CTO (519) 886-8070
Complete Cellular ENG Platform

Dialight Corporation*2006

Doug Woehler (732) 991-2837
Obstruction Lighting, L.E.D. Based

Dielectric Communications*1995

Jay S. Martin (207) 655-4555
TV & FM Broadcast Products

Digital Alert Systems, LLC*2005

Bruce Robertson (520) 488-8667
IP Based EAS ENDEC

DigiTenna, LLC*2009

Brad EckWielen (920) 564-6224
Television Reception Antenna
Manufacturing

DSC Laboratories*2002

Michael Kent (905) 673-3211
Test Charts & Illuminators

DTS*2009

Mark Seigle (425) 814-3200

du Treil, Lundin & Rackley, Inc.*1985

Jeff Reynolds (941) 329-6000
Consulting Engineers

e2v technologies Inc.*1997

Vijay Patel (914) 592-6050
(800) 342-5338
klystrons, MSDC IOTs, IOTs, Satcom Amps,
TWTS

Econco*1980

(800) 532-6626 or (530) 662-7553
New & Rebuilt Transmitting Tubes

Empower RF Systems*2008

Jon Jacocks (310) 412-8100
DTV Transmitter & Translator

ENCO Systems Inc.*2003

Don Backus (800) 362-6797
Digital Audio Automation & Delivery

Environmental Technology Inc. *1997

John Cahill (800) 234-4239 Dehydrators,
Deicing Sensor & Controls for Broadcast/FM
& Satellite Antennas

ERI - Electronics Research*1990

David White (812) 925-6000
Antennas, Towers, Filters, Combiners

Fiber Instrument Sales, Inc *2009

David J. Porta (315) 736-2206

Floral Systems*2008

Jim Berry (352) 372-8326
Television Broadcast Automation

Freeland Products*1997

Joel Freeland (800) 624-7626
Rebuilt Power Tubes

Frontline Communications Corp.*2000

Doug McKay (727) 573-0400, ext. 120
Broadcast/Command/HLS Vehicles

Fujinon, Inc.*1986

Thom Calabro (973) 633-5600
Broadcast & Communications Products

Geppo International, Inc.*1995

Ken Bernd (847) 795-9555
Audio, Video Cable Products

Google Inc.*2005

Scott Bodgan (949) 791-1200
SS32, Maestro, ASP Solutions

Grass Valley*2000

William Powers (404) 929-5007
TV/Film Production & Broadcast
Professionals

**Harris Corporation, Broadcast
Communications Division*1977**

Joe Mack (TV), Chris Pannell (Radio),
Bob Duncan (Software)
(513) 459-3406, (406) 556-0280,
(719) 439-0130
Broadcast Equipment & Services

HD World*2006

Michael Driscoll (203) 371-6322
HD World Conference & Exposition

Image Video*1997

Dave Russell (416) 750-8872 ext. 230
Under Monitor Tally Display Systems, Moni-
tor Walls, Signal Alarm Systems

IneoQuest*2009

Tom Tucker (508) 339-2497
Video Quality Assurance Solutions

Jay S. Gerber, CBT*1999

(205) 491-6904 Manager,
NFL Frequency Organization Group

JDSU*2007

Brigitte Robbins (919) 338-5061

Joseph Electronics Inc.*2003

Yohay Hahamy (847) 501-1584
Broadcasters One-Stop Supplier

Kathrein Inc., Scala Division*1985

Michael W. Bach or Mike Johnson
(541) 779-6500
Antennas for Broadcasting &
Communications

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

LBA Technology, Inc.*2002

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

LEA International*2004

Carol Rassiier (208) 762-6121
Power Quality Products & Services

Lincoln Financial Media*2007

Don Shaw (704) 374-3639
Media, Communications

LYNX Technik*2007

Steve Russel (661) 251-8600
Broadcast Terminal Equip

Markertek Video Supply*2002

Tom Moretti (845) 246-3036
Audio, Video, Audio Visual Broadcast Supply

Maxell Corporation of America *1991

Paxella Byrne (201) 794-5900
Broadcast Video Products

Micronet Communications, Inc. *2005

Jerry Armes (972) 422-7200
Coordination Services / Frequency Planning

Microwave Radio Communications *1991

Nadine Frechette (978) 671-5700
Video Microwave Systems

Microwave Service Corporation *1997

Warren J. Parece (978) 556-0970
Microwave Equipment Rentals/Sales/Service

Middle Atlantic Products*2005

David Amosato (973) 839-1011
Enclosures, Power, Accessories, Furniture

Minkin Design Inc.*2005

Jay Minkin (206) 250-7481
System Integration/Design/Documentation

Miranda Technologies, Inc.*1997

Doug Butterbaugh (530) 265-1000
Routers, Master Control & Terminal Equip-
ment

Mohawk*1995

Jamie Silva (800) 422-9961
Wire and Cable

Moseley Associates, Inc.*1977

Dave Chancey (805) 968-9621
RF & T1 STLs

**National Association of Broadcasters
*1981**

(202) 429-5340 Industry Trade Association

National Football League*1999

Jay Gerber
Game Day Coordination Operations

NauteL, Inc.*2002

Wendell Lonergan (207) 947-8200
Radio Broadcast Transmitter Manufacturer

Nott Ltd.*2002

Ron Nott (505) 327-5646
Folded Unipole Antennas; Detune Systems;
Lightning Prevention

Orban/CRI*2008

David Rusch (480) 403-8300
Audio Processing

**Panasonic Broadcast & Digital Systems
Company*1985**

Tom Moore (201) 392-6176
Professional Broadcast Equipment

Pasternack Enterprises*2001

Christine Hammond (949) 261-1920
Coax & Fiber Products

PESA Switching Systems, Inc. *1997

Robert McAlpine (800) 328-1008
Routing Switcher Manufacturer

Pike & Fischer*1991

Andy Myers (800) 255-8131, ext. 234
FCC Rules & Regulation

Prime Image, Inc.*1997

Rodney Hampton (408) 867-6519
Digital Audio/Video Equipment

Propagation Systems, Inc.(PSI) *2005

Doug Ross (814) 472-5540
Quality Broadcast Antenna Systems

Pulsecom*2003

Stan Bailey (630) 961-3253
Telco Broadband Audio Transmission

**Quintech Electronics and
Communications Inc.*2002**

Richard E. Bush (724) 349-1412
RF Signal Management

Radian Communication Services Inc. *1986

John McKay (866) 4-RADIAN
Towers, Antennas, TV Transmitter
Installation

RCS*2003

Diana Stokoy (308) 284-3007
Audio and Video Content Management,
Music Scheduling, Radio Automation

RDL*2004

John Gatts (928) 778-9678, ext. 111
Audio, Video, Control & Test Equipment
Manufacturer

RF Extreme, LLC*2009

Don Hoeler (908) 852-3700 ext 3110

RF Specialities of Texas, Inc. *2008

Don S. Jones (806) 372-4518
Transmitters, Antennas and More

Richland Towers*2001

David Denton (813) 286-4140, ext. 6872
Tower Owner/Management

Rohde & Schwarz*2003

Eddy Vanderkerken (469) 713-5322
Broadcast Transmitters, Test &
Measurement

ROSCOR Corporation*1998

Tom Voigts (847) 299-8080
DTV System Integration

Ross Video Ltd.*2000

Burt Young (613) 652-4886
Manufacturer, Television Broadcast Equip-
ment

Salzbrenner Stagetec Media Group*2009

Russel Waite (888) 782-4391
Professional Audio Solutions

SCM Construction*2009

Samuel Mitchell (972) 274-5151
General Contractor/Transmitter/Facility
Services

SCMS, Inc.*2000

Bob Cauthen (800) 438-6040
Broadcast Equipment- New/Used

Seacom Erectors, Inc.*1997

John Breckenridge (360) 793-6564
Tower/Antenna Erections

Sencore, Inc.*2005

Jeff Murray (800) 736-2673
Audio/Video Test Equipment

Shively Labs*1996

David Allen 888-SHIVELY
FM Antennas & Combiners

Sigmat*2008

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

Snell & Wilcox, Inc.*1995

John Shike (818) 556-2616
Video Equipment Manufacturer

Stainless LLC/Doty-Moore*2004

Ed Deetscrees (215) 631-1323
Tower Engineering/Tower Service

Sundance Digital, Inc.*2004

Steve Krant (972) 444-8442
Broadcast Automation Solutions

Superior Broadcast Products*1999

Benny Springer (800) 695-7919
Vacuum Tube & Solid State Transmitters

Superior Electric*1995

Michael J. Miga (860) 585-4552
Power Protection Equipment

Sutro Tower, Inc.*1989

Gene Zastrow (415) 681-8850
Broadcast Tower Leasing

Switchcraft, Inc.*1995

Jim Hoffman (773) 792-2700
Electronic/Electromechanic Components

TC Electronic*2008

Stacey Moran (818) 665-4906
DTV Audio Level Processing

Tektronix, Inc.*1977

Jon Hammarstrom (503) 627-6936
TV Test, Measurement Equipment

Telos Systems/Omnia/Axia*2003

Denny Sanders (216) 241-7225
Telos Systems - Talk-Show Systems

Terrestrial RF Licensing Company *2003

Steven Slocum (888) 373-4832
FCC Licensing Services

TESSCO*2008

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STL, Cable Test Equipment

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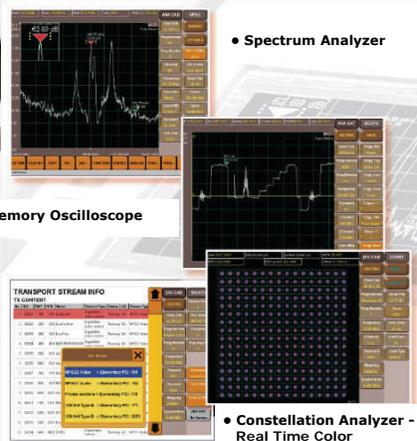


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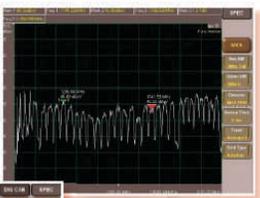
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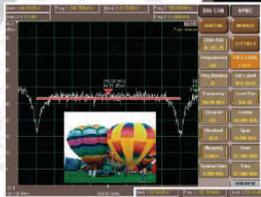
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