

Central New York Hosts 50th SBE National Meeting

The Society of Broadcast Engineers will culminate its 50th anniversary celebration at the annual SBE National Meeting, October 7-8, 2014 in Verona, N.Y. The host event is the 42nd annual SBE Chapter 22 Broadcast & Technology Expo, held at the Turning Stone Resort Casino. The Expo is the largest regional tradeshow in the northeast that features technical equipment, products and services for the broadcasting and media industry.

The SBE National Meeting begins on Tuesday afternoon, October 7 with the fall meeting of the national SBE Certification Committee from 2-4 pm. The fall meeting of the SBE Board of Directors will take place from 6 to 10 pm and is open to all members to attend. On Wednesday, activities begin with the annual SBE Fellows Breakfast, honoring all SBE Fellow members, including the newest SBE Fellow, Gino Ricciardelli, CPBE of Chapter 1 in Binghamton, N.Y. In the afternoon, the one-hour SBE Annual Membership Meeting will be held, with a live webcast available to members around the world.



Turning Stone Resort Casino, Verona, N.Y.

The SBE Annual Awards Dinner takes place Wednesday evening and will feature a guest speaker and the presentation of the society's major awards. The dinner will also be the final formal event celebrating the SBE's 50th anniversary. Awards that recognize chapter, individual and Sustaining Member achievement to be presented include the Best Social Media Site, Best Website, Best Technical Article, Best

Regional Convention or Conference, Technology Award, Best Newsletter, Best Frequency Coordination Effort and statistical awards based on percentage for Best Chapter Attendance, Most SBE Certified Chapter and the chapter with the Greatest Member Growth. These will be followed by the James C. Wulliman SBE Educator of the Year and Robert W. Flanders SBE Engineer of the Year awards. The dinner program will conclude with the presentation of the Fellow honor to Ricciardelli.

On Wednesday, the Chapter 22 Broadcast & Technology Expo events kickoff and include professional development opportunities with presentations and demonstrations covering engineering, technology integration, workflow and production. At 10 am, Chapter 22 will present its annual Student Career Seminar that features a roundtable discussion of industry professionals, delivered live via webcast to high school students across Central New York.

The exhibit floor will be open from 9 am to 5 pm. Lunch will be available in the exhibit hall and

Ricciardelli Named SBE Fellow

The Board of Directors of the Society of Broadcast Engineers has elected Gino Ricciardelli, CPBE, a Fellow member of the Society. Ricciardelli is a Charter and Life member of the SBE, holding member #117. He was a founding member of Chapter 1 in Binghamton, N.Y. in 1964 and became its second president.



Ricciardelli served Chapter 1 as its certification chairmen from 1975 to 2011 and as chapter frequency coordinator for almost 20 years. He

is life certified as a SBE Certified Professional Broadcast Engineer (CPBE).

Ricciardelli worked at a number of stations in Upstate New York throughout his career and was Chief Engineer of WINR-TV/WICZ-TV for many years. He later became a consultant for Stainless Broadcasting (now Northwest Broadcasting) and was instrumental in getting many of their affiliates on the air with digital transmitters.


Fellow members of the SBE are nominated by their peers and elected by the national Board of Directors. They are recognized for providing conspicuous service or valuable contributions to the advancement of broadcast engineering.

Ricciardelli will be recognized for his achievement at the SBE National Awards Dinner, October 8 in Verona, N.Y., held during the 2014 SBE National Meeting. The National Meeting is being held in conjunction with the Chapter 22 Broadcast & Technology Expo at the Turning

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Stone Resort Casino. Tickets for the awards dinner (\$15) are available on-line at the SBE website, www.sbe.org or by calling the SBE National office at (317) 846-9000. To register for the Chapter 22 Broadcast & Technology Expo, visit www.sbe22expo.org. The expo and educational sessions are free to attend. Companies interested in exhibiting at the expo are invited to also visit the expo website. 

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exhibit floor reception from 3 to 5 pm will provide a opportunities to network and meet up with friends.

The Turning Stone Resort Casino is located in the geographic center of New York State and can be reached directly from east or west via the New York State Thruway (Interstate 90) at exit 33. If planning to travel by air, visitors should use Syracuse Hancock International Airport, then ground transportation east via Interstate 90.

A limited block of rooms has been arranged for guests and exhibitors to use should you desire overnight accommodations. Contact the Turning Stone Resort Casino directly at (800) 771-7711 and request accommodations for the Society of Broadcast Engineers event. The room block is reserved for a

limited time and available on a first come, first served basis.

To register for the free SBE Chapter 22 Broadcast & Technology Expo, visit the expo website, www.sbe22expo.org. Go to Attendee/Registration and complete the on-line form. Pre-registration is recommended. Your Expo registration also serves as your registration for the SBE National Meeting events, except the National Awards Dinner. Tickets for the dinner are available for the discounted price of \$15 each and can be purchased on-line at the SBE National website, www.sbe.org. Click on the SBE National Meeting "box". This event moves around the country each year so, especially for those in the northeast, we hope you'll make plans to attend. ●

Board Candidate Nominations

A list of candidates for the summer election of the Society of Broadcast Engineers Board of Directors is assembled. The election begins July 21 and runs through August 21.

Candidates must be voting members, current in their SBE dues and hold certification by the SBE at an engineering level, which includes CBT or a higher certification. If elected, these same requirements apply during the term of office. Voting members include Regular, Senior, Fellow and Life members and the voting representatives of SBE Sustaining Members.

All four officer positions will be on the ballot as will

six of the twelve director seats. Officer terms are for one year and director terms are for two years. Election ballots will be emailed to voting members in good standing on July 21 and will be completed online. Voting members who chose to opt out of electronic balloting during this year's dues renewal period will receive their ballots in the mail.

Mailed ballots are to be returned by USPS, express delivery or personal hand delivery so they are received at the National Office by 4:30 pm EDT on August 21. Electronic balloting must also be completed by 4:30 pm EDT on August 21. Votes will be tabulated on the evening of August 21. ●



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Society of Broadcast Engineers

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joe.snelson@meredith.com

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Entercom Greenville, LLC | Greenville, S.C.
jmassey@entercom.com

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jimleifer@hotmail.com

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acummis@gmail.com

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GatesAir | Mason, Ohio
tim.anderson@gatesair.com

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COX Media Group | Charlotte, NC
ted.hand@coxinc.com

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Telos Systems | Nashville, Tenn.
kirk@harnack.com

John Heimerl, CPBE

Fine Tuning Associates/H&A Inc. | Suffolk, Va.
johnh@finetuning.com

Mark Heller, CPBE, CTO

WGBW and WLWB Radio | Two Rivers, Wis.
wgbw@lsoil.net

Ched Keiler, CPBE, 8-VSB, CBNT

E Three | Ft. Lauderdale, Fla.
ckeiler@ethree.us

Gary Kline, CBT, CBNT

Cumulus Media | Atlanta, Ga.
gary.kline@cumulus.com

Scott Mason, CPBE, CBNT

CBS Radio | Los Angeles, Calif.
scmason@cbs.com

Wayne M. Pecena, CPBE, 8-VSB, AMD, DRB, CBNE

Texas A & M University | College Station, Texas
w-pecena@tamu.edu

Thomas R. Ray III, CPBE, AMD, DRB

Tom Ray Broadcast Consulting | New Windsor, N.Y.
tomray@tomrayconsulting.com

Kimberly Sacks, CBT

CBS Radio | Lanham, Md
kiksacks@cbs.com

Dennis Wallace, CBTE

Meintel, Sgrignoli & Wallace | Waldorf, Md.
dennis.wallace@mswdtv.com

IMMEDIATE PAST PRESIDENT

Ralph Hogan, CPBE, DRB, CBNE

KJZZ-FM/KBAQ-FM | Tempe, Ariz.
rhogan@sbe.org

SBE NATIONAL STAFF

John L. Poray, CAE | Executive Director

jporay@sbe.org

Megan E. Clappe | Certification Director

mclappe@sbe.org

Debbie Hennessey | Sustaining Membership Manager

dhennessey@sbe.org

Scott Jones | Database Manager

kjones@sbe.org

Dan Kissel | Communications & Membership Coordinator

dkissel@sbe.org

Kristin Owens | Education Director

kowens@sbe.org

Carol S. Waite | Certification Assistant

cwaite@sbe.org

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



LETTER FROM THE PRESIDENT

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

Looking Back at this Year's NAB Show

As I write this, the 2014 NAB Show has just ended. This year's show was particularly special for me. It was not only my first NAB since becoming SBE President, but it was also 50 years ago that the SBE was born at the NAB convention held in Chicago.

My activities began on Saturday, prior to the exhibits opening, when I gave a presentation to those that are participating in the NAB Technology Apprenticeship Program (TAP). These are young students that have NAB-arranged internships and are looking forward to getting a job someday in broadcasting, either on a station level or in audio/video production. As I shared my personal experiences and talked about the SBE, it excited me to see them taking notes and listening intently. It reinforced in my mind the important role SBE plays in the development of the broadcast engineer. I was able to take the opportunity to stress the importance of chapter meetings as well as the various educational offerings we have on the SBE website. They also joined us for a while at our membership meeting and were acknowledged. At the conclusion of the Technology Apprentice Program, these students will get to take a SBE Certification exam and become a CBT. This fine group of young engineers to-be, concluded their NAB convention experience by joining us at the SBE Board of Director's tables for the NAB Technology Luncheon on Wednesday.

Other SBE related activities that occurred concurrently with the NAB convention included meetings of the SBE Board of Directors, Certification Committee, Frequency Coordinators and the Education Committee.

For the frequency coordinators, one of the major topics discussed was the sharing of the 2 GHz BAS band with the Department of Defense (DoD). As you may recall, SBE issued a brief alert to members regarding this. SBE General Counsel, Chris Imlay, and Dennis Wallace, Chair of the National Frequency Coordination Committee, are working together with NAB in negotiating a memorandum of understanding with DoD, establishing the "rules of the road" so to speak, to protect incumbent broadcast BAS operations. Negotiations will be starting soon and Chris Imlay will be providing updates to SBE frequency coordinators and members as they become available. So, stay tuned.

It was exciting for me to sit in on the meeting of the SBE Education Committee chaired by Wayne Pecena. There were

discussions ranging from webinar topics to courses being made available through the SBE University series. Wayne, his committee and SBE Education Director, Kristin Owens, have some great programs planned. If you haven't checked out the various educational offerings we have, I would encourage you to do so. Wayne has conducted a couple of webinars lately on IP Networking. I sat in on one of those and Wayne did an outstanding job of presenting the subject in a very



Students participating in the NAB Education Foundation's Technical Apprentice Program (TAP) attend the SBE Membership Meeting.

understandable manner.

On Wednesday, I had the opportunity to meet with our friends from AMITRA. Similar to the SBE, AMITRA, is a society for broadcast engineers in Mexico. Through the years of our association with AMITRA, we have been able to exchange ideas and information to help serve the members of our societies. It is always a pleasure to meet each year with this great group of broadcast engineers from our neighbors to the south.

The SBE Membership Meeting held on Tuesday afternoon was well attended with attendance of around 175. There were several things that made this meeting special. First, it was 50 years ago at an NAB convention held in a Chicago hotel that the SBE held its first meeting. In other words, it was the birthday of the SBE.

Secondly, we had a couple of special guests that joined us at our membership meeting. Jim Wulliman, a former SBE President and also known as "The Father of the SBE Certification program", was present. Jim gave us a few words of greeting when he was introduced. What a thrill it was to have one of the Charter Members of the SBE present with us.

Another special guest at our meeting was Victoria Battison, the daughter of SBE founder and first president John Battison. What a


legacy her dad left in beginning a society that now has a membership of over 5,000!

The other special part of the membership meeting was a 12 minute video that was produced by the SBE's Executive Director, John Poray. John did an outstanding job of assembling material covering the founding of the SBE and its growth over the last 50 years. If you haven't had a chance to view the video, be sure to do so as it is well worth watching to learn about the Society in which you belong.

When the membership meeting concluded, everyone made their way to a room across the hall where we held the SBE 50th Anniversary Reception. As people entered the doors they were given a ticket for five SBE prize drawings. We gave away five, fifty dollar bills in commemoration of the 50th anniversary. I will add that we are appreciative of the many sponsors that contributed to make this event and prizes possible.

While there was plenty of food, beverage and fellowship going on, we also had a timeline on the front table spanning the major developmental events of the SBE over the course of the last 50 years. There was also a timeline of membership numbers. All members in attendance were invited to sign their name and member number at the appropriate location on the line that stretched 15 feet across the front of the room. The line began at member number one, which was signed by Victoria Battison for her father, and ended at 30,000.

I wish to congratulate the 50th Anniversary committee and the SBE national staff for their hard work in pulling off this successful event. It was apparent that, "A good time was had by all."

With all the activities of the SBE going on at the NAB Show, you may be wondering if I even had a chance to visit the exhibit floor. The answer to that was, yes, I did. While there was a lot to see, I will mention that the presence of 4K certainly stood out in terms of video. While we don't transmit that kind of resolution today, we probably will at some point in the near future. With that, it further underscores in my mind the importance of the role the SBE will play in disseminating knowledge through chapter meetings, webinars and our SBE University courses to keep our members current in technology. If you haven't checked out our opportunities lately, be sure to go to the website and see what is available and that can be of benefit to you in advancing your career. 

50 Years of SBE Advocacy: A Look Back at the First Phone

Chris Imlay, CBT, SBE General Counsel

I first started working with my mentor, Bob Booth, a broadcast engineer first and a communications lawyer second, in September of 1979. Bob was proud of his First Class Radiotelephone license.

One of the first tasks Bob slapped down on my desk was FCC's Docket 20817, an "Inquiry Relating to the Commission's Radio Operator Licensing Program." The docket went back to June of 1976, when the FCC issued a short Notice of Inquiry asking whether or not it should continue its program of licensing what it then referred to as "service operators" of radio stations. At the time, Section 318 of the Communications Act required that the actual operation of all transmitting apparatus for which a station license is required must be carried on by a person holding an operator license. This provision could be waived except for ship, aircraft, broadcast and some common carrier stations. FCC rules at the time called for the adjustment, repair and maintenance of radio transmitting equipment to be performed only by persons holding valid operator licenses of classes specified in the rules. Early in 1979, FCC had reduced the requirement for duty operators at AM and FM stations to have Third Class operator permits, and later in 1979, directional AMs and TV stations were permitted to use any class of operator licensee as long as a First Phone licensee was the chief operator.

FCC took the position that the proper technical operation of a radio station was the ultimate responsibility of the station licensee. Because many station licensees "possessed little or no technical expertise" they had to depend on a Commission-licensed "service operator" to install and maintain the transmitting equipment in conformity with the technical rules. FCC asked whether it was timely to eliminate the requirement that routine station operation be done by a licensed person, and whether service operators of stations could be licensed with a less formal process than the First or Second Class Radiotelephone license.

Bob Booth was contacted by Bob Jones, the President of SBE in late 1979. SBE was, before that time, inactive in FCC regulatory proceedings, but when the FCC began to consider eliminating the First Class Radiotelephone License, SBE decided that it had something to say about it. FCC looked at the Comments in response to the Notice of Inquiry, of which there were few, and proposed in 1980 to discontinue the issuance of new and renewed First Class Radiotelephone operator licenses, and to eliminate the requirement for licensing by examination of operators who perform installation, maintenance and technical supervision of the operation of transmitting equipment for AM, FM, NCE-FM, TV and broadcast translator stations. FCC proposed to permit holders of any class of commercial operator license, including Restricted Radiotelephone permits, to perform

technical duties at those stations.

SBE thought that this was ludicrous. We argued that Section 318 of the Communications Act was based on an understanding by Congress that electronic knowledge is critical to the safe operation of high-powered broadcast



transmitters, especially when servicing high-voltage equipment, which often necessitated disconnecting interlocks during servicing. Abandonment of even basic knowledge of electrical circuits would create safety issues and most certainly interference issues. We noted that all radio operators were required to be licensed since 1912 and that, while the First Class Radiotelephone examination was not the ultimate test of an engineer's ability to install, maintain, repair and supervise broadcast transmitting equipment (because no one test could evaluate and classify such expertise in any given situation) the First Phone exam did offer a uniform threshold basis for determining whether a person is familiar with the basic operation of transmission equipment and a working knowledge of broadcast technical regulations. More importantly, it provided a basis for a non-technical broadcast licensee to have a basis for making a determination of the threshold competency of broadcast engineers at hiring time. By contrast, a "babysitter license" as the restricted radiotelephone permit was referred to at the time, would have no value at all, as it does not demonstrate technical knowledge, and certainly not the pride of accomplishment that, in SBE's words, "largely distinguishes well-motivated engineers from poor ones."

SBE's comments were filed in November of 1980. Many comments were filed, and of those, NAB was almost alone in supporting the FCC proposal. NAB's view was that there were "cram" schools that taught to the test, and therefore the First Phone was not a measure of technical knowledge. Further, NAB argued that the reliability of broadcast equipment was so high by that time that an operator requirement was not necessary. NAB did say that "Preliminary discussions between [SBE] and NAB indicate that the two organizations could work cooperatively and with other broadcast entities, to develop a satisfactory testing instrument."

SBE filed reply comments, aimed at the

NAB's comments. SBE noted that broadcast licensees were not motivated to achieve technical compliance to the same extent that a First Phone licensee was; the engineer had a powerful incentive to protect that which he or she worked for and which was an icon of technical achievement. SBE noted that it had, for the five years preceding the 1980 Notice of Proposed Rule Making, developed a certification program for the purpose of testing experience and competence, but it was not intended, SBE said, to substitute for the First Phone. The SBE program did not test on FCC rules and regulations, or knowledge of operating procedures. At the time, certification exams were given only twice a year, and therefore they would not be a substitute for the First Phone.

As of course we all know, the FCC had made up its mind long before, and despite an aggressive SBE effort via a Petition for Reconsideration, FCC did eliminate the First Phone, and terminated the proceeding in July of 1982. It replaced the First and Second Class Radiotelephone licenses with the General Radiotelephone operator license, and issued those to First and Second Phone holders. The Third Class Radiotelephone license became the marine radio operator permit. Now, the General is issued for life, but no license is required at all to operate a broadcast station.

Ironically, the FCC's decision led directly to the SBE certification program's expansion and its becoming, de facto, the standard method for evaluation of technical competence in the broadcast industry. The First Phone docket was SBE's first big toe in the water in terms of advocacy at the FCC, and our advocacy agenda is now a dance card that is pretty much full all the time.

Christopher Imlay is General Counsel for the Society of Broadcast Engineers; a post he has held since 1980. He was elected a Fellow of the society in 1997.

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EDUCATION UPDATE

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

The Future of Broadcast Engineering & SBE Education Needs

Another National Association of Broadcasters Annual Conference has come and gone. I hope you were fortunate to have attended NAB 2014 and one of the many associated conferences held with the annual NAB gathering. These associated conferences such as the PBS TechCon, the Public Radio Engineers Conference (PREC), and the SBE sponsored Ennes Workshop offered a variety of professional development opportunities and personal networking opportunities beyond the traditional NAB broadcast engineering conference program offerings.

Regardless of what events you were able to attend or exhibit halls you visited during the conference, you likely came away with the impression that the information technology (IT) emphasis in the broadcast plant infrastructure is well alive and here to stay. The radio folks have already seen this transformation take place and the TV and video industry transformation is well underway. The dominance of IT focused presentation topics, panel discussions, and technology exhibits was everywhere from IP based microwave links to video content storage and transcoding performed in the "cloud" IT environment.

As the SBE recognizes and celebrates 50 years of service to its membership, the industry is clearly seeing a major technology transformation. Technology transformations have occurred numerous times throughout broadcast engineering history, but the pace of the broadcast IT transformation will likely set new records. Along with the rapid adoption of the latest technology comes the need to develop the knowledge and skills of the broadcast engineer to keep pace. How does the entrenched and experienced broadcast engineer learn the latest IT infrastructure knowledge? How does the entrenched and experienced IT engineer learn the broadcast infrastructure knowledge? The real-time media aspect of the broadcast industry presents unique challenges to an IT infrastructure and thus the experienced IT engineer might be facing some new challenges. And of course the IT engineer will likely find the high-power RF world of broadcast totally foreign. Likewise, the experienced broadcast engineer who is totally comfortable with AES, SDI, and ASI signal flow might find these same signals in an IP environment somewhat challenging.

Regardless of your background, formal

education or experience level, there is simply a lot to learn by everyone in the broadcast industry. Each individual is challenged with learning new or unfamiliar technology, while at the same time, keeping up with daily job demands. In many cases, accepted knowledge in one field can be treasured knowledge in another field. Even the basics can sometimes prove challenging to someone who is all of a sudden in un-familiar territory. The broadcast engineer might find a true understanding of IP network subnetting invaluable while routine knowledge "that everyone knows" to the IT engineer. At the same time the same IT engineer might be challenged with interfacing un-balanced and balanced audio that is "old hat" to the broadcast engineer. And 15 Kv plate voltage may simply be terrifying. The SBE faces its own challenges in providing professional development training to its members. What specific content does the broadcast professional need to keep up or get ahead today? How should the needed content be delivered? Who should deliver the desired content? These are many questions that your SBE Education Committee is faced with.

Can You Help?

You bet! Let the SBE Education Committee know your professional development needs. Tell us what specific content you need. Tell us how and when the content should be presented. Tell us who is best at providing the desired content. No matter how basic or how advanced, let us know your needs. By the way, you can look for some future webinars that focus on some of the basics from audio interfacing, to grounding, to practical surface mount technology repair techniques!

Are You Planning a State, Regional, or Local Chapter Sponsored Conference?

The SBE can bring quality professional development presentations to your event through the Technical Presenters Group program. This program provides quality content and professional presenters on a variety of topics from broadcast focused IP networking to FCC station inspections to your event.

In addition to the annual Ennes Workshop held during

the NAB Show each year, the SBE sponsors several regional Ennes Workshops throughout the country. The schedule has openings for 2-3 more of these regional events in 2014. Contact Kristin Owens at the National SBE office for further information and to schedule a regional Ennes Workshop or to schedule a member of the Technical Presenters Group for your event.

Don't Have Time to Attend On-Line Events During the Workday?

In addition to SBE University courses, the society offers numerous recorded webinars in addition to those delivered live. Webinars cover the diverse topics of interest to the broadcast engineer ranging from AM Directional Antenna Systems to understanding FCC regulations to numerous IP networking topics. These webinars are less intensive, are usually an hour or so in length, and available on your schedule. Several are free, based upon generous support of industry sponsors. Others are available to SBE members at a nominal cost.

Future Education Events:

SBE RF Safety Course Webinar with Richard Strickland – June 24th

SBE Advanced IP Networking Course for Broadcast Engineers with Wayne Pecena hosted by SBE Chapter 47 Los Angeles – June 27th

SBE 2014 Leadership Development Course with Purdue Professor Rodney Vandever – August 12-14 – Atlanta, Ga. ●

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



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CERTIFICATION UPDATE

by Jim Bernier, CPBE, CBNE
SBE National Certification Committee
jim.bernier@sbe.org

Certification Volunteer Recognition

A close friend of mine had a recent experience which had me thinking about one of the least mentioned values of certification. Think about this...

After a long week at work, it's finally Friday and you're looking forward to a weekend of fun and relaxation when your boss calls and asks if you have a few moments to chat. You arrive in his office and there waiting for you is your boss and the human resources officer for the station. Your service to the company is no longer needed. You're being terminated!

You take a couple of days to gather your thoughts and to get over the shock of being let go. You start to prepare yourself for the task of securing a new position: looking over job listings; contacting your network of industry friends; and preparing your résumé or CV, just to name a few things.

How is your résumé going to differentiate you from the other people applying for the same position? What if the two finalists are you and another candidate with apparently equal credentials? What if you were certified by a nationally recognized body for your skillsets and the other candidate isn't? It could be the factor that tips in your favor!

The time to be thinking about this scenario is now – before you have to confront it. It begins by going to the SBE website and navigating to the Certification section. There, you will find all the information you need to help you get started on your road to being a certified broadcast engineer. Whether you're primarily a TV engineer or a radio engineer; whether you're responsible for video systems or audio systems; whether you're a radio board operator or a TV master control operator; or whether you're the IT guru for the station or the transmitter geek, there is a certification level that matches your skillsets.

Being certificated is, of course, no guarantee of finding a new position. But having a certification and using those letters beside your name at the top of that résumé tells a recruiter, HR manager or hiring manager an awful lot about you before they even get to the rest of your experience.

It's not hard to imagine the value certification has in the job hunt. It's just one more arrow in your quiver of experience. Even if it only gets you past the first round of screening, it's been valuable. And if it's a determining factor, then it's enormously valuable.

A word of caution to those who might be tempted to "fake" it and use the letters or state that they are certified when, in fact, they are not. People responsible for screening applications often call the SBE offices to verify stated certifications. If you were certified at one time but let that certification lapse, you are not certified and that is the answer that the screener will receive.

While exam periods are scheduled four times a year at the local chapters, accommodations can be made to sit for an exam at other times. If you don't live near a chapter city, accommodations can be made to sit for an exam at a convenient location. Call the SBE office and speak with Megan Clappe. She and the national certification committee members are willing to assist. But you have to make that call.

Don't wait until that day comes to decide that a certification would polish off that résumé nicely. You'll be too busy trying to secure your next position to have time to study and prepare for an exam. Do it now!



Certification Question
answer on page 14

The address for IPv3 contains:

- a. 4 bytes
- b. 8 bytes
- c. 16 bytes
- d. 32 bytes

Society of Broadcast Engineers, Inc.

2013 Audited Financial Statements
Combined Statement of Assets, Liabilities and Net Assets - December 31, 2013

ASSETS

Cash and cash equivalents	\$72,124
Investments	1,045,577
Office Equipment	27,782
Intangible Assets	3,410
Total Assets:	\$1,148,893

LIABILITIES and NET ASSETS

Liabilities:	\$0
Net Assets:	\$1,148,893
Total Liabilities & Net Assets:	\$1,148,893

2013 SBE Audited Revenue & Expense Statement*

Membership Fees & Support	\$393,739
National Meeting	37,640
Certification	69,891
Publications/Promotion	69,352
Education Services	67,853
Interest & Dividend Income	31,328
Net Realized/Unrealized	
Gain (Loss) from Investments	44,021
Miscellaneous Income	6,747
Total Income:	\$720,571

EXPENSES

Member Services	\$276,100
Chapter Rebates	34,105
National Meeting	25,730
Publications/Communications	71,856
Certification	78,277
Education	72,477
Administration	67,562
Depreciation/Amortization	13,656
Total Expenses:	\$639,763

Net Assets 12/31/2012:	\$1,068,085
Net Assets 12/31/2013:	\$1,148,893
Change in Net Assets:	\$80,808

* Audited statement reflects modified cash accounting method. Investments are listed at market value.



New SBE Certification Achievements

CONGRATULATIONS

LIFE CERTIFICATION

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

Certified Senior Radio Engineer™ (CSRE®)
Richard Hood, Jr., Claymont, Del. – Chapter 18

Certified Broadcast Networking Technologist® (CBNT®)
Richard Hood, Jr., Claymont, Del. – Chapter 18

FEBRUARY EXAMS

Certified Senior Television Engineer™ (CSTE®)
Glenn Axelrod, Framingham, Mass. – Chapter 11
Lindsay Bold, Liberty, N.C. – Chapter 84

Certified Senior Radio Engineer™ (CSRE®)
William Blum, San Francisco, Calif. – Chapter 40
Certified Broadcast Networking Engineer™ (CBNE™)

Phil Jennings, Sturgis, Mich. – Chapter 30
AM Directional Specialist™ (AMD™)
William Harris, Albuquerque, N. M. – Chapter 34
Philip Mulivor, Cleveland Heights, Ohio – Chapter 70
8-VSB Specialist™ (8-VSB™)
Timothy Coucke, Big Lake, Minn. – Chapter 17

SBE EXAMS HELD DURING THE NAB SHOW

Certified Broadcast Radio Engineer™ (CBRE®)
Brian Gullikson, Eagan, Minn. – Chapter 17
Derek Murphey, Fitchburg, Wis. – Chapter 24
A.M. Paulos, APO, AE – Chapter 37
Certified Broadcast Networking Engineer™ (CBNE™)
Ronald Anderson, San Antonio, Texas – Chapter 69
Evangel Arcega, Abu Dhabi, Abu Dhabi

James Glanz, Brooklyn, N.Y. – Chapter 15
Veronica Mazuca, San Marcos, Texas – Chapter 79
AM Directional Specialist™ (AMD™)
Thomas Oliver, Williamstown, Ky. – Chapter 35
8-VSB Specialist™ (8-VSB™)
Ernest Harvey, Jr., Harahan, La. – Chapter 72

Certified Broadcast Networking Technologist® (CBNT®)
Moses Edralin, Sr., El Segundo, Calif. – Chapter 47
Gregory Jarrell, Las Vegas, Nev. – Chapter 128
Gregory Martin, Bowling Green, Ky. – Chapter 103
Brian Vita, Peabody, Mass. – Chapter 11

Certified Broadcast Technologist® (CBT™)
Paul Kaminski, Johnson City, N.Y. – Chapter 1
Certified Television Operator® (CTO®)
Bret Quinn, Henderson, Nev. – Chapter 128

SPECIAL PROCTORED EXAMS

Certified Broadcast Networking Engineer™ (CBNE™)
Gradley Giardiello, Laurel, Md. – Chapter 46

Certified Broadcast Television Engineer™ (CBTE®)
Ivan Vanchev, Sofia Bulgaria

Certified Broadcast Radio Engineer™ (CBRE®)
Louis Caesar, Jr., New York, N.Y. – Chapter 15

SBE CERTIFIED SCHOOL COURSE COMPLETION

Certified Broadcast Technologist® (CBT®)
DINFOS
Nicholas Graves, Hays, Kan. – Chapter 59
Patrick VanBuren, APO, AE
Justin Villorante, Los Angeles, Calif. – Chapter 47
Geoffrey Hogue, Fort Bragg, N.C.

Llewelyn Kennedy, North Augusta, S.C. – Chapter 101

CERTIFIED BY LICENSE

Certified Broadcast Technologist® (CBT®)
Timothy Boling, Indianapolis, Ind. – Chapter 25
Zachary Brockett, Gran Terrace, Calif. – Chapter 131
Ron Kurnetz, Alburgh, Vt. – Chapter 110
Bill Tidwell, Valdosta, Ga. – Chapter 7
David Toon, Marquette Heights, Ill. – Chapter 49

CERTIFIED RADIO OPERATOR® (CRO®)

James Daugherty, III, Mount Vernon, Ohio
Albion College Radio
Yvonne Spence, Albion, Mich.
Taylor Sokoloksis, Niles, Mich.

Pasadena City College
Catalina Akbar, Los Angeles, Calif.
Greg Austria, Upland, Calif.

David Cong, Rosemead, Calif.
Rolando Corado, Los Angeles, Calif.
James Estrada, Alhambra, Calif.
Jennifer Jones, Los Angeles, Calif.
Viridiana Noriega, Los Angeles, Calif.
Minh Phan, Monterey Park, Calif.
Richard Potts, Los Angeles, Calif.
Francine Rios, Moreno Valley, Calif.

Diva Ward, Los Angeles, Calif.
Kathleen Weiskopf, Valley Village, Calif.
Knightstown High School
Aaron Benson, Spiceland, Ind.
Kaitlyn Feaster, New Castle, Ind.
Kaleb Gillock, New Castle, Ind.
Sean Hitchens, Sulphur Springs, Ind.
Tristian Holzhausen, Greenfield, Ind.

Dekota McCallister, Carthage, Ind.
Anna Todd, Lewisville, Ind.
Connor Whitfield, Carthage, Ind.

CERTIFIED TELEVISION OPERATOR® (CTO®)

Mark Lee, Boulder, Colo.
Justin Naranjo, Santa Clara, Calif.
Todd Nunes, Los Angeles, Calif.
John Pooley, Norwood, Mass.

Encompass Digital Media
Aaron Bloom, North Hollywood, Calif.
Paul Cervantes, Pico Rivera, Calif.
William Chavez, Burbank, Calif.
Tim Coyne, Culver City, Calif.

Richard Curran, North Hollywood, Calif.
David Johnson, Glendale, Calif.
Michael Pennock, Palmdale, Calif.
Erica Sanchez, Commerce, Calif.

Parma City Schools
Domenic Carter, Chagrin Falls, Ohio
Stephanie Mosack, Parma, Ohio
Daniel Myers, Parma Heights, Ohio
Lucas Streets, Parma Heights, Ohio
Raymond Tam, Parma Heights, Ohio

JUBILEE PROJECT

Certified Professional Broadcast Engineer® (CPBE®)
Michael LeClair, Watertown, Mass. – Chapter 11
Jerry May, Lexington, Ken. – Chapter 35
Certified Professional Broadcast Engineer® (CPBE®) 8-VSB Specialist™ (8-VSB™)
Jerry Whitaker, Morgan Hill, Calif. – Chapter 40

Certified Broadcast Radio Engineer™ (CBRE®)
Mark Saia, Ithaca, N.Y. – Chapter 140
Peter Stohrer, Concord, N.H. – Chapter 110
Steve Westbrook, Smirna, Ga. – Chapter 5
Certified Broadcast Television Engineer™ (CBTE®)
Kenny Elcock, Honolulu, Hawaii – Chapter 63
Cary Martin, Jacksonville, Fla. – Chapter 7

Robert Scott, Corpus Christi, Texas – Chapter 29
Certified Broadcast Networking Technologist® (CBNT®)
Ronnie Barnes, APO, AE – Chapter 132
Timothy Boling, Indianapolis, Ind. – Chapter 25

Certified Television Operator® (CTO®)
Orvin Debban, Holdridge, Neb. – Chapter 87

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 Broadcast Radio Television Audio Video Engineer™ (CBRTAVE™)
Lewis Lawrence, Jr., Destrehan, La. – Chapter 72
Certified Television Operator® (CTO®)
Victoria Rhymer, Aurora, Colo.
Allen Simmons, Columbus, Ga.
Eric Williams, Spring Valley, Calif.
Certified Radio Operator® (CRO®)
John Jordan, Rocky Mount, N.C. – Chapter 93
Michael McCormick, Ogallala, Neb. – Chapter 87

2014 NAB Show



Ralph Hogan (l), chairman of the national SBE Certification Committee, recognizes members for years of service. To Ralph's left, chapter certification chairmen, Henry Kaul, Chapter 63, Hawaii and Gary Stigall, Chapter 36, San Diego; Terry Baun, national Certification Committee member; SBE President Joe Snelson.



Members of SBE international affiliate, AMITRA, the Association of Broadcast Engineers and Technicians of Mexico, attended the membership meeting and reception. AMITRA President, Jesus Canela is second from left.



Victoria Battison, daughter of SBE founder, John Battison, attended the meeting and reception.



A 15 ft. long timeline illustrated key events in the history of the SBE.



Members enjoy the food at the reception.



Steve Gordoni, Mike Tosch and Gary Stigall at the reception.



A full house at the SBE Membership Meeting.



Jim Wulliman signs the member number timeline.



A large crowd attended the 20th annual SBE/Ennes Program; part of the NAB Broadcast Engineering Conference.





Old friends meeting up at the reception include (l-r) Megan Clappe, Ralph Hogan, Terry Baun, Linda Baun, Jim Wulliman and Doug Garlinger.



Members Dan Ryson, Alan Jurison and Dennis Wallace enjoy the reception.



Sponsors of the SBE 50th Anniversary Reception



President Joe Snelson presides at the membership meeting.



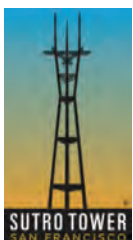
Addressing the crowd at the SBE Membership Meeting is Eric McCulley of sponsor, Vislink Broadcast.



SBE staff, (l-r) Megan Clappe, Debbie Hennessey, Kristin Owens and John Poray at the SBE exhibit booth.



President Snelson assists Karen Johnson, vice president of SBE daily booth sponsor, Ka You Systems, as she draws the prize winning number.





LEGAL PERSPECTIVE

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

First Informer Statutes - Spread the Word

Sometimes it is procedurally difficult to do good things. I have heard periodically that Amateur Radio operators often have a difficult time volunteering their valuable communications skills in disaster relief and emergency communications because they are restricted in their access to those disaster areas where communications are disrupted. They are not First Responders, though they often provide communications for First Responders in disaster areas. For example, after the 9/11 attacks in New York, the only radio amateur volunteers who were given access to the area were those who had Red Cross credentials.

Broadcasters are often in the same boat. They serve a very important function in disaster relief by informing the public about conditions in and near the disaster area. But broadcasters are not First Responders either, although they provide First Responders access to large populations at once for information dissemination. So how do broadcasters get access to the disaster area to do their job and inform the public? By state statute, that's how.

There are a handful of states that have enacted so-called "First Informer" statutes. These typically provide that broadcasters (typically including radio, television and cable systems) can, in collaboration with the state emergency management agency and/or the state broadcasters' association, establish a program for training and certifying broadcast engineers and technical personnel

as first informer broadcasters. Once certified, the statutes provide that state and local governmental agencies must allow a first informer broadcaster access to an area affected by an emergency or disaster for the purpose of restoring, repairing, or resupplying any facility or equipment critical to the ability of a broadcaster to acquire, produce, and transmit essential emergency or disaster-related public information programming, including, without limitation, repairing and maintaining transmitters and generators, and transporting fuel for generators. The training relates to personal safety in a disaster area and the mechanics of equipment repair and restoration of media communications facilities following disasters.

Typically, to become qualified as a "First Informer Broadcaster," technical personnel are required to take on-line courses. These courses are part of the NIMS (National Incident Management System) training, and they are offered free. Each course takes approximately 3 hours, so it requires some commitment. Those who complete the NIMS training receive a certificate after each course completed, and these courses qualify for .3 IACET CEU's, presumably contributing to SBE recertification. For details, visit: <http://training.fema.gov/is/nims.aspx>.

States that have enacted these statutes so far include Wisconsin (2006), Nevada (2009), Illinois (2013), Arizona (4/15/2014), Virginia (4/14/14), and most recently, Oklahoma (4/23/14). Bills are pending in Georgia, Missouri and West Virginia.

As you can see, the concept is catching on fast.

The scope of things that a certified first informer can do varies from state to state. Georgia's pending Bill is quite detailed, making it clear that the real goal is to allow broadcast stations inside the disaster area to be put back on the air and kept on the air to provide information on an



ongoing basis. If the Bill in Georgia (SB381) is signed by the Governor (which is likely by the time you read this) it would permit first informer broadcasters to:

(A) Have access to areas affected by an emergency for the purpose of restoring, repairing, or resupplying any facility or equipment critical to the ability of a broadcaster; to acquire, produce, or transmit emergency related programming, including but not limited to repairing and maintaining transmitters and generators and transporting fuel for generators;

(B) Have access to the distribution of fuel, food, water, supplies, equipment, and any other materials necessary for maintaining or producing a broadcast or broadcasting signal; and

(C) Not have vehicles, fuel, food, water, and any other materials seized or condemned that are essential for maintaining or producing a broadcast or broadcasting signal.

This is a very good opportunity for broadcast engineers in emergency preparedness and it provides, at long last, a good opportunity for recognition of radio and television broadcasting as an essential component of emergency response planning. An effort in the recent past to have broadcasters recognized as "First Responders" was conceptually flawed. Broadcasters are simply not First Responders; that term is clearly understood to be limited to public safety officials. Bravo, however, to whoever first coined the term "First Informers". That is exactly what broadcasters are and what they do. ●

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FOCUS ON SBE

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

Jubilee Project Demonstrated the Value of SBE Certification

On April 30, the SBE completed a special one-year window of opportunity for those who had allowed their SBE certifications to lapse. It was a chance to reinstate their certifications without taking exams. Called the Jubilee Program, in recognition of the SBE's 50th anniversary, the program was limited to certifications that had lapsed since 1999, but any of the SBE certification levels were eligible to be reinstated.

The response to the program was strong. As of this writing, approximately 120 individual certifications had been applied for during the twelve months of the program. Circumstances varied among those who took advantage of the opportunity. Some had left broadcasting and allowed their certifications to lapse. Now they were back and wanted to get certified again. For many, time just got the best of them and they missed their recertification deadline. There were some who questioned the value of their certification when it came time to recertify and chose not to, but realized after it was gone just how valuable it was.

One chapter recently publically demonstrated the importance of SBE certification to its local members by instituting a policy that provides financial reimbursement to those who successfully earn their first certification. Chapter 26 in Chicago, chaired by Gordon Carter, CPBE, DRB, CBNT, approved the program, which uses chapter funds to rebate 100% of the certification fee for a member's first certification. Carter said, "We need to encourage young and experienced members alike to seek certification by eliminating any economic roadblocks the member may be facing." Long time Chapter 26 member and past chairman, Mike McCarthy, CSRE, CEA, was a proponent of the new chapter policy and said the timing with the society's 50th anniversary, "...makes this time the perfect opportunity to further certification accessibility."

The value of SBE certification can be measured in several ways and that determination is unique to each individual. It varies depending on the stage of one's career, the level of interest an individual has in career advancement, and the level of importance current or potential employers place on professional certification. The point to remember is that SBE certification remains the only industry measurement of broadcast engineering knowledge and experience. There

is no FCC license or other formal measurement tool available. While some employers require SBE certification, many others find it preferable when hiring. Holding SBE certification demonstrates to others your commitment



Jim Wulliman, SBE member # 105 speaks, at the membership meeting.

as a professional in the field of broadcast engineering; a commitment that includes learning new technology and how to apply it to benefit your employer or clients. If you have not yet pursued SBE certification, why not make this 50th year of the SBE, the year you make the commitment.

This column would not be complete without acknowledging the many members who attended the spring membership meeting on April 8 during the NAB Show and the 50th anniversary reception that followed. One of those was SBE past president (1973-1975), Jim Wulliman, CPBE and his wife Ginny. Jim, who is referred to as the father of the SBE Certification program, has long been retired and lives in southern Arizona. They made the trip to the NAB Show, their first in more than 15 years, specifically to attend the SBE 50th anniversary activities. It was great to see you, Jim.

One of the 50th anniversary celebratory features was a 12 minute video shown during the membership meeting, SBE - 50 Years in the Making. Many people

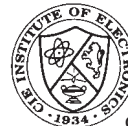
have asked if the video would be made available to members. A copy on DVD has been mailed to each chapter chairman and we encourage each chapter to show it at a future meeting. We'll also soon be posting it to the SBE YouTube channel.

We express our thanks to the volunteers and national staff who planned and presented the anniversary events, and to our sponsors; ten of our SBE Sustaining Member companies that provided financial support to make the events and the SBE exhibit booth at the NAB Show possible. You'll find their company logos on the two-page NAB Show photo spread in this issue of The Signal.

And we're not done celebrating yet! The 50th year celebration continues and will culminate at the 50th SBE National Meeting, October 7-8 in Verona, N.Y., held in conjunction with the 42nd Annual SBE Chapter 22 Broadcast & Technology Expo. If you're in the area, I hope you will attend. For those who can't be there, plan to tune in to the live one-hour webcast of the SBE Annual Membership Meeting the afternoon of October 8. ●



Turning Stone Resort Casino, site of the 2014 SBE National Meeting.



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Engineering Perspective

by Donald Kolbert, CPBE
dmkolbert@msn.com

Sunspots and the Terrestrial Broadcast Engineer

I have always been awestruck by the Northern Lights (Aurora Borealis) and wondered what caused it. It took me over 60 years to find out that sunspots were a part of the process.

Heinrich Schwabe, a German pharmacist and amateur astronomer began observing the dark spots visible on the sun in 1826. In 1843 he noticed that the number of spots varied according to an 11 year cycle. The maximum occurred on the 11th year. In 1862, Edward Sabine of England found that magnetic storms followed a similar pattern.

Another amateur astronomer in England, Richard Carrington, documented observations between 1853 and 1863. Carrington was observing a group of sunspots in September, 1859 when suddenly, "two patches of intensely bright and white light broke out." The patches brightened rapidly and then decayed again. His observation was confirmed, independently, by another English astronomer, Richard Hodgson.

Carrington had seen a solar flare. About 17 hours later, a great magnetic storm erupted with an aurora seen as far south as Cuba. This so called "Carrington Event" was the strongest geomagnetic storm ever recorded and induced such high voltages into telegraph wires and circuits that operators received shocks, telegraph keys melted and circuits operated with batteries disconnected. Astronomers and astrophysicists warn us that if a storm of that proportion hit the earth today, much if not all of its electrical infrastructure could be damaged or destroyed.

Sunspots appear as dark blotches on the sun and are caused by the appearance of cooler (3000 degrees Celsius) areas amidst the roiling gases on the surface (6000 degrees C). These areas are cooler because much of their energy is tied up in intense magnetic fields that are 1000 times stronger than the magnetic fields of the earth.

Solar flares appear as explosive bright spots on the surface of the sun (as experienced by Carrington and Hodgson in 1859). They occur when magnetic energy built up in the solar atmosphere near a sunspot is suddenly released in a burst equivalent to ten million volcanic eruptions. Radiation, including radio waves, X-rays, gamma rays, ultra violet rays and charged particles (electrons, protons and oxygen ions) may strike the earth. Most are deflected by the earth's magnetosphere.

The outer solar atmosphere, the Corona, is structured by strong magnetic fields. It is a gaseous region and extends millions of miles into space. It is invisible, except during a total eclipse. When these fields are closed, often above sunspot groups, the confined solar atmosphere can suddenly and violently release bubbles of gas and magnetic fields called coronal mass ejections (CME's). A large CME can be as large as the sun and can contain 10 billion tons of matter. CME's are sometimes associated with solar flares but usually occur independently. A CME can induce huge amounts of voltage into our earth's magnetic shield and can damage and destroy power grids on Earth. When a CME collides with the solar wind, the shock wave created can drive super-charged particles into the Northern and Southern Hemispheres and produce an aurora.

We live in a world that has become so dependent on electrical and electronic systems that in the event of a huge geomagnetic storm that destroys our power grid, we may have to return to the 'horse and buggy' days or worse. We wouldn't be able to get a drink of water or flush the toilet, or even drive a motor vehicle without electricity. When a transformer feeding the power grid in the province of Quebec was hit by a geomagnetic storm in 1989, the excessive induced current caused it to melt and the whole province lost electrical power for many days.

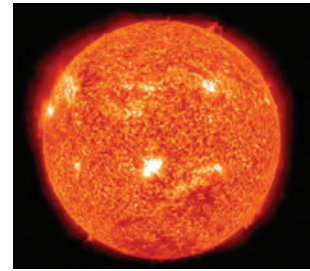
The best advice to give to broadcast engineers is to be prepared. You should plan for the worst possible conditions that could affect transmissions, programming, staffing, spare parts, emergency medical and more.

FM and TV stations shouldn't lose their carriers in a space weather attack unless the power grid goes down. They may lose their programming source if it is dependent on satellites. AM stations, especially those with directional arrays, may have some pattern problems if the ionosphere is upset.

The morning of this writing, a large solar flare burst out of a group of sunspots. It brought with it a strong burst of X-ray and sprayed the ionosphere with excess electrons, protons and ions. HF (3-30 MHz) radio blackouts occurred on the side of the Earth facing the sun. I was able to observe their website to find out what was going on.

The National Oceanic and Atmospheric Administration (NOAA) operates the Space

Weather Prediction Center (SWPC) to provide the nation and the world with the information needed to predict the outcomes of a wide range of solar-earth activities. NOAA's task is to monitor the types and amounts



The Sun exhibits two events at once on Jan. 28, 2011. A filament on the left side became unstable and erupted, while an M-1 flare (mid-sized) and a coronal mass ejection on the right blasted into space.

of energy being radiated by the sun and what interactions with the earth are taking place. SWPC provides three on-line reports which are important to users who need to monitor existing space weather conditions to determine if they are normal, abnormal but safe, or abnormal but dangerous. These are geomagnetic storms, solar radiation storms and radio blackouts. Depending on intensities, it is possible for more than one to occur simultaneously. Several websites can help you become knowledgeable about space weather. Using the three sites together, one can monitor and anticipate space weather that can affect broadcast transmissions.

Space weather scales can be found at www.swpc.noaa.gov/NOAAscales/. NOAA introduced these as a way to communicate to the general public the current and future space weather conditions and their possible effects on people and systems.

Space Weather Now, at <http://www.swpc.noaa.gov/SWN/>, provides geomagnetic and solar radiation storm information and radio blackout status. At www.swpc.noaa.gov/today/html, NOAA provides today's space weather.

Donald E. Kolbert, CPBE lives in Stewartville, Minn. During his 58 year career, Kolbert has worked, instructed and authored in the field of electronics and computers. He retired as Chief Engineer at Minnesota Public Radio, Rochester, Minn. in 2000. He is a member of SBE Chapter 112, La Crosse, Wis. ●

AC Video Solutions • 2014

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

Advanced Broadcast Solutions • 2012

Arco Groenenberg (206) 870-0244
Systems Integrator

Advanced Electronic Services (AES) • 2012

Eda Gray (336) 719-0755 Ext. 142
Electronic, Hydraulic, Motor Repair

American Tower Corporation • 2000

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

Anton/Bauer Inc. • 2004

Kyle Dann (203) 929-1100
Manufacturer Portable Power Sys.

ATCi • 2012

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

Audemat-Worldcast Systems Inc. • 2000

Christophe Poulain (305) 249-3110
Control Manufacturer

AVCOM of Virginia, Inc. • 2010

Warren McElfresh (804) 794-2500
Spectrum Analyzers

AVDB Group • 2014

Maria Cody (720) 940-7131
Audio/Video/Lighting & Control

Avid Technology • 2011

Rich Griffin (303) 248-3259
Broadcast Products and Services

Belden Electronic Division • 1991

Steve Lampen (800) 235-3361
Cable and Connectivity

Bell Tower • 2014

Bruce Burris (918) 789-9020
Tower Manuf., Design & Installation

Bexel • 2009

John Root (818) 565-4314
Calrec Broadcast & Audio Consoles

Blackmagic Design • 2012

Terry Frechette (978) 337-0991
Switchers, Digital Cameras, Routers

Blonder Tongue Laboratories, Inc. • 2013

Jeff Smith (512) 238-6973
Encoders, Digital CATV, EdgeQAM/IP

Boxx Communications • 2012

Mark Walker (310) 287-1285
HD Wireless Video Transmission

Bracke Manufacturing LLC • 2012

Patra Largent (949) 756-1600
RF & Microwave Components

Broadcast Electronics Inc. • 1978

Tom Beck (217) 224-9600
Radio Equipment Manufacturer

Broadcast Microwave Services Inc. • 1997

Jim Kubit (805) 581-4566
Manufacturer, Transmitters,
Receivers, Antenna Systems

Broadcast Supply Worldwide • 1986

Shannon Nichols (800) 426-8434
Audio Broadcast Equipment Supplier

Broadcasters General Store • 2004

Buck Waters (352) 622-7700
Broadcast Audio Video Distributor

Canon USA Inc. • 1985

Larry Thorpe (201) 807-3300,
(800) 321-4388
Broadcast Lenses & Transmission
Equipment

Cavell, Mertz & Associates Inc. • 2011

Gary Cavell (703) 392-9090
Consulting Services

Chyron Corporation • 2013

Kieran Foster (905) 330-8902
Broadcast Graphics Solutions

Comark • 2013

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

Comrex Corporation • 1997

Chris Crump (978) 784-1776
Audio CODECS & Telephone
Interface Products

Comsearch • 2004

Tim Hardy (703) 726-5651
Frequency Coordination Services

Content & Communications World • 2006

Michael Driscoll (203) 371-6322
HD World, 3D World and SATCON

Contentual Electronics Corporation • 1976

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

Davicom, Division of Comlab, Inc. • 2014

Guy Fournier (418) 682-3380
Site Remote Controls

Dialight Corporation • 2006

US Headquarters (732) 919-3119
FAA Obstruct. Lighting, L.E.D. Based

Dielectric Communications • 1995

Cory Edwards (207) 655-8131
TV & FM Transmission & Cellular Cord

Digital Alert Systems, LLC • 2005

Bill Robertson (585) 765-1155
Emergency Alert Systems

DoubleRadius, Inc. • 2012

Jeffrey Holdenrid (704) 927-6085
IP Microwave STL

DSI RF Systems, Inc. • 2010

Judy Mueller (732) 563-1144
RF Service/Installation/Products

du Trell, Lundin & Rackley, Inc. • 1985

Jeff Reynolds (941) 329-6000
Consulting Engineers

DVEIO - 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 (503)
662-7553
New & Rebuilt Transmitting Tubes

Elektronika America Inc. • 2010

Maria Quintero (305) 592-4506
High Efficiency FM/TV Transmitter &
Exciters

Emerson Network Power/Avocent • 2014

George Morgan (917) 592-0956
Avocent High Performance KVM

ENCO Systems Inc. • 2003

Kenneth Frommert (800) 362-6797
Digital Audio Automation & Delivery

ERI - Electronics Research • 1990

David White (812) 925-6000
Broadcast Antennas, Transmission
Line, Filters/Combiners, Towers and
Services

Federal Communications Compliance LLC. • 2012

Jim Purther (202) 670-4322
FCC Public File Compliance

Floral Systems • 2008

Ashley Condon(352) 372-8326
Television Broadcast Automation

FOR-A Corporation of America • 2013

Adam Daniul (305) 773-7608
Innovation in Video and Audio Tech.

Fujinon, Inc. • 1986

Thom Calabro (973) 633-5600
Broadcast & Communications Prod.

GatesAir • 1977

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

Geppo International/General Cable • 1995

Joe Zajac (847) 795-9555
Audio, Video Cable Products

Graham Brock, Inc. • 2012

Marilyn Matheny (912) 638-8028
Technical Consultation - Radio/TV

Heartland Video Systems, Inc. • 2011

Dennis Klas (920) 893-4204
Systems Integrator

High Resolution Systems • 2011

Drew Taylor (888) 742-7690 ext. 108
Systems and Show Control

Image Video • 1997

Zach Wilkie (416) 750-8872 ext. 228
Under Monitor Tally Display Systems,
Monitor Design and Manufacture

Broadcast Equipment

Inovonics Inc. • 2012

Lukas Hurwitz (831) 458-0552
Radio Broadcast Equipment

Integrated Microwave Technologies • 2009

Elena Waldhuber (908) 852-3700
Microwave Video Transmission and
Receive Systems

International Datacasting Corp. • 2012

Rudi Polednik (613) 596-4120 ext.
2222
Media-aware Content Delivery

JAMPRO Antennas Inc. • 2011

Alex Perchevitch (916) 383-1177
DTV/DVBT & HD Radio-IBOC Solu.

JVC Professional Video Products • 2014

Lon Mass (973) 317-5117
Professional Video Products

Ka You Systems • 2011

George Gimourginas (301) 585-4302
Audio, Video, IP - Satellite

Kathrein Inc., Scala Division • 1985

Michael W. Bach (541) 779-6500
Antennas for Broadcasting & Comm.

L-3 Communications Electron Devices • 2003

Steve Blik (570) 326-3561, ext. 229
Tubes, Power

Latakoo Inc. • 2011

Paul Adrian (214) 683-0791
Internet Video Distribution

LBA Technology Inc. • 2002

Javier Castillo (252) 757-0279
AM/MW Antenna Equipment &
Systems

LYNX Technik • 2007

Steve Russell (661) 251-8600
Broadcast Terminal Equipment
Manufacturer

Markertek Video Supply • 2002

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

Maxell Corporation of America • 1991

Patricia Byrne (973) 653-2423
Data/Broadcast Video Media

Micronet Communications Inc. • 2005

Jeremy Lewis (972) 422-7200
Coordination Services / Frequency
Planning

Microwave Video Systems • 2011

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

Middle Atlantic Products • 2005

David Amoscato (973) 839-1011
Equipment, Mounting, Solutions

MoreCom Inc. • 2009

Kyle Moorehead (763) 533-5535
Networking & AV Construction

Moseley Associates Inc. • 1977

Dave Chancey (805) 968-9621
Digital STLs AM/FM/TV

MusicMaster • 2014

Shane Finch (352) 351-3625
Advanced Music Scheduling Sol.

Myat, Inc. • 2013

Dennis Heymans (201) 684-0100
Transmission Line, Filters, Combiners

National Association of Broadcasters • 1981

(202) 429-5340
Industry Trade Association

National Football League • 1999

Ralph Beaver (813) 282-8612
Game Day Coordination Operations

Nautel Inc. • 2002

Jeff Welton (877) 662-8835
Radio Broadcast Transmitter
Manufacturer

Nemal Electronics Int'l Inc. • 2011

Benjamin L. Nemser (305) 899-0900
Cables, Connectors, Assemblies and
Fiber Optic

Neutrik USA, Inc. • 2012

Kathy Hall (704) 972-3050
Ruggedized Optical Fiber Systems

NewBay Media • 2013

Thomas Leader (212) 378-0438
Publisher of Broadcast Magazine

Orban • 2011

David Rusch (480) 403-8300
Audio Processing AM/FMTV

Pacific Radio • 2013

Josh Phillips (818) 556-4177
Cables, Connectors, Tools, Racks

Pasternack Enterprises • 2001

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

Potomac Instruments Inc. • 2012

Guy Berry (301) 696-5550
RF Measurement Equipment
Manufacturer

ProAudio.com - A Crouse-Kimzey Co. • 2008

Mark Bradford (800) 433-2105 ext.
560
Proaudio Broadcast Equipment Distri.

Progressive Concepts • 2013

Sara Enriquez (630) 736-9822
FM & LPFM Radio Broadcast Equip.

Propagation Systems Inc. - PSI • 2010

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

Quintech Electronics and Communications Inc. • 2002

Paul Campagna (724) 349-1412
State-of-the-art RF Hardware
Solutions

QVC • 2011

Kevin Wainwright (484) 701-3431
Multimedia Retailer

Radio Frequency Systems • 2013

Martin O'Donohue +61 3 9751 8464
Broadcast Antenna Systems

RCS • 2003

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

RDL • 2004

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

RF Specialties Group • 2008

www.rfspecialties.com
Everything from the Microphone to
the Antenna

Richland Towers • 2001

Ryan Willaman (813)579-4239
Tower Owner/Management

Rohde & Schwarz • 2003

Dave Benco (724) 852-1332
Broadcast Transmitters, Test &
Measurement

Rohn Products • 2013

Mark Allen (309) 566-3000
Towers and Poles

Ross Video Ltd. • 2000

Darren Budrow (613) 228-0688
Manufacturer, Television Broadcast
Equipment

Sage Alerting Systems Inc. • 2010

Gerald LeBow (914) 872-4069 ext.
210
Emergency Alert Systems Products

SEG • 2014

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

Shively Labs • 1996

Dale Ladner 888-SHIVELY
FM Antennas & Combiners

Shure Incorporated • 2012

Bill Ostry (847) 600-6282
Microphones, Wireless Systems,
Headsets

Sierra Automated Systems and Engineering Inc. • 2011

Al Salci (818) 840-6749
Routers, Mixers, Consoles, Intercoms

Sigmat • 2008

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

Signiant • 2012

Steve Gillen (781) 221-4000
Signiant Content Delivery Software

Snell Inc. • 1995

John Shike (818) 556-2616
Video Equipment Manufacturer

Solid State Logic • 2014

Steve Zaretsky (212) 315-1111
Digital Audio Consoles/Routers

Staco Energy Products Co. • 2010

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WOSU Chief Engineer, Ling Ling Sun works to get a production feed to a client.

Our member *In the Circle* this issue is perhaps one of the more unique we've ever profiled. Ling Ling Sun is Chief Engineer at WOSU TV, the public broadcast station in

Columbus, Ohio located at the Ohio State University. She grew up in Harbin, China and always had curiosities about technology but at a time when a cultural revolution was being quashed. The push for industry and new technology only had a resurgence when she was ready to go to college. Sun knew the concept of television, but had never watched its programming until she visited a relative in Beijing who owned a television. She was 18 years old at the time. She says, "Television was so new then, it was so Hi-Tech when the time <came> I was ready to go to college. I picked Broadcast Institute when I found out there <was> actually a college teaching broadcast."

Sun earned a degree in Electronics Engineering from Beijing Broadcast Institute. She returned to Harbin and became deputy chief of the transmitter division of the provincial television station when color broadcasts had just started in the area.

After moving in the 1990's to the United States, when her husband began studying for a PhD at Washington State University, she landed a broadcast technician job at the university's station, KWSU. A television broadcast engineer there, DeeAna Bell, taught Sun how to overhaul a Sony 3/4" tape machine. That led her to begin to develop her skills in master control and production fields. Sun says, "I have such warm feeling when thinking about her. She opened a door for me when I was looking for it. I hope many of us can do the same to other younger engineers to help them grow."

Sun joined the SBE in 2012 and is a member of Chapter 52 in Columbus. She says a rewarding aspect of her membership is attending local chapter events and talking with her peers. She enjoys finding out someone there has a solution for a technical problem that she's seeking or vice versa. Sun volunteers as a member of the national SBE Education Committee and says that gives her a sense of responsibility that her work will positively impact the younger generation of engineers in our field.

She says most people don't know that she started her career as an RF engineer, maintaining microwaves and then TV transmitters. She says, "I still remember it took me a while to learn how to correctly apply my strength to pull out BIG transmitter vacuum tube not bending its contact finger stock." Sun says her hobby is learning the language, American culture and technology. Asked what she likes most about her job, she said, "What I do makes a difference. The difference has a direct impact to the community I serve, which gives me a purpose to continue to do my best." ●

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Robert Hoover, PE, Potomac, Md.
Robert Lee, Jr., Costa Mesa, Calif.
Dan Makinster, Morgan Hill, Calif.

MEMBERS ON THE MOVE



Jerry Brown, CPBE, is now President and COO at Icon Media Holdings, Inc., Raleigh, N.C.

Carl Cuforth is now Director of Broadcast, AV, Media, MetLife Stadium at Metlife Stadium

William Hamilton, CBT, is now Chief Engineer at WBUW-TV, Madison, Wis.

Hal Hostetler, CPBE, has been named Senior Field Engineer at Roland, Schorr & Tower in Tucson, Ariz.



Louis Libin has been named Executive Director of the Advanced Television Broadcasting Alliance, Washington, D.C.

George Maier, CPBE, is now Eastern Regional Engineering Manager at OTA Broadcasting.



Jason Ornellas, CRO, is now Chief Engineer at CBS Radio, Sacramento, Calif.



RJ Russell, CPBE, is now Director of Engineering at Journal Broadcast Group, Tucson, Ariz.

Brian Szewczyk of Quincy, Ill. is now Regional Sales Manager at GatesAir.

Timothy White is now Transmission Service Support Engineer at GatesAIR, in Quincy, Ill.

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

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A snapshot in time

In the early 1990s, the SBE entered into its first sharing agreements with broadcast engineering associations in other countries. Here, (from left) Kim Kyung Ho, President of the Korean Broadcast Engineers and Technicians Association (KOBETA) in Seoul, Richard Farquhar, SBE President and Chuck Kelly (far right), SBE International Committee Chairman, gather after the two presidents had signed an agreement to exchange information and cooperate with each other on matters of like interest. This took place on October 3, 1991 at the George R. Brown Convention Center, during that year's SBE National Convention in Houston, Texas. (The man second from right is unidentified.)



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