

**SBE****JUNE  
2007**

Volume 20, Number 3

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BIMONTHLY PUBLICATION OF THE SOCIETY OF BROADCAST ENGINEERS

**Chapter 20, Pittsburgh to  
host SBE National Meeting**

**T**he 2007 National Meeting of the Society of Broadcast Engineers will be hosted by Chapter 20 of Pittsburgh on October 10-11 as part of their annual regional convention. Chapter 20 has presented a regional convention for more than 30 years, serving the members and broadcast engineering community of Western Pennsylvania and near-by regions. For the first time, the Chapter 20 Regional Convention will open with exhibit hours the night before the traditional full-day program. The exhibition will continue on October 11th, along with the presentation of a number of technical papers.

The SBE National Meeting and Chapter 20 Regional Convention will be held at the Radisson Hotel and ExpoMart, located in Monroeville, an eastern suburb of Pittsburgh. The ExpoMart hosts many tradeshows each year while the Radisson Hotel, which is attached to the ExpoMart, offers ample lodging, meeting and dining facilities.



SBE members and guests attended the 2006 SBE National Awards Dinner, the highlight event of the SBE National Meeting.

The schedule for the SBE National Meeting includes the fall meeting of the Board of Directors from 6:00 pm to 10:00 pm on Wednesday, October 10. Meetings of the

See **NATIONAL MEETING** on page 21

**SBE, Focal Press to publish  
first books jointly**

**I**n 2006, the Society of Broadcast Engineers named Focal Press, a division of Elsevier Publishing, as the official publisher for the Society. SBE's objective is to bring more technical educational material to members and the industry. The partnership with Focal Press, a leader in technology publishing for more than 60 years, is to use their editing, production and marketing resources and expertise, along with the collective knowledge and expertise the Society has

available through its membership, to achieve that objective. SBE will work with Focal Press to develop relevant topics and arrange many of the authors.

During the SBE Membership Meeting on April 17 in Las Vegas, SBE President, Chriss Scherer, CPBE CBNT and Focal Press Senior Acquisitions Editor, Angelina Ward, announced the first three co-branded SBE/Focal Press publications would be released by

See **SBE** on page 21

*Due to recent changes in postal regulation, the Signal is now coming to you folded. Simply unfold to reveal all of the regular content.*

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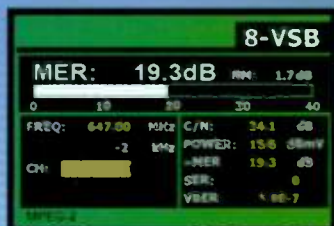
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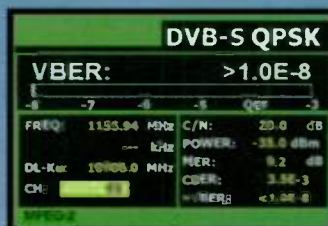
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*Radio magazine • Overland Park, Kan. • cscherer@sbe.org*

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**James T. Bernier, Jr., CPBE, CBNT, Turner Entertainment Networks, TBS, Inc.**  
*Atlanta, Ga. • jim.bernier@sbe.org*

**Andrea B. Cummis, CBT, CTO, American Desi TV**  
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*San Francisco, Calif. • dericksen@h-e.com*

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*Charlotte, N.C. • ted.hand@wsoc-tv.com*

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*Tucson, Ariz. • hhh4@kvoa.com*

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**NATIONAL STAFF**

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

**Megan E. Clappe, Certification Director**  
*mclappe@sbe.org*

**Whitney L. Allen, Communications Manager**  
*wallen@sbe.org*

**Scott Jones, Database Manager**  
*sjones@sbe.org*

**Debbie Hennessey, Executive Assistant**  
*dhennessey@sbe.org*

**Carol S. Waite, Certification Assistant**  
*cwaite@sbe.org*

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# SBE at NAB2007



Members participate in the open forum during the SBE Membership Meeting at NAB2007. The conference took place from April 14-19 in Las Vegas.



**LEFT:** George Maier of Microwave Radio Communications announces his company's contribution to the Ennes Trust Scholarship Fund during the SBE Membership Meeting. **RIGHT:** Members enjoy the hors d'oeuvres during the SBE Member Reception, sponsored by Turner Broadcasting Systems/CNN.



Board member Chris Tarr, CBRE, CBT, CBNT (far right) works at the SBE booth while members browse the merchandise.



Angelina Ward of Focal Press and SBE President Chris Scherer announce the first three joint SBE/Focal Press books.



Close to 200 members participated in the annual spring SBE Membership Meeting.

For more on NAB2007,

see **AN SBE LOOK BACK TO NAB2007** on page 15

# Candidates announced for National Officer, Director Seats

**J**ames T. Bernier, Jr., CPBE, CBNT, Director of Maintenance, Design & Engineering for Turner Entertainment Networks, TBS, Inc., Atlanta, Ga. and chairman of the SBE Nominations Committee, has announced the list of candidates for the 2007 election of SBE national officers and directors.

The SBE Nominations Committee has the responsibility of presenting a list of qualified candidates for the offices of national president, vice president, secretary and treasurer. They also submit a list of qualified candidates for six available director seats that are contested each year. Candidates must be SBE certified at an engineering level and be members in good standing. They agree to participate in meetings of the Board and, if an officer or appointed by the President, meetings of the Executive Committee. Each member of the Board is elected on an "at-large" basis and represents the interests of the entire membership.

Serving with Bernier on the Nominations Committee were SBE members Ralph Beaver, CBT, President & CEO, Media Alert, LLC, Tampa, Fla. and Larry J. Wilkins, CPBE, AMD, CBNT; Assistant Director of Engineering, Cumulus Broadcasting, Prattville, Ala.

Terms for SBE officers are for one year. The president and vice president are limited to no more than two successive terms while the secretary and treasurer are limited to no more than four successive terms in office.

In addition to the four officers and immediate past president, there are 12 other members that comprise the Board of Directors. Six of those seats are contested each year. Director terms are two years in length and are limited to no more than three successive terms. No individual may serve more than a total of 10 consecutive years on the Board and as an officer, combined. Time spent on the Board as immediate past president does not count toward the 10-year maximum.

Officer candidates for the 2007-2008 term include:

## PRESIDENT

Barry Thomas, CPBE, CBNT; Vice President of Engineering-Radio, Lincoln Financial Media, Atlanta, Ga.



Barry Thomas, CPBE, CBNT

## VICE PRESIDENT

Vincent A. Lopez, CEV, CBNT; Director of Engineering, WSYT/WNYS TV, Syracuse, N.Y.



Vincent A. Lopez, CEV, CBNT

## SECRETARY

Ted Hand, CPBE, 8-VSB; Chief Engineer, WSOC-TV, WAXN-TV, Charlotte, N. Car.



Ted Hand, CPBE, 8-VSB

## TREASURER

Ralph Hogan, CPBE, CBNT; Assistant General Manager, Engineering Services, Washington State University, Pullman, Wash.



Ralph Hogan, CPBE, CBNT

The Nominations Committee has assembled a slate of 8 candidates for the six available board seats. All candidates run on an at-large basis. The six candidates who receive the most votes will be elected. In alphabetical order, the candidates are:

- Cris Alexander, CPBE, AMD; Crawford Broadcasting Company, Denver, Colorado
- Jon Bennett, CPBE, CBNT; Director of Engineering-Richmond, Cox Radio, Inc., Richmond, Va.
- Andrea Cummis, CBT, CTO; Sr. Vice President, Engineering and Technology, American Desi TV, Roseland, N.J.
- Dane E. Erickson, P.E., CSRT, 8-VSB, CBNT; Senior Engineer, Hammett & Edison, Inc., San Francisco, Cal.
- Clay Freinwald, CPBE; Entercom, Seattle, Wash.
- Hal Hostetler, CPBE;

Senior Engineer/I.T. Director, KVOA-TV, Tucson, Ariz.

- Scott Mason, CPBE; Director of Engineering-West Coast, CBS Radio, Los Angeles, Cal.
- Jerry K. Massey, CPBE, 8-VSB, AMD, CBNT; Corporate Regional Engineer, Director of Engineering/MIS, Entercom Greenville, LLC, Greenville, S. Car.

SBE voting members in good standing may nominate other qualified members to run for officer or director positions. Nominees must agree to have their name placed on the ballot and to serve if elected. Anyone so nominated by 10 or more voting members will be added to the ballot. Nominations must be received at the National Office no later than July 16, 2007. Letters of Nomination should be addressed to Vincent A. Lopez, CEV, CBNT; SBE National Secretary and mailed to SBE, 9102 N. Meridian Street, Suite 150, Indianapolis, IN 46260. Letters may also be faxed by the deadline to SBE at (317) 846-9120.

Ballots will be mailed from the National Office to each voting member of SBE on July 30. Information about each candidate will be provided with the ballots along with a voting history of current SBE directors and officers. Completed ballots must be delivered by United States mail, overnight express or in person to the SBE National Office no later than 5 pm, EDT, Thursday, August 30, 2007. Ballots will be tabulated by a Board of Tellers that evening. Results will be announced the following day.

Installation of officers and directors will be held at the SBE Annual Membership Meeting, Thursday, October 11, 2007 in Monroeville, Pa. (Pittsburgh) as part of the SBE National Meeting, held in conjunction with the SBE Chapter 20 Regional Convention.

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# Call to action

BY **Chriss Scherer, CPBE, CBNT**

*SBE President*

**N**ow that NAB2007 is behind us, I would usually take this opportunity to recap some of the SBE news and events from the convention. There's plenty to cover, and other columns in this issue will cover the main news, so I will focus on something that happened during the convention, but was not a part of it. A major event occurred that had many people at the convention scrambling to be sure that the news was covered.

I'm referring to the tragedy that took place at Virginia Tech on April 9. While the event is tragic and many people are still struggling with understanding all the events, there is at least one item of happy news from the event that touches one of our own.

While many people lost their lives, one of the survivors is Kevin Sterne, a senior at the school and also the chief engineer of the campus radio station, WUVT-FM. Sterne was shot multiple times, and one bullet tore through his leg and pierced his femoral artery.

Sterne kept his cool and applied some knowledge that he learned as an Eagle Scout: he fashioned a tourniquet to stop the bleeding. His make-shift tourniquet was an electrical cord. A tourniquet is usually considered a last course of action in first aid, but in this

case it was the right choice. Sterne's action saved his own life.

You have probably seen the video of Sterne being carried away by four uniformed men. The orange cord on his leg is clearly visible.

Sterne underwent surgery to repair the damage, and when he awoke in recovery he asked his girlfriend how the radio station's fund-raising event was going.

Sterne's major project for the past few years has involved the station's transmitter site. There are plans to move the transmitter from its elevator penthouse location to a tower near the school, but as is usually the case with a campus station, resources and finances are limited.

As attention turned to what could be done to help Sterne during his recovery, he and his family both stated that notes of well wishes and financial donations could be made to the station in Sterne's honor.

At the same time, the SBE was considering actions that it could take on Sterne's behalf, when the details of the transmitter project came to light. Working with Clear Channel, Harris, Cumulus, Broadcast Electronics and others, the station was restored to full power, and the volunteer effort was begun to help the transmitter relocation project move forward. I'm proud to be a part of the dedicated group that donated its resources to helping one of our own.

While the effects of the activity may seem to



only benefit the station, the real benefit is felt by the entire school community. The station is reaching its full audience and will soon reach an even bigger audience. We all know the influence that local media has as a voice of the community. WUVT's community voice is now clearer than ever and helping that community to heal.

There is one negative to all this. It's unfortunate that it took a tragedy and a potentially fatal injury to a radio engineer to make us aware of the station's situation. The end result has a positive light to it, but let's learn from this lesson.

I'm sure that you know of a campus or community station near you. If you don't know of any, find out where they are. Talk to the station leaders and learn about the station and its needs.

In some cases, the station may only need a piece of equipment; in other cases, it may need an expensive part. Others may be limping along with more significant problems. Regardless, offer to help. Give something back to broadcasting. Share your skill, your knowledge or your surplus equipment with these future broadcasters. Don't wait for a tragedy to be a catalyst. Take the proactive action.

I often hear complaints that broadcast and media engineering isn't attracting young people to our field. Change that. Find the Kevin Sternes and help them discover that our industry can be a rewarding career and that the people involved in it are part of a larger community. ●

## SBE Accredited Frequency Coordinators

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

Those interested in becoming an SBE Accredited Frequency Coordinator may go to [www.sbe.org/accreditation.pdf](http://www.sbe.org/accreditation.pdf) for more information and an accreditation application. ●

### Accredited March, 2007 through May, 2007

Coordinator	Location	Affiliation
Roger Bishop	Indianapolis, IN	Colts GDC
Timothy Brusky	Green Bay, WI	

# SBE's RF Safety Training Course: *It really is necessary*

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

I really hate having my car serviced at car dealerships. I don't do it unless I absolutely have to, or if the car is under warranty and I am not going to be paying for what they do. Perhaps some of my dislike for the dealers is that the mechanics there know how to diagnose problems with the modern engine computers and I can't do it. I still have my trusty dwell meter and timing light, but I no longer use them, or my feeler gauges for gapping breaker points. I used to be able to do all that stuff, and I loved it. It was just as much fun as tuning a Yagi antenna so that it resonates precisely where I want it to.

But another reason why I don't like some dealerships' service departments is that they are always trying to sell me something besides what I took the car there for in the first place. No, I don't want to have some professional fuel injector cleaning. No, the front brake pads and rotors are not yet in need of replacement, and my transmission does not yet need flushing. I don't need a lot of stuff they tell me I need. I know enough about even modern cars to know what I have to have done and what I don't. They like to use scare tactics to get me to agree to the unnecessary work. They infer that if I don't do it, I will be left on the road, or worse. Maybe some of that work ought to be done, but I didn't like the marketing tactics.

I have always suspected that something like that was going on with RF safety training. Some of the many companies that I saw that conducted seminars (who are darn good at RF safety training, by the way) were using what looked to me like "scare tactics" to get me to sign up. I have seen references in their literature to FCC enforcement proceedings and large monetary forfeitures based on lack of RF safety training. I had seen forfeitures based on excessive measured MPE levels at certain sites, but I had not seen any issued to anyone because they lacked RF safety training and accessed transmitter sites. Maybe I missed them, or per-

haps those kinds of forfeitures will be forthcoming from FCC, but I thought the risk of FCC forfeitures was overstated. People shouldn't be browbeaten to do something, no matter how good or important it is to do it, by scare tactics.

A bit over a year ago, I wrote in this column about RF safety training, and how my friend Ray Benedict dragged me away from my client work and time sheets to an AFCEE seminar on RF safety to prove to me that broadcast engineers aren't generally doing what they need to do in the way of RF safety training. It turned out that Ray was right; it is mandatory. And I learned that from the best of authorities: Robert Cleveland, Ph.D., who until his retirement from FCC recently, was the FCC's leading expert on RF safety. Cleveland gave a great seminar on the subject and suggested as a "must-read" the IEEE C95.7-2005 Recommended Practices document on the subject of RF safety.

Cleveland, who is one of the foremost experts on RF Safety anywhere, said that RF exposure training is now and has been mandatory, and that the failure to have it, for people who access transmitter sites, turns what otherwise would be a "controlled" RF environment into an "uncontrolled" environment. That got SBE moving toward setting up some high-quality RF Safety training. Elsewhere in this issue of the Signal you will find John Poray's article containing all the details about this new program. It is worth a second look here, though, at why you ought to consider this new SBE program very soon. Here's the deal:

FCC regulations, at Section 1.1310, provide for two sets of Maximum Permitted Exposure (MPE) limits. You recall that the MPE limits are determined in relation to the human resonance region, which is of most concern in the 30 to 300 MHz range. The first MPE limit is for occupational exposure levels, in so-called "controlled" environments. The MPE levels are higher in these environments, because members of the "general public" (i.e. people who are unaware of the safety issues) are not allowed access to them. The other environ-

ment is the "uncontrolled" environment, which includes (but is not limited to) areas that are accessible by the general public. The MPE in an uncontrolled environment is 20 percent of the MPE for a controlled environment.

A controlled environment is, in effect, an area in which those who access it are covered by an RF safety program. In such an environment, all of the persons accessing the area are "qualified workers." A qualified worker is a person who has completed RF safety training. If people enter a controlled environment who have not had RF safety training, the environment becomes an uncontrolled environment, and is subject to the much lower MPE levels.

The FCC footnote to the table of MPE levels in Section 1.1310 of the Commission's rules says that "Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided that those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure." Therefore, qualified workers, those who are able to enter controlled environments where the more liberal RF levels are permitted, must be "fully aware" of the potential for exposure and are able to "exercise control" over that exposure. One cannot possibly be "fully aware" of the RF exposure potential or able to "exercise control" over that exposure if they have not been provided with RF safety training.

By contrast, the same FCC rule says that "General population/uncontrolled exposures apply in situations in which the general public may be exposed or in which persons that are exposed as a consequence of their employment may not be fully aware of the



potential for exposure or can not exercise control over their exposure."

How much safety training is necessary in order for a person accessing a transmitter site to be considered a "qualified worker?" The terms "fully aware" and the ability to "exercise control" are not crystal clear, but they offer some guidance. A qualified worker would obviously have received some instruction in RF safety and can as the result of that training, use equipment such as RF personal monitors and protective RF suits to control the time and amount of RF exposure and protect himself or herself.

Professional people such as electricians, roofers, plumbers, and the like who access transmitter sites to do their work very occasionally are, unless trained, not considered "fully aware" or able to "exercise control" and therefore are not considered qualified workers. Their entry into a controlled environment converts that environment (temporarily) into an uncontrolled environment.

Richard Strickland, who conducts the SBE RF Safety seminars, is a professional person who does not use scare tactics in his presentations. He is eminently qualified and we are looking forward to working with him to

provide a means for SBE members (and in fact anyone who is professionally required to enter controlled RF environments) to easily, cheaply and confidently comply with the obligations which exist for RF safety training.

If you take the SBE RF Safety course, you will be able to say that you are "fully aware" and able to "exercise control" of the RF environment in which you work. So, don't be scared into doing this. Do it because it is the right thing to do, and the responsible thing to do. ●

## 2007 SBE Membership Drive concludes

**M**ay 31 closed the 2007 annual SBE Membership Drive. Even though *The Signal* went to press prior to the Drive's end, it looks like this will again be a very successful Drive.

All current SBE Members who sponsored a new member during this year's drive will receive \$5 off their 2008 Membership Renewal for each new Regular, Associate or Sustaining member that was sponsored (up to \$25). In addition, sponsors will have their names entered into the Membership Drive Prize Drawing. The name of one newly-recruited member will also be drawn for a prize. Prize winners will be drawn on June 30.

**THANK YOU** to the following organizations who, through the donation of prizes, helped make the 2007 Membership Drive possible:

- Acrodyne
- Broadcast Electronics
- Crispin Corporation
- Kathrein Inc., Scala Division
- Middle Atlantic Products
- Moseley Associates, Inc.
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- Shively Labs
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# BAS Relocation Training adopts distance-learning model

BY David P. Otey, CPBE

**O**n March 1 of this year, AZCAR Training Systems (ATS), a unit of AZCAR USA, launched an innovative series of distance-learning workshops on digital ENG operations. Funded by Sprint Nextel, these training events are offered free of charge to every TV station (or similar entity) affected by relocation of the 2 GHz Broadcast Auxiliary Services (BAS) microwave band in the US.

What distinguishes these workshops from earlier, site-based training programs is the way the distance-learning model developed by ATS frees us from any geographic constraints on scheduling. Instead of being forced into a limited time window when an instructor and the equipment are in the market, a station's training can be scheduled according to the station's own timeline. If a station is running ahead of others in the market in getting the new gear ordered and delivered, that station can schedule its training earlier and benefit from digital operation that much sooner.

Here is how it works. Each station on the master list from Sprint Nextel is contacted by one of our coordinators. Armed with up to 28 workshops weekly (five each weekday and three on Saturday), the coordinators are able to help stations find dates and times that maximize training effectiveness while minimizing disruption to broadcast operations. Every station is offered at least two separate, two-hour workshops, plus a third if the size of the staff warrants it. Prior to a station's first workshop, we will ship enough training manuals for the total number of expected participants at that site.

When the training date and time roll around, a coordinator will call the station contact about 15 minutes before "air time" to establish the return audio link and the optional video return via web cam, using Windows Live Messenger. Note that web-cam video is used only for the return, to allow our instructors to see the participants. The instructors are seen and heard by means of a standard-definition, digital, Ku-band satellite feed on Galaxy 25. If a station lacks facilities for receiving this feed, ATS and Sprint Nextel will work to find another facility nearby where the workshop can take place.

The ATS satellite feed is unencrypted, and interested engineers are encouraged to tune in

and audit any of the workshops to get a preview of the training experience, minus the return audio and video. A schedule, showing the particular equipment complement to be used in each session, is posted at [www.azcar-training.com](http://www.azcar-training.com) and updated weekly. Visitors to the web site will also find supplemental resources like white papers, FAQ's and a form for submitting additional questions.

Because of their interactive nature, no two workshops are exactly alike. For one thing, each audience asks slightly different questions. Also, each ATS instructor (there are three) infuses his or her own style into the workshop, and may use a different complement of radios, controllers, and spectrum monitors from one session to the next depending on each station's preference. To capture this uniqueness and give stations additional training tools, we record every session on two DVD's. One remains in our archives. The other is sent to the participating station and can be used for later review or supplemental training.

So much for the logistics; what about the content? We state at the outset of each workshop that our intent is not primarily to instruct operators in the use of a particular piece of gear – although such instruction certainly does take place – but, rather, it is to allow ENG operators to see for themselves how using the current generation of digital equipment compares with operating in the more familiar, analog environment. To accomplish this objective, we demonstrate both analog and digital shot acquisition and path troubleshooting. We incorporate video of "real-world" workflows in both modes, illustrating that the only significant differences are in the way one evaluates the results when tuning in a shot. We then replicate those situations using live equipment in our studio. Central to our demonstrations is the use of new quality metrics in the receivers as well as the use of integrated spectrum monitors.

An essential element in good instructional design is that the teacher learns from the students as well as the other way 'round. So, you may ask, what have we learned? One thing I have learned is that most users of ENG equipment simply want assurance that their job skills will not become obsolete once digital microwave systems come into use. We at ATS have used that knowledge to design a training

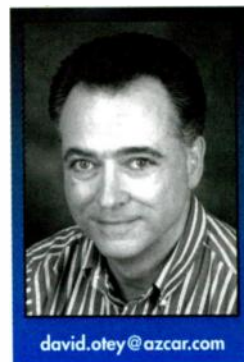
experience that reinforces what is already known while identifying new tools that make the job even easier in the digital arena. This approach to instruction is a logical extension of the user training AZCAR has long provided to customers of its systems integration services.

We have also learned that engineers at the station level appear much better-informed about D-ENG technology now than they were when the conversion first got underway. It no longer seems necessary – if it ever was – to prove the technology works. Instead, the attitude of engineers encountering digital microwave systems for the first time can be summed up by the comment I heard in a recent workshop: "Is this really as easy as we think it is?"

I believe the answer to that is a resounding "Yes!"

For more information on our Digital ENG operator workshops, please visit [www.azcar-training.com](http://www.azcar-training.com). In addition, check the web site for periodic announcements of Engineers' Q&A Sessions.

*The author, former SBE Frequency Coordination Director, is general manager of AZCAR Training Systems, a business unit of AZCAR USA ([www.azcar.com](http://www.azcar.com)). He can be reached at [david.otey@azcar.com](mailto:david.otey@azcar.com).* ●



What's your Certification Quotient?

To help you prepare for your certification exam we provide question examples from the practice tests. How do you score?

FCC rules require an operator must hold either a:

- A) General class license or a Broadcast license
- B) Restricted Radiotelephone permit or a Lifetime General Radiotelephone license
- C) Broadcast license or a Restricted Radiotelephone permit
- D) License/permit is no longer required

Question taken from SBE CertPreview. Turn to page 14 for the answer.

# SBE offers RF Safety Course for Broadcast Engineers

BY **John L. Poray, CAE**  
*SBE Executive Director*

**S**BE is looking to ramp up its educational offerings to provide members with the information and tools needed to do your jobs. The first new educational opportunity is the presentation of the SBE RF Safety Course several times this summer. The first is to be held on Wednesday, June 27 from 2 to 5:30 p.m., EDT. The course has also been scheduled for July 27 and August 2. The courses will be presented via web conference and is designed for broadcast station personnel such as chief and assistant chief engineers, transmitter site engineers, ENG and SNG maintenance personnel and management that need to have an understanding of RF safety issues and regulations. Instructing the SBE course will be noted RF safety expert, Richard Strickland of RF Safety Solutions.

This course will provide an overview of RF radiation issues for broadcast engineers and others at stations that need to access RF areas. The course will include:

- Biological effects of RF radiation and the distinct differences between RF radiation and ionizing radiation
- FCC and OSHA regulations - what they are and what you need to do to comply
- Workplace hazards
  - Transmitter Sites
  - SNG and ENG trucks
  - Remote operations (where news personnel can find problems such as on rooftops)
  - The unique issues at AM stations
- RF hazard protection equipment - you may not need it but your contractors probably will
- Signs - what they mean and what you need

The course makes use of MS Power Point and is interactive - questions can be asked at any time during the course.

Each participant will receive a course "hand-out" via e-mail prior to the course. Those who complete the course will receive a certificate of completion through the mail from the Society of Broadcast Engineers. We recommend that persons taking the SBE RF Safety Course have at least a basic knowledge of electronics and understand the concept of frequency.

Strickland founded RF Safety Solutions in 2001 after ten years as Director of Business Development for Narda Safety Test Solutions, the world's leading supplier of RF safety measurement and monitoring products. As director of the RF safety business at Narda, Strickland determined which products were developed and their performance characteristics. He

frequently functioned as program manager, as he did with the Nardalert XT RF personal monitor. He initiated the development of RF radiation training courses at Narda and has conducted courses ranging from basic employee awareness seminars to in-depth application specific courses. Audiences have included environmental health and safety professionals, engineers, technicians, attorneys, communications industry professional consulting engineers and senior managers of major corporations, government organizations, and professional groups.

In-house course clients have included the National Association of Broadcasters, National Public Radio, Sony, Motorola, NYNEX Mobile, ABC, CapRock, the U.S. Army, Bell Atlantic Mobile, Ameritech, Princo, NORTEL, Texas Instruments, and Northrup-Grumman. He has been both a featured speaker and a member of the radio frequency radiation panel at the National Association of Broadcasters, the Radio Club of America, and the International Wireless Conference and Exposition.

Strickland has provided consulting and training services to ABC Radio, ABC Television, British Aerospace, Cornell University, ESPN, Lockheed Martin Corporation, NBC, Raytheon Corporation, SpectraSite Communications, Trinity Broadcasting and the U.S. Coast Guard. He holds an MBA from the University of Massachusetts and a B.A. in Physics from Bridgewater College. He's authored more than 35 articles on RF safety, high-power amplifiers and radomes and has conducted more than 150 public and in-house training courses on RF safety and measurement. SBE is pleased to have him serve as our instructor for this course.

In order to make the course available to more areas, it's being conducted via a web conference, which will use an Internet connection for the visual portion and a telephone connection for the audio. To accommodate the anticipated interest in this course, we are encouraging SBE chapters, broadcast stations or companies to host the course at a suitable training site where local members or employees can be accommodated. For sites with more than a few participants, an LCD projector and screen will be needed with an Internet-connected computer. For the audio portion, the host will dial a toll-free number and the audio can be amplified as needed for the size of the audience. Log-in sites are very limited for the course. Since there are fixed costs for Internet and telephone connections to present the course, we have established pricing that encourages group settings.



jpokay@sbe.org

Each log-in site will be given a participant code, a web address and the toll-free telephone number (within the U.S.) to access the course.

All nine log-in ports were reserved back in mid-May for the first course on June 27. Because of the response, we have scheduled two more offerings of the same course. The first will be Wednesday, July 25 from 2 to 5:30 pm EDT. The second will be Thursday, August 2, also from 2 to 5:30 pm, EDT. We'll reserve the log-in ports on a first come, first served basis. If demand warrants, we will establish additional course offerings.

## TO REGISTER

The first step is to reserve a log-in port (no cost) by calling, (317) 846-9000, or e-mailing the SBE National Office at [RFSafetyCourse@sbe.org](mailto:RFSafetyCourse@sbe.org). Request a log-in port for either the July 25th or August 2nd course. If the log-in ports are filled for one or both courses, you can request to be placed on a waiting list. As we establish additional course offerings, those on the waiting list will get first priority for the added courses in order of receipt.

The second step is the registration for each individual participant. A registration form is available on the SBE website, [www.sbe.org](http://www.sbe.org). Each individual planning to take the course must complete the registration form and return it to the SBE National Office with payment.

**Course sites with four or more participants -  
Course Fee: \$75 per participant**

**Course sites with three or fewer participants -  
Course Fee: \$110 per participant**

To register, download and complete the registration form at [www.sbe.org/pub\\_sc.php#RFSAFE](http://www.sbe.org/pub_sc.php#RFSAFE) and e-mail to the SBE National Office at [RFSafetyCourse@sbe.org](mailto:RFSafetyCourse@sbe.org). You may also fax your registration form to SBE at (317) 846-9120.

If your facility includes an RF environment, I hope you will take advantage of this educational opportunity and involve the appropriate staff in this excellent training. ●

# FCC nukes Clarity's "Trucker TV"

BY **Dane E. Erickson, P.E., CSRTe,  
8-VSB, CBNT**

*Chairman, SBE FCC Liaison Committee*

In a clear victory for the integrity of 2 GHz TV Broadcast Auxiliary Service (BAS) spectrum, in a May 3, 2007, Order the FCC dismissed 248 Cable Television Relay Service (CARS) applications filed by Clarity Media Systems, LLC ("Clarity"), to operate fixed based stations in the shared 2,025–2,110 MHz BAS/CARS band. In February 2006 Clarity had submitted applications for an initial group of 10 "Trucker TV" base stations at its Flying J truck stops, and on January 24, 2007, had submitted applications for an additional 248 base stations for its other truck stops.

The use of the 2 GHz TV BAS/CARS spectrum for fixed base stations and for direct service to subscribers is not permitted by the Part 73 CARS rules, and so Clarity had requested waivers of Sections 78.1 (purpose), 78.11 (permissible service), 78.13 (eligibility for license), 78.18(a)(6) (frequency assignments), 78.101 (power limitations), 78.103(e) (emissions and emission limitations) and 78.107 (equipment and installation).

The rule waivers were opposed by SBE, ABC, Capitol Broadcasting Company, Centrex Television, Duhamel Broadcasting Enterprises, Fox, Hubbard Broadcasting, Meredith Corporation, McGraw-Hill Broadcasting, MSTV/NAB, NCTA, Red River Broadcast Company, The Dispatch Broadcast Group, and by NASA.

The Commission's Order found that Clarity's proposal "does not serve the purpose of the Part 78 CARS Rules," that Clarity's demonstration operations at Frazier Park, Calif.; North Salt Lake City, Utah; and Provo, Utah, under experimen-

tal license WD2XPK, "were not adequate" to demonstrate no interference to co-channel electronic news gathering (ENG) operations. The Commission found that the demonstrations failed to include measurements of the Trucker TV signals at nearby ENG receive-only (ENG-RO) sites, and failed to include tests of digital ENG signals.

As pointed out by SBE and others, the Commission agreed that Trucker TV interference to BAS and CARS operations "would look like noise with no identifying characteristics." The SBE comments had also pointed out the risk of "me too" waivers by others, a point that the Commission agreed with by noting in the Order that "other similar service waivers could come from other chains of truck stop travel plazas, RV parks, campgrounds, etc., adding hundreds and perhaps thousands of potential new users which would further restrict viability of the 2 GHz band for ENG use."

The Order also faulted Clarity for failing to demonstrate "good cause" for its requested rule waivers. The Commission found that Clarity had failed to demonstrate that "it has no reasonable alternative" to using the 2 GHz TV BAS band. As was pointed out by SBE, the Order noted that "Clarity could purchase spectrum at auction, pursue using unlicensed spectrum, install cable at its truck stops, or negotiate spectrum leases."

SBE had committed a large amount of its volunteer resources to oppose Trucker TV; there were a total of four detailed SBE opposition filings over an eighteen-month period (all are posted on the SBE web site). Additionally, SBE members participated in the field demonstration tests concocted by Clarity, and informa-

tion from this effort figured prominently in the SBE rebuttal filings. SBE members Howard Fine and Jerry Kalke deserve special praise for their inputs to the SBE filings.

Rarely has an FCC decision so clearly shot down a truly bad idea. However, there is always the possibility of a Petition for Reconsideration by Clarity, so SBE, and other parties interested in the integrity of BAS spectrum, will need to remain vigilant.

## **SPRINT NEXTEL REVERSES ITS POSITION OPPOSING RM- 11308**

In a further bit of good news, at the April 17 Frequency Coordinators' meeting at the NAB spring convention, representatives of Sprint Nextel indicated that Sprint Nextel would no longer oppose RM-11308, the SBE Petition for Rulemaking to allow TV Pickup licensees to enter the location(s) and height(s) of their ENG-RO sites into the Universal Licensing System (ULS), as part of their TV Pickup license record. SBE originally proposed this long-needed change to the ULS in its ET Docket 01-75 comments. Strangely, the FCC dismissed those comments as "outside the scope of the rulemaking." SBE then filed a Petition for Reconsideration, pointing out that the scope of the ET Docket 01-75 rulemaking was a very broad updating of the Part 74 BAS rules and the harmonization of those rules, where possible, with the Part 101 Private Operational Fixed Service rules. The SBE petition therefore argued that the ENG-RO site data in the ULS portion of its comments were entirely within the scope of the rulemaking. But, to no avail: In the October 2003 ET 01-75 Memorandum, Opinion and Order the Commission re-



affirmed its position that the SBE proposal was outside the scope of the rule-making. The Commission stated that SBE could either work informally with Wireless Telecommunications Bureau (WTB) staff to accomplish this change to the ULS, or submit a Petition for Rulemaking. For approximately three years SBE then tried to convince WTB that the ULS should be so modified (reminding WTB staff that the "U" in ULS supposedly stands for "universal"); all without results. So, in 2005 SBE filed a Petition for Rulemaking to amend the ULS to allow TV Pickup stations to document their ENG-RO sites, and this filing became RM-11308. Unfortunately, RM-11308 was then opposed by Sprint Nextel, because it saw a linkage to the SBE WT Docket 04-356 comments regarding service rules for 2.1 GHz Advanced Wireless Services (AWS) stations. In its rebuttal filing, SBE pointed out that there was no linkage between the two rulemak-

ings, and RM-11308 was needed, and made sense, regardless of the Commission's decision in the WT 04-356 rule-making, where SBE proposed a tighter out-of-band emission (OOBE) mask for 2.1 GHz AWS base stations, and a 0.5-km "keep away" distance to existing ENG-RO sites. Unfortunately, more than two years after the close of reply comments, a Report & Order to the 04-356 rulemaking has yet to be issued, so neither SBE nor AWS auction winners know whether a tighter emission mask, and/or a keep-away distance, will be adopted. This is problematic, now that the AWS auctions have been completed and AWS auction winners are in the process of deploying AWS systems, so they can start generating revenue to offset their pricey winning bids (for example, the T-Mobile USA winning bid for the New York-Newark Cellular Market Area (CMA) was \$396 million, and \$255 million for the Chicago CMA). ●

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WHO CAN WE HIRE FOR THAT TECHNICAL POSITION?*

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### Society of Broadcast Engineers, Inc.

## 2006 AUDITED FINANCIAL STATEMENTS

**Combined Statement of Assets, Liabilities  
and Net Assets – December 31, 2006**

### ASSETS:

Cash and cash equivalents	\$330,093
Investments	801,713
Prepaid Expenses	0
Office Equipment	25,552
Intangible Assets	13,281
<b>Total Assets:</b>	<b>\$1,170,639</b>

### LIABILITIES & NET ASSETS:

<b>LIABILITIES:</b>	<b>\$ 0</b>
<b>NET ASSETS:</b>	<b>\$1,170,639</b>

**TOTAL LIABILITIES & NET ASSETS  
\$1,170,639**

## 2006 AUDITED REVENUE & EXPENSE STATEMENT\*

### INCOME:

Membership Fees & Support	\$348,828
National Meeting	26,808
Certification	73,226
Promotion	1,918
Book Sales	18,455
Directory & Newsletter	80,164
Frequency Coordination	33,449
Education Services	29,728
Interest & Dividend Income	55,936
Net Realized/Unrealized Gains from Investments	28,746
Miscellaneous Income	12,732
<b>Total Income:</b>	<b>\$709,990</b>

### EXPENSES:

Member Services	\$275,114
Chapter Rebates	36,716
National Meeting	22,084
Publications/Communications	102,607
Certification	80,929
Education	24,870
Frequency Coordination	9,820
Administration	57,674
Amortization	823
Depreciation	29,327
<b>Total Expenses:</b>	<b>\$639,964</b>

**CHANGE IN NET ASSETS: \$70,026**

**TRANSFER OF NET ASSETS^: \$59,440**

**TOTAL CHANGE IN NET ASSETS: \$129,466**

**NET ASSETS 12/31/2005: \$1,041,173**

**NET ASSETS 12/31/2006: \$1,170,639**

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

^ Transfer of Net Assets is from 2005 Special Projects.

# SBE Digital Radio Specialist announced

BY **Ralph Hogan**

*SBE Certification Committee*

Due to some recent changes in the FCC rules recognizing the viability of digital radio and officially endorsing multicasting, the SBE National Certification Committee is proud to announce the next specialist certification program, Digital Radio Broadcast (DRB). This certification will cover one's knowledge of digital radio broadcasting including audio processing, studio to transmitter links and transmission of multi-channel digital program streams. The official roll out of the DRB Specialist Certification will be during the National Meeting in conjunction with SBE Chapter 20's regional convention, Oct. 10-11, 2007 in Monroeville, Pa.

The certification will include knowledge of importers, exporters, the various methods of combining analog and digital transmitters to antenna systems, delivery of digital audio signals and data to transmitter sites, transmitter emission mask

measurements, AM and FM FCC rules, monitoring of digital signals, and bandwidth requirements for AM antenna systems.

Digital Audio Broadcasting is a service that will enhance the broadcast licensee's ability to not only better serve the public, but to provide means of additional revenue in this highly competitive industry. Station owners will be relying on those technicians and station engineer's knowledge and expertise to implement this service for their company. With this certification, the engineer or technician carries the credentials needed for successful installation of DAB. In this way, your value to your employer further proves your important role in the facility.

By becoming Specialist certified, you can assure your manager that you are up to date on the latest technology. Digital Audio Broadcasting is a bit different from traditional analog services. Being able to certify your knowledge of the

entire system, rather than just a single part, will bring confidence to both you, and station management.

To apply for the Digital Radio Broadcast specialist certification, you must currently hold certification at the Broadcast Engineer, Senior Broadcast Engineer or Professional Broadcast Engineer Certification level. The exam will consist of 50 multiple-choice questions and one essay question. The essay will be worth 20 points. In the near future, an SBE CERT-preview for this test will be available. To obtain an application for the Digital Radio Broadcast specialist certification, go to [www.sbe.org/specialist\\_cert.php](http://www.sbe.org/specialist_cert.php) on the SBE website or contact the SBE National Office. ●



Ralph Hogan



## CERTpreview

Certification Sample Test Software

The SBE National Certification Committee has updated its sample test software for the SBE certification examinations. **SBE CertPreview** now comes on a CD-ROM and operates in Windows. Each sample test contains 100 to 150 questions typical of those found on an actual exam. Correct answers move you to the next question; wrong answers stop to give you the

right answer. Each CD also includes suggested reference materials for further study and an application for the actual exam. **SBE CertPreview** can be purchased for the following certification levels (check the level[s] you want to purchase):

**\$27 per test**

*add \$3 per CD\*  
for shipping/handling*

\*Multiple tests can be purchased on one CD

- |   |  |
|---|--|
| <input type="checkbox"/> Certified Broadcast Technologist (CBT)         | <input type="checkbox"/> Certified Broadcast Networking Technologist (CBNT)    |
| <input type="checkbox"/> Certified Audio Engineer (CEA)                 | <input type="checkbox"/> Certified Video Engineer (CEV)                        |
| <input type="checkbox"/> Certified Broadcast Radio Engineer (CBRE)      | <input type="checkbox"/> Certified Senior Broadcast Radio Engineer (CSRE)      |
| <input type="checkbox"/> Certified Broadcast Television Engineer (CBTE) | <input type="checkbox"/> Certified Senior Broadcast Television Engineer (CSTE) |
| <input type="checkbox"/> AM Directional Specialist (AMD)                | <input type="checkbox"/> 8-VSB Specialist (8-VSB)                              |

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Card Holder's Signature: \_\_\_\_\_

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# 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®)

Dennis Christensen, Sammamish, WA - Chapter 16  
Michael Hill, Lacey, WA - Chapter 16  
Steve Rowell, Lake Mary, FL - Chapter 42

## CERTIFIED BROADCAST RADIO ENGINEER (CBRE®)

Lee Young, Jacksonville, FL - Chapter 7

## CERTIFIED BROADCAST TELEVISION ENGINEER (CBTE®)

Blake Richert, Trafford, PA - Chapter 20

## CERTIFIED SENIOR TELEVISION ENGINEER (CSTE®)

Randolph Pratt, Crowley, TX - Chapter 67  
Richard Stephens, Evinton, VA - Chapter 78

## CERTIFIED BROADCAST NETWORKING TECHNOLOGIST® (CBNT®)

Paul Reynolds, San Antonio, TX - Chapter 69

## 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®)

Frederick Ervin, Canonsburg, PA - Chapter 20  
Sim Kolliner, Holly Springs, NC - Chapter 93  
William Sacks, Luthian, MD - Chapter 37

## SBE CERTIFIED SCHOOL COURSE COMPLETION

## CERTIFIED BROADCAST TECHNOLOGIST® (CBT®)

**Cleveland Institute of Electronics**  
Aaron Savage, Hilo, HI - Chapter 63

## Defense information school

William Dobbs, Millersville, MD - Chapter 132  
Stephen Lloyd, Fort Meade, MD - Chapter 132  
Cynthia Thornton, Gunbrills, MD - Chapter 132

## FEBRUARY EXAMS

"Thank You" CHAPTER CERTIFICATION CHAIRS FOR YOUR ASSISTANCE

## CERTIFIED SENIOR TELEVISION ENGINEER (CSTE®)

William Gillman, Salt Lake City, UT - Chapter 62

John Lloyd, Jr., Sandy, UT - Chapter 62  
Frank Mengel, Eagle River, AK - Chapter 89  
Melvin Parkes, Salt Lake City, UT - Chapter 62  
Erwin Roman, Millington, TN - Chapter 103  
Kenneth Tankel, Malvern, PA - Chapter 18

## CERTIFIED SENIOR RADIO ENGINEER (CSRE®)

Charles Bullett III, North Bethesda, MD - Chapter 37  
Douglas Irwin, Issaquah, WA - Chapter 15  
James Leifer, Boynton Beach, FL - Chapter 88  
Frank Mengel, Eagle River, AK - Chapter 89  
William Sacks, Hollywood, MD - Chapter 37  
Kenneth Tankel, Malvern, PA - Chapter 18

## CERTIFIED AUDIO ENGINEER® (CEA®)

Errol McKinson, Laurel, MD - Chapter 132

## CERTIFIED AM DIRECTIONAL SPECIALIST (AMD)

Gregory Armstrong, Columbus, OH - Chapter 52  
Ljube Georgievski, Clermont, FL - Chapter 42  
Kevin Kidd, Lawrenceburg, TN - Chapter 111  
Arthur Reis, New Lenox, IL - Chapter 26  
Mark Simpson, Tucson, AZ - Chapter 32

## CERTIFIED 8-VSB SPECIALIST (8-VSB)

Mark Fehlig, Snellville, GA - Chapter 5

## CERTIFIED BROADCAST NETWORKING TECHNOLOGIST® (CBNT®)

Shane Roth, Las Vegas, NV - Chapter 128

## EXAMS HELD AT NAB2007

## CERTIFIED BROADCAST TECHNOLOGIST® (CBT)

Scott Anderson, Eden Prairie, MN - Chapter 17  
Randy Lee, Waco, TX - Chapter 67

## CERTIFIED SENIOR RADIO ENGINEER (CSRE®)

Michael Golchert, Pelham, AL - Chapter 68

## CERTIFIED 8-VSB SPECIALIST (8-VSB)

William Gillman, Salt Lake City, UT - Chapter 62

## CERTIFIED BROADCAST TELEVISION ENGINEER (CBTE®)

Chris Bright, Mound, MN - Chapter 17  
Tracey Liston, Streetsboro, OH - Chapter 70  
Dan Stoe, Junction City, OR - Chapter 76

## CERTIFIED BROADCAST NETWORKING TECHNOLOGIST® (CBNT®)

Justin Hermanek, Las Vegas, NV - Chapter 128  
Brad Jurens, Forest City, IA - Chapter 17

## CERTIFIED TELEVISION OPERATOR® (CTO®)

Megan Silverstein, Glendale, CA

## CERTIFIED BY LICENSE

## CERTIFIED BROADCAST TECHNOLOGIST® (CBT)

Michael Brown, Little Rock, AR  
Jeff Carter, Fairmont, GA - Chapter 5  
Lynn Durham, Pickerington, OH - Chapter 52  
James Godfrey, Kent, OH - Chapter 70  
Jeremy Hall, Marcellus, MI - Chapter 102

Matthew Jones, Atwood, IL - Chapter 49  
Steven Levens, Prior Lake, MN - Chapter 17  
Robert Lyon, Draper, UT - Chapter 62  
Clyde Smith, Coldwater, MI  
Ying Yu, Augusta, GA

## CERTIFIED RADIO OPERATOR® (CRO)

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Jack Calaway, Corvallis, OR  
Richard Drouleff, Snow, OH  
Kevin Elston, Flagstaff, AZ  
Donna Trapp, Kissimmee, FL  
Pasadena city college  
Estefany Aguilar  
Edgar Anzo  
Robert Askew  
Jennifer Coulter  
Christopher Edwards  
Alejandro Gomez  
Victor Hiebert  
Cherie Johnston  
Caroline MacLeod  
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Vincent Molina  
CBS Radio-Los Angeles  
Colin Russel, KTWV  
Ryan Wong, KLSX

## CERTIFIED TELEVISION OPERATOR® (CTO®)

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Jack Calaway, Corvallis, OR  
Marc Copp, Los Angeles, CA  
Ed Crampton, Meridian, ID  
Robert Devlin, Murfreesboro, TN  
Carlos Fernandez, Los Angeles, CA  
Dustin Garrett, Arlington, TX  
Roman Ginzburg, Los Angeles, CA  
Serena Gongphairach, Los Angeles, CA  
Susana Herrera, Houston, TX  
Paul Hufstader, Grand Rapids, MI  
Andrew Humphries, Murfreesboro, TN  
Aaron Jones, Boone, IA  
Channu Kelley, Grand Rapids, MI  
Curtis Kirk, Tyler, TX  
Mark Krueger, Grand Rapids, MI  
Andy Miles, Meridian, ID  
Gabriel Ortega, Roseville, CA  
Sasa Petrovic, Grand Rapids, MI  
Kim Quinones-Owen, Los Angeles, CA  
Julian Romero, Glastonbury, CT  
Donna Trapp, Kissimmee, FL  
Deborah Walters, Cuyahoga Falls, OH  
Wendy Young, Grand Rapids, MI  
Colorado Satellite Broadcasting  
KC Caster, Boulder, CO

## 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®)

Ray Cisneros, Katy, TX - Chapter 105  
Jack Layton, McMurran, PA - Chapter 20

## CERTIFIED SENIOR RADIO ENGINEER (CSRE®)

Mickel Pruden, Woodland, NC - Chapter 54

## CERTIFIED SENIOR TELEVISION ENGINEER (CSTE®)

Victoria Way Kipp, Madison, WI - Chapter 24

## CERTIFIED SENIOR RADIO/TELEVISION ENGINEER (CSRTE)

Robert Carroll, Slidell, LA - Chapter 72

## CERTIFIED BROADCAST RADIO/TELEVISION ENGINEER (CBRTE)

Lorin McArthur, Meridian, ID - Chapter 115

## CERTIFIED BROADCAST RADIO ENGINEER (CBRE®)

Audrey Bentham, Haddonfield, NJ - Chapter 18  
Paul Clark, South Bend, IN - Chapter 30  
Stuart Muck, Fond du Lac, WI - Chapter 80

## CERTIFIED BROADCAST TELEVISION ENGINEER (CBTE®)

Kenneth Barnett, Cedar Creek, TX - Chapter 79  
Richard Dyer, Virginia Beach, VA - Chapter 54  
Humberto Irizarry, Ashburn, VA - Chapter 37  
Leonard Lyon, Powder Springs, GA - Chapter 5  
Veronica Mazuca, San Marcos, TX - Chapter 79  
George Randell, Norfolk, VA - Chapter 54  
Eddie Simone, Phoenix, AZ - Chapter 9  
Gregory Wynter, Toronto, Ontario Canada

## CERTIFIED BROADCAST TELEVISION ENGINEER (CBTE®) 8-VSB SPECIALIST

Mark Bulla, Laurel, MD - Chapter 46

## CERTIFIED BROADCAST NETWORKING TECHNOLOGIST® (CBNT®)

John Francioni, Chapel Hill, NC - Chapter 93  
Joseph Geerling, Florissant, MO - Chapter 55  
Victoria Way Kipp, Madison, WI - Chapter 24  
Jarrett Liddicoat, Bangor, WI - Chapter 112  
Dan Metzger, Montgomery, AL - Chapter 118  
Erwin Roman, Millington, TN - Chapter 103  
Sandeep Roys, Rialto, CA - Chapter 131  
Steven Sabin, Northvale, NJ - Chapter 15  
Kevin Smith, Burnt Hills, NY - Chapter 58  
Brian Truong, Perry Hill, MD - Chapter 132

## CERTIFIED BROADCAST TECHNOLOGIST® (CBT)

Steven Beitzel, Trenton, OH - Chapter 33  
Duncan Brode, Los Angeles, CA - Chapter 47  
James Caldwell, Grove City, OH - Chapter 52  
Scott Diamond, Encino, CA - Chapter 47  
Jay Gerber, Warrington, PA - Chapter 18  
Craig Gill, Indianapolis, IN - Chapter 25  
Michael Mick, Gurnee, IL - Chapter 26  
Eric Miller, Jenks, OK - Chapter 56  
Jon Morgan, St. Charles, IL - Chapter 26  
Carlo Tamayo, Chicago, IL - Chapter 26  
Salvatore Trapani, Elk Grove, CA - Chapter 43

## CERTIFIED TELEVISION OPERATOR® (CTO®)

Chad Haase, Omaha, NE  
Dave Heise, Cape Girardeau, MO  
James Long, Frederick, MD  
James, McCoy, Bristol, VA

# Georgia, NYC, Boston, Tampa Bay will host Ennes Workshops

Ennes Workshops are scheduled in four locations during the remainder of 2007. SBE Chapter 5 in Atlanta is the host of the first Workshop, held in conjunction with the Georgia Association of Broadcasters (GAB) on Friday, June 8 at Callaway Gardens, in Pine Mountain, Ga. As you are reading this, this particular workshop is upon us or has already taken place. The program has been heavily promoted in Georgia and much of the southeastern US. Our thanks go to Chapter 5 and the GAB for hosting the event.

The complete Georgia Ennes Workshop program can be found at the SBE web site at [http://www.sbe.org/ennes\\_workshops.php](http://www.sbe.org/ennes_workshops.php).

Following the program in Georgia will be an Ennes Workshop on Saturday, September 15 in New York City, held at the 4 Times Square building in mid-town Manhattan. In October, the Bos-Con SBE Regional Conven-

tion will host an Ennes Workshop on Thursday, October 4 in Marlborough, Mass., west of Boston. Bos-Con is operated by SBE Chapter 11 in Boston. Bos-Con and the Ennes Workshop will be at the Best Western Royal Plaza Hotel.

Completing the Ennes calendar for 2007 will be a workshop hosted by Chapter 39 in the Tampa Bay area on Friday, October 19. As of this writing the location was being confirmed. Ennes Workshops in Sacramento and Las Vegas were held earlier in 2007.

Ennes Workshops are one-day educational programs for radio and television engineers and technicians. Topics and presenters are selected who bring the latest information on technology that engineers need today and in the future at their facilities. Each Workshop typically features as many as 10 speakers

with topics ranging from 45 minutes to two hours. Dual tracks are offered as many of the sessions are specific for radio or TV engineers.

Program details for the New York, Boston and Tampa Bay workshops are being developed as of this writing. Be sure to check the SBE website in the coming weeks for program information and to register. Program flyers and registration information will be mailed to SBE members within a few hundred miles of each location, but anyone is invited to attend.

The Ennes Workshops are a joint effort of the Ennes Educational Foundation Trust (an educational and scholarship arm of the SBE) and the Society of Broadcast Engineers. Ennes Trustee, Fred Baumgartner, CPBE CBNT, serves as moderator and chief program planner for the Workshops.

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Marvin Marcelo, Pullman, WA  
David Hewitt, Chicago, IL  
Thomas Weber, Indianapolis, IN

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.

Mail donations in care of the Society of Broadcast Engineers, 9102 North Meridian Street, Suite 150, Indianapolis, IN 46260. The Ennes Trust is a 501(c)3 non-profit, charitable organization, EIN# 35-1506445.



**Terrence M. Baun, CPBE, AMD, CBNT**, has been named Director of Engineering and Operations of the Wisconsin Educational Communications Board.

**Brett Erieg, CBRE**, recently accepted the position of Chief Engineer with Archway Broadcasting in Columbus, Ga. He was previously the Assistant Engineer with Beasley Broadcasting in Augusta, Ga.

*If you or someone you know has moved, changed positions or been honored in some way by the broadcast engineering industry, submit details to Members on the Move at [wallen@sbe.org](mailto:wallen@sbe.org) or to Attn: Whitney Allen, 9102 N. Meridian St., Suite 150, Indianapolis, IN 46260.*



**D.No license or permit is required by the FCC for Part 73 stations.**

# An SBE look back to NAB2007

Activity was at its usual frantic pace during the annual NAB convention. NAB2007 was held in Las Vegas from April 14-19 and NAB reported that more than 108,000 people attended. Many members of SBE were in town and took part in some of the dozens of activities, meetings and educational sessions targeting the broadcast engineering community.

The SBE exhibit booth was busy throughout the show. It was the second year for the South Hall, second floor lobby location and the number of visitors at the booth were up from 2006. Twenty-six new members joined SBE while at the show! Our thanks to the many members of the national Board of Directors and Certification Committee who, along with our SBE staff, handled booth duties during the week.

There was a full slate of SBE meetings and activities during the week. Here's a recap of some of the highlights.

The SBE Board of Directors, led by President, Chriss Scherer, CPBE CBNT, met Sunday morning for its regular spring meeting. Many issues were discussed and updates and committee reports were provided. The progress in developing SBE webinars on RF safety with industry expert, Richard Strickland, was discussed. The first offering will be on June 27 (see "Focus on SBE" on page 9 in this issue of *the Signal*).

SBE's first Student Chapter was approved. Chapter 80.1 at the University of Wisconsin-Oshkosh was organized this past winter under the guidance of SBE board member, Keith Kintner, CPBE CBNT. The chapter number indicates that the Student Chapter is affiliated with Chapter 80, of Wisconsin's Fox Valley.

There was discussion about the increasing tendency of local governmental jurisdictions to enact licensing requirements for those who handle low-voltage wiring. Several avenues of action were discussed. SBE will be discussing possible changes to the National Electrical Code that would include commercial broadcast stations among those entities exempt from low-voltage licensing requirements.

Jim Bernier, CPBE CBNT, chairman of the SBE Certification Committee, announced that the Committee had approved the creation of a third SBE Specialist Certification. The new certification will be "Digital Radio Broadcast" (DRB) and is projected to be rolled out by the SBE National Meeting in October of this year (see Certification Update on page 12 in this issue of *the Signal*).

Chris Tarr, CBRE CBT CBNT, chairman of the

SBE IT Strategies Committee, announced that a new interactive map depicting all SBE chapters is now posted at the SBE website. It's another tool to help people locate a chapter near them and includes contact information for the chapter chairman.

Close to 200 members turned out for the SBE spring membership meeting held late Tuesday afternoon, April 17. The meeting featured recognition of many local chapter Certification Chairmen who had achieved volunteer service milestones. SBE Secretary, Vinny Lopez reported that national membership was up 32 members at the end of March compared to March 31, 2006. (*Ed. Note: that number grew to 54 by the end of April*)

The first 125 members in attendance received a special SBE meeting commemorative luggage tag. Three dinner gift certificates were awarded as door prizes and a grand prize of a Canon digital camera with accessories went to one lucky member. A Podcast of the meeting is available on the SBE website, [www.sbe.org](http://www.sbe.org). See the article in Short Circuits on the home page for the link.

Special thanks to our sponsor of the Spring Membership Meeting, Microwave Radio Communications (MRC). Their support helps to provide the prizes and giveaways and the company also made a \$500 contribution to the Ennes Trust Scholarship Fund. George Maier, CSTE, Director of Broadcast Products at MRC, made the presentation.

The Membership Meeting was followed by the first SBE Membership Reception held during a Las Vegas NAB convention. Sponsored by Turner Broadcasting System/CNN, the event was held at the Hilton Hotel with attendance estimated at 300 people. Our sponsor provided several door prizes as well as ample food and beverage. We hope to do it again next year!

The annual SBE sponsored gathering to discuss the Emergency Alert System was held on Monday afternoon of convention week. SBE Vice President, Clay Freinwald, CPBE organized and chaired the meeting. In addition to the 40+ people in attendance, more than 1,600 others listened in as it was streamed via the Internet. Our thanks to Dave Biondi and Broadcast.Net, Kevin Webb and Tieline Technology and Art Leisey and Trilithic for their sponsorship of the meeting which made the live streaming possible. An audio archive of the Internet audio of the meeting as well as Podcast recordings are

posted on the SBE website at [http://www.sbe.org/gov\\_eas.php](http://www.sbe.org/gov_eas.php).

Our thanks to Vinny Lopez, CEV CBNT for recording both the EAS and Membership meetings and to Chriss Scherer, CPBE CBNT, for his editing and production work.

For the 13th consecutive year, SBE partnered with NAB to produce the NAB Broadcast Engineering Conference. The BEC is the oldest and longest of all of the NAB conferences held at the convention each year. Our thanks to the members of the BEC Planning Committee, which included Lew Zager (Chairman), Talmadge Ball, Dave Converse, CPBE, Steve Fluker, Al Grossniklaus, P.E., Gary Kline, CBNT, Wayne Kube, John Merrill, Paul Shulins and Jeffrey Smith, CEA CBNT. Fred Baumgartner, CPBE with the help of Lew Zager, organized and moderated an excellent Ennes Workshop, "Everything Audio," which drew approximately 500 people on Saturday. We were pleased to once again have many of the attendees of the PBS Technical Conference attend the Ennes Workshop for a third year and many of those who attended the NPR Technical Conference, for the first year.

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

## NEW MEMBERS

John A. Amrhein - North Canton, OH  
Richard A. Bell - Oak Harbor, WA  
Kevin Beverley - Stafford, VA  
Dan Birchett - Nashville, TN  
Brett A. Blankenship - Tulsa, OK  
Robert J. Bradley - Milan, MI  
Paul J. Burnham - Poughkeepsie, NY  
Jeff S. Carter - Fairmont, GA  
Bob Carter - Ilion, NY  
Aaron S. Coil - Salina, KS  
Chris F. Cormier - Orlando, FL  
Stephen J. Cudnopskey - Lynnwood, WA  
John D. DeMarco - Lawrenceville, GA  
Dave Dennis - Chicago, IL  
John Deveck - Baltimore, MD  
Richard Dillman - Port Reyes Station, CA  
James T. Edwards - Palm Beach Gardens, FL  
John B. Ellis - Dodge City, KS  
Kevin D. Faris - Plattsmouth, NE  
Theodore E. Figgins - Surprise, AZ  
Larryson A. Foltran - Detroit, MI  
Benjamin A. Ganger - Napa, CA  
David A. Gillette - Alexandria, VA  
John L. Gochenour - Roanoke, VA  
James A. Godfrey - Kent, OH  
Paul J. Gonzalez - APO, AE  
Bill Gray - Hazel Crest, IL  
Jonathan Haase - Corvallis, OR  
Mark A. Harris - Garland, TX  
Harley L. Heckman - Eugene, OR  
Mark Heller - Two Rivers, WI  
Jeff Henry - La Jolla, CA  
Justin J. Hermanek - Las Vegas, NV  
Robert Hoffman - Pittsburgh, PA  
Johney B. Hunn - Centreville, VA  
Mark A. Ioriatti - Summerville, SC  
Terry J. James - Dahlgren, IL  
Bruce E. Kalifa - Kensington, MD  
Scott E. Kauffman - Oceanside, CA  
Alan Kochta - New York, NY  
David Kolesar - College Park, MD  
Justin R. Kraky - Dalton, PA  
Mark T. Laura - Lake Ronkonkoma, NY  
David A. Mackenzie - Strongsville, OH  
Kala J. Macom - Eugene, OR  
Patrick K. Madigan - Bristol, CT  
Deepak Malhotra - Delhi, Delhi, India  
Anna M. Markley - Boise, ID  
Predrag Markovic - San Diego, CA  
Sean F. McGuire - Worcester, MA  
Dexter B. Merry - Smithfield, RI  
Robert A. Meuser - New York, NY  
Andy J. Miles - Meridian, ID  
Thomas L. Moore - Rio Vista, CA  
Joseph M. Muchnij - Bellbrook, OH  
Kenneth R. Munro - Vienna, VA  
Robert Nance - Owens Cross Roads, AL  
James W. Nessen - Dixon, CA  
Steven M. Nordby - Eugene, OR  
Rudolph M. Norman - Denver, CO  
Emir Onat - San Diego, CA  
Donald J. Player - Lexington, SC  
Michael J. Pluta - Broomfield, CO  
Mike Prasser - El Cajon, CA  
Antonio E. Puell - Plantation, FL  
Erich J. Rastetter - Douglaston, NY  
Michael Rhodes - Manassas, VA  
Richard Ricamonte - New York, NY  
Michael Ridinger - Boylston, MA  
A. D. Rigmaiden - Humble, TX  
Joel M. Robertson - Pearl, MS  
Bruce Rogers - Salem, OH  
Kimberly K. Sacks - Hollywood, MD  
Michael A. Seifert - San Antonio, TX  
Keith E. Silvester - Talent, OR  
Stephen I. Sklar - Bala Cynwyd, PA  
Joshua C. Smith - Atlanta, GA  
Jeremy Snider - Lawrenceburg, TN  
Aaron M. Stella - Saginaw, MI  
Daniel M. Stewart, III - Lexington, SC  
Mark E. Strohecker - Millersburg, PA  
James L. Sute - Jacksonville, OR  
James S. Swift - Quincy, IL  
Rajendra Tandon - Miami, FL  
Thomas S. Taylor - Douglasville, GA  
Paul J. Toth - Seminole, FL  
Rob Truitt, III - Raleigh, NC  
Anthony Tsosie - Salt Lake City, UT  
Orlando Valdivia - Pasadena, TX  
Drew N. Van Wyk - Oshkosh, WI  
Raul A. Velez - Redwood City, CA  
Phil Vogel - Lake Mary, FL  
Alex G. Voss - Dallas, TX  
Garren K. Warwick - Summerville, SC  
William Weaver - Ft. George G. Meade, MD  
William S. Werner - Medford, OR  
Kyle R. Wesley - Dallas, TX  
Michael W. Whichard - APO, NY  
Scott B. Whitcomb - Maple Valley, WA  
Norbert Young - San Pablo, CA

Matthew J. Koch - Oshkosh, WI  
Allison Rockwell - Terryville, CT  
William A. Russell - Boise, ID  
Dale J. Schroeder - Oshkosh, WI  
Clyde R. Smith - Coldwater, MI  
Jonathan W. Stricklin - Oshkosh, WI  
William D. Weaver - Haddon Heights, NJ  
Joshua N. Werner - Cambria, WI  
Scott J. Zindar - Manitowoc, WI

## NEW ASSOCIATE MEMBERS

Garrett J. Bohannon - Rockville, MD  
Murrisa Griffin - San Antonio, TX  
John M. Rowe - Centennial, CO

## REINSTATED MEMBERS

Sean R. Anker - Albuquerque, NM  
William J. Barbour - Bristol, CT  
Paul F. Beeman - East Islip, NY  
Mark D. Blaauboer - Albany, NY  
Kevin P. Bowland - Boston, MA  
Brian R. Boylan - Canyon Country, CA  
Michael A. Breitenstein - Saint Louis, MO  
John P. Carroll - Getzville, NY  
Robert C. Combs - Savannah, GA  
Timothy L. Coucke - Mount Juliet, TN  
Elliott N. Cristofoli - Oakville, Ontario, Canada  
Manuel A. Ferreira - Assonet, MA  
Kurt C. Flansburg - Tacoma, WA  
Raymond A. Fodge, Jr. - Las Vegas, NV  
James J. Grimes - Chatham, IL  
Jonathan M. Hardee - Apex, NC  
Lyn F. Hare - Springfield, MO  
Craig G. Harris - La Verne, CA  
Richard W. Haskins - Stephens City, VA  
Robert S. Hershey - Dillsburg, PA  
Mark A. Hill - Normal, IL  
Thomas C. King, Jr. - Santa Barbara, CA  
Holly M. Misslin - Lebanon, TN  
Mark D. Ness - Harrisonburg, VA  
Lucio Padilla - Reseda, CA  
Jeffrey W. Pearce - West Palm Beach, FL  
Stanley H. Pierce - Plano, TX  
James W. Pollock - Haddon Heights, NJ  
Farid B. Quintanilla - Northridge, CA  
Patrick O. Roberts - Oklahoma City, OK  
Kevin A. Rogers - Rio Rancho, NM  
John Ross - Brownsville, TX  
David Salant - Henryville, PA  
Michael P. Sandorse - Wakefield, MA  
Harry R. Schroeder - Ewing, NJ  
David L. Stewart - Dallas, TX  
Brian C. Talley - Hillsboro, IL  
Sam S. Vasa - Olney, MD  
James W. Walker - Highland, CA

## NEW STUDENT MEMBERS

Michael G. Buck - Oshkosh, WI  
Jonathan L. Cameron - Oshkosh, WI  
Derrick T. Carey - Appleton, WI  
Kyle Cofell - Glastonbury, CT  
Travis H. Dart - Duncanville, TX  
Adam M. Garvey - Mountain Home, ID  
Brian J. Hughes - Cotati, CA

# Interactive television showcased at the "DTV Hot Spot" at NAB2007

BY **Jerry C. Whitaker, CPBE, 8-VSB**

*Vice President of Standards Development, ATSC*

**T**he ATSC and NAB demonstrated the most sophisticated technologies in digital television at the "DTV Hot Spot: A Digital Paradise" at the 2007 NAB Convention in Las Vegas. The DTV Hot Spot featured a wide variety of new technologies, offering a fascinating look inside the world of digital television. The demonstrations highlighted the ongoing evolution of new systems and products based on ATSC standards. Located in the Las Vegas Convention Center South Hall Upper Lobby, the DTV Hot spot included the following demonstrations:

- Demonstration of the capabilities of the ATSC Advanced Common Application Platform (ACAP) Standard, including development tools and consumer solutions
- Advanced DTV multicasting services
- Home networking
- Implementation of the ATSC Software Data Download Standard and a novel broadcast monitoring system
- Advanced VSB (A-VSB) for improved indoor and mobile/handheld reception
- Mobile/Portable/Handheld (MPH) technology for a variety of mobile applications
- An operating single-frequency network
- Distributed transmission test generator and analyzer
- Digital-ENG data return channel capabilities using an over-the-air DTV signal
- A trial implementation of a data return link (DRL) system for use with remote broadcast systems
- ATSC receiver software and development tools
- Practical implementations of the CEA-909 Smart Antenna interface
- DTV analog-to-digital set-top converter boxes

Organizations demonstrating these technologies at the DTV Hot Spot included AMD, BitRouter, ETRI, HANA, Harmonic, Harris, KBA, Microwave Radio Communications, MSTV, NAB, Rohde & Schwarz, Samsung, Unisoft, UpdateLogic, and Zenith/LG.

## INTERACTIVE TELEVISION FIELD TRIAL PROJECT

One of the focal points of the DTV Hot Spot was the ACAP Demonstration and Field Trial Project. The ACAP (Advanced Common Application Platform) Standard was developed by ATSC to enable broadcasters to deliver interactive applications through terrestrial, cable, satellite, and other distribution systems. An equivalent standard for cable is the OCAP (OpenCable Application Platform) specification from CableLabs. This demonstration was intended to show interoperability of ACAP and OCAP using terrestrial DTV and cable set top boxes; and raise awareness of content creators, networks and local broadcast stations about the business opportunities made possible by the ACAP Standard.

Interactive television (ITV) enables broadcasters to enhance programming with features such as voting/polling, games, sweepstakes entry, iAds, t-commerce, and supplementary information related to the show. Creating a common standard for publishing ITV applications enables economies of scale if the same application can run on all TV platforms. The ACAP demonstration showed several ITV applications developed by broadcasters in conjunction with software developers using the ACAP standard.

In an effort to move ITV applications forward, the ATSC Planning Committee (PC) last year launched a major demonstration project of the ACAP ITV system. Led by Dan Berkowitz of NBC Universal, the project is designed to illustrate how ACAP can be

used to enhance the viewing experience. The project has been divided into two major elements:

- Phase 1 — a stand alone demonstration of ACAP applications "broadcast" to and run on ACAP and OCAP receivers
- Phase 2 — a field trial in select market(s) of ACAP applications broadcast over the air and distributed on cable systems to run on ACAP and OCAP receivers

A developmental lab has been set up at NBC's 30 Rockefeller Center headquarters to facilitate development of ITV applications and to test the interoperability of ACAP- and OCAP-enabled set-top boxes. Seamless interoperability is critical for content producers, who need to know that their ITV applications will play as intended on television sets receiving signals over the air and from cable. Interoperability with satellite systems is being studied.

One side benefit of the ACAP project is that it has identified elements of the ACAP Standard that may need to be refined to provide optimum end-to-end performance. So far, the project team has found some subtle differences in the performance of certain ACAP and OCAP devices it has tested. This is likely due in some part to implementation choices made by vendors and due to changes in the OCAP standard since the original harmonization effort with ATSC. Where updates to the ACAP Standard are appropriate, those issues are being logged for future action within ATSC.

## FOR MORE INFORMATION

The ACAP specification can be downloaded at no charge from the ATSC Web site. See: <http://www.atsc.org/standards/a101.html>. If you would like to be involved in ongoing work within ATSC on interactive television, please contact the author.



# Want to **learn how to lead** or **expand** your **leadership skills?**

Then the **Leader-Skills Seminars**, sponsored by SBE, **are for you.**

If you relate most seminars with having a hard time keeping your eyes open and staying awake — attending the Leader-Skills Seminar will change your mind.

**“(It was) an eye-opening experience,”**

said Brian Gallagher, who attended the 2006 Leader-Skills Seminar in Indianapolis. **“Cupka is obviously one of the best at what he does.”**

Gallagher was one of 14 who attended the seminar that was held last summer. Course I graduates continued their leadership training with a second course offered in Indianapolis in August.

The Leader-Skills Series, in its 11th consecutive year with the Society, is specifically designed for broadcast engineers who have or aspire to have management responsibilities. SBE offers the two-part series in cooperation with instructor Richard D. Cupka, Sr., West Lafayette, Ind.

Cupka, who has over 40 years of experience in adult training, has directed and taught the Leader-Skills seminars to broadcast engineering managers, supervisors and technicians for 40 years. Many of the most respected broadcast engineering managers in the country today are graduates of the program and continue to send members of their staffs so that they, too, can learn from Cupka.

Cupka is known for his unique style of teaching. “I was told before about his style,” said Tommy Baugh, who also attended Course I of the seminar. **“It was the best teaching style I have ever encountered. It was the best three days of learning ever spent. It opened my eyes to look at myself.”**

This year, Course II, “Leadership —

**“If I had eight hours to cut down a tree. I would spend six sharpening my axe.”**

*~ Abraham Lincoln*

Expanding Your People Skills” will be held August 7-9, 2007, at the Holiday Inn Select Airport in Indianapolis. It covers the function and nature of your leadership role; how to build stronger teams and effective internal cooperativeness; the complex differences of people; and discovery of your “natural” style of leading and how to nurture a “developed” style to help you adjust to different people in differing situations.

**“I learned more about myself in three days than I have in the last 50 years,”** said Baugh. **“The program was about people. That’s what I needed.”**

Designed to take technically-adept people and instill in them sound supervisory and management skills, the Leader-Skills Series can also be viewed as a tool for personal growth and development, even for those without prior management or supervisory responsibilities.

Registering early is a good idea — each course is limited to a minimum of 10 and a maximum of 18 participants. Deadline to register for Course II is July 3. The cost of registration is \$545, which includes three days of instruction, all course materials, a certificate of completion and classroom refreshments. All transportation, housing and meals are the responsibility of the participant. However, a single or double room can be reserved through SBE at the Holiday Inn Select (Airport) — where the course will be held — at a rate of \$105 per night, plus tax.

If you would like more information on the SBE Leader-Skills Series, please contact Whitney Allen at (317) 846-9000 or [wallen@sbe.org](mailto:wallen@sbe.org).

**“The ‘secret’ to success is... getting ready!”**

*~ Henry Ford*



# 2007 Leader-Skills Registration

**COURSE INFORMATION:** Each course includes three days\* (24 hours) of programming, all seminar materials, completion certificate and classroom refreshments. Class size is limited to a minimum of 10 and a maximum of 18 participants per course.

Name of Participant: \_\_\_\_\_ E-mail: \_\_\_\_\_

Company: \_\_\_\_\_ Title: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ Daytime Phone: \_\_\_\_\_

**If someone other than the participant is filling out this form, please provide the following information:**

Company Contact: \_\_\_\_\_ Title: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Phone: \_\_\_\_\_ E-mail: \_\_\_\_\_

## COURSE

**SELECTION:** ☐ Course II: Leadership – Expanding Your People Skills, August 7-9, 2007 (*Registration deadline: July 3, 2007*)

Prerequisite: Course I, please list location and year : \_\_\_\_\_

**PAYMENT INFORMATION:** Registration for each course is \$545. Payment is required in advance via credit card or check (payable to SBE).

Total: \$ \_\_\_\_\_ by (check one): ☐ Check ☐ Visa ☐ MasterCard ☐ American Express

Credit Card No.: \_\_\_\_\_ Exp. Date: \_\_\_\_\_

Print Cardholder Name: \_\_\_\_\_ Signature: \_\_\_\_\_

**NOTE:** Cancellation, with no substitution, within 10 days of the seminar will result in forfeiture of full registration fee; a \$50 charge may be applied if cancellation, with no substitution, occurs more than 10 days from the seminar.

**HOUSING INFORMATION:** Reservations, if requested, will be made at the Holiday Inn Select Indianapolis Airport (site of the Leader-Skills Seminar). Cost for accommodations is \$105 per night, plus tax.

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**OR FAX TO:** (317) 846-9120

**QUESTIONS:** Whitney Allen at wallen@sbe.org or (317) 846-9000

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

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End to End Connectivity Solutions  
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Test and Measurement Equipment Rentals

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UHF TV Broadcast Transmitters

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Broadcast Tower Development/  
Construction/Management

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Audio/Video Cable & Interconnect Products

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RDS Generator, Metering, Monitoring,  
Remote Control Manufacturer

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Digital Content Creation Software

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Matt Nelson  
(256) 430-4000  
KVM Switching for Broadcast

#### AXCERA • 1983

Mike Romo  
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Television Transmitters & Exciters

#### BELDEN ELECTRONIC DIVISION • 1991

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Cable and Connectivity

#### BEVERIDGE CONSULTING, INC. • 2006

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

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Ray Miklius - Studio Products  
or Tim Bealor - RF  
(217) 224-9600  
Radio Equipment Manufacturer

#### BROADCAST ENGINEERING MAGAZINE • 1984

Bradley L. Dick  
(913) 341-1300  
Journal of the Broadcast Industry

#### BROADCAST MICROWAVE SERVICES, INC. • 1997

Russell Murphy - East  
or Jim Kubit - West  
(540) 952-5660 or (805) 581-4566  
or (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

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(352) 622-7700  
One Stop Broadcast Store

#### CANARE • 1991

Cheryl Moritz  
(818) 365-2446  
Audio/Video Interconnect Products

#### CANON USA, INC. • 1985

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

#### CAYRON CORP. • 1992

#### CARL KEANE

(631) 845-2031  
HD/SD Character Generators and MOS

#### CLARK WIRE & CABLE • 1991

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

#### CMBE, INC. • 1999

Chip Morgan  
(802) 758-5000  
High Performance Broadcast Engineering

#### COAST TO COAST TOWER SERVICE, INC. • 2001

Mike Jackson  
(972) 923-9504  
Broadcast Tower & Antenna Specialist

#### COMET NORTH AMERICA • 2005

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

#### COMBET CORPORATION • 1997

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

#### CONSEARCH • 2004

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(703) 726-5651  
Frequency Coordination Services

#### CONTINENTAL ELECTRONICS CORPORATION • 1976

Michael Troje  
(214) 381-7161 or (800) 733-5011  
AM & FM IBOC Transmitters

#### COSPIN CORPORATION • 2006

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(919) 845-7744  
Broadcast Automation Solutions

#### DAZIMOR • 1998

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

#### 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

#### DISKSTREAM INCORPORATED • 2006

Rein Taul  
(519) 579-8166, ext. 57  
Capsa Video Archive

#### DMT USA, INC. • 2003

Tom Newman  
(856) 423-0010  
Television Transmitters, Translators and Antennas

#### DSC LABORATORIES • 2002

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

#### DU TREL, LUNDIN & RACKLEY, INC. • 1985

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Consulting Engineers

#### DYMO CORPORATION • 2006

Robert Garvey  
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RHINO Professional Labeling Products

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or Main - (800) 342-5338  
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#### ECONO • 1980

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

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

#### ENVIRONMENTAL TECHNOLOGY INC. • 1997

John Cahill  
(800) 234-4239, ext. 229  
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#### ERI - ELECTRONICS RESEARCH • 1990

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Antennas, Towers, Filters, Combiners

#### ETS-LUNGEN / HOLIDAY ENF MEASUREMENT • 2003

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RF Safety Instrumentation

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Joel Freeland  
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#### FRONTLINE COMMUNICATIONS CORP. • 2000

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Broadcast & Communications Products

#### GEPCO INTERNATIONAL, INC. • 1995

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

#### GOOGLE INC. • 2005

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

#### HARRIS CORPORATION, BROADCAST COMMUNICATIONS DIVISION • 1977

Joe Mack (TV) or Chris Pannell (Radio) or Bob Duncan (Software)  
(513) 459-3406 or (406) 556-0280  
or (719) 439-0130  
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#### HD WORLD • 2006

Michael Driscoll  
(203) 371-6322  
HD World Conference & Exposition (Oct. 10-11, 2007, New York)

#### HOLMOON ENTERPRISES, INC. • 2006

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WireCAD - Serious design tools

#### IMAGE VIDEO • 1997

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(416) 750-8872 ext. 230  
Under Monitor Tally Display Systems, Monitor Walks, Signal Alarm Systems

#### JAY S. GERBER, CBT • 1999

Manager, NFL Frequency Organization Group

#### JOSEPH ELECTRONICS INC. • 2003

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

#### KATHREIN INC., SCALA DIVISION • 1985

Michael Wm. 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 Bliet  
(570) 326-3561, ext. 229  
Tubes, Power

#### LBA TECHNOLOGY, INC. • 2002

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

#### LEA INTERNATIONAL • 2004

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

#### LINCOLN FINANCIAL MEDIA • 2007

Don Shaw  
(704) 374-3639  
Media, Communications

#### LP TECHNOLOGIES, INC. • 2006

Samuel Lee  
(316) 816-9696  
Digital Microwave Transmission

#### Spectrum Analyzers

#### MACKAY COMMUNICATION • 2002

Patrick Fisher,  
Director of Satellite Services  
(919) 850-3164  
Satellite Communications Equipment & Airtime

#### MARKETER VIDEO SUPPLY • 2002

Tom Moretti  
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Broadcast Video Products

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Frank Malanga  
(603) 624-4351 or (800) 545-0608  
TV & FM Antennas & RF Components

#### MICRONET COMMUNICATIONS, INC. • 2005

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

#### MICROWAVE FILTER COMPANY, INC. • 2003

Sherry Bell  
(815) 438-4700  
Passive Electronic Filters

#### MICROWAVE RADIO COMMUNICATIONS • 1997

Nadine Frechette  
(978) 671-5700  
Video Microwave Systems

#### MICROWAVE SERVICE CORPORATION • 1997

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

#### MOORE ATLANTIC PRODUCTS • 2005

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Enclosures, Power, Accessories, Furniture

#### MORRIS DESIGN INC. • 2005

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

#### MOWAT • 1995

Jamie Silva  
(800) 422-9961  
Wire and Cable

#### MORROW TECHNOLOGIES, INC. • 2002

Tish Boyles  
(727) 531-4000  
Spectrum Analyzers

#### MOSELEY ASSOCIATES, INC. • 1977

Dave Chaney  
(805) 968-9621  
RF & TI 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 Lowmeyer  
(207) 947-8200  
Radio Broadcast Transmitter Manufacturer

#### NEURAL AUDIO • 2006

Mark Seigle  
Surround Sound Technologies

#### NORTHWEST TOWER ENGINEERING, PLLC • 2003

Seven Diamond, P.E.  
(425) 258-4248  
Tower Engineering, Structural Analysis

#### NORT LTA • 2002

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

#### NUCOM, INC. • 1996

John Dulany  
(908) 852-3700  
Digital Microwave Transmission

#### Equipment

#### NVISION, INC. • 1997

Doug Butlerbaugh  
(530) 265-1000  
Routers, Master Control & Terminal Equipment

#### OLDCASTLE PRECAST, INC. • 2006

Douglas Dumas  
(678) 371-8315  
Precast Buildings/General Construction/Program Management

#### OMT TECHNOLOGIES INC. • 2001

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Automation, Skimming/Logging Software

#### PANASONIC BROADCAST & DIGITAL SYSTEMS COMPANY • 1985

Tom Moore  
(201) 392-6176  
Professional Broadcast Equipment

#### PASTERNAK ENTERPRISES • 2001

Christine Hammond  
(949) 261-1905  
Coax & Fiber Products

#### PESA SWITCHING SYSTEMS, INC. • 1997

Robert McElpine  
(800) 328-1008  
Routing Switcher Manufacturer

#### PKE & 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

#### PRO-DE • 2002

Terry Barnham  
(631) 549-5159  
Automation, Routing & Infrastructure

#### PROPAGATION SYSTEMS, INC. (PSI) • 2005

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

#### PROPHET SYSTEMS INNOVATIONS • 2003

John Gager  
(308) 284-3007  
Audio and Video Content Management

#### PROVIDEO SYSTEMS, INC. • 2000

Dave Goldsmith  
(419) 874-2850  
Sales, Consulting, Design & Integration

#### 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

#### RAHAM COMMUNICATION SERVICES INC. • 1986

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

#### RDL • 2004

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

#### RF CENTRAL, LLC • 2005

Jeff Winemiller  
(717) 249-4900, ext. 222  
Digital Wireless Microwave Equipment

#### RICHARDSON ELECTRONICS • 1987

Chris Chinchilla  
(800) 348-5580  
Power Grid Tubes

#### RICHARD TOWERS • 2001

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

#### RODDE & SCHWARTZ • 2003

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

#### ROSCOR CORPORATION • 1998

Tom Voigts  
(888) 373-4832

#### National Meeting from page 1

national Certification and Frequency Coordination committees are also planned for Wednesday afternoon. On Thursday, October 11, the annual SBE Fellows Reunion will be a luncheon (by invitation) from 12:00 pm to 1:00 pm. The Annual Membership Meeting will be held from 4:00 pm to 5:00 pm followed by the National Awards Reception from 5:00 pm to 6:00 pm. The National Awards Dinner will highlight the evening, beginning at 6:00 pm. Tickets for the dinner will be available from the SBE National Office beginning in July. In addition to the National Awards, the dinner will feature a special guest speaker.

The Chapter 20 Regional Convention schedule includes exhibit hours on Wednesday, October 10 from 5:00 pm to 8:00 pm. Thursday, October 11 begins with a special Keynote Breakfast from 7:30 am to 8:45 am. Exhibits begin at 9:00 am and run until 4:00 pm and will feature more than 50 exhibitors displaying equipment and technical services for broadcasters and those in related fields. Technical sessions begin at 9:00 am and run until 4:00 pm. A special panel is in the works that will feature a number of past national SBE presidents in a wide ranging discussion about the industry and the Society.

Everyone is invited to attend the National Annual Membership Meeting at 4:00 pm and the reception and National Awards Dinner which follow.

More information about the SBE National Meeting and Chapter 20 Regional Convention is available on the websites of both SBE National, [www.sbe.org](http://www.sbe.org) and Chapter 20, [www.sbe20.org](http://www.sbe20.org).

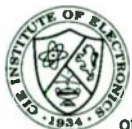
#### SBE from page 1

April of 2008. The three books include: "ATSC Digital Television Transmission: 8-VSB Theory and Practice," by Gary Sgrignoli; "Antenna Zoning," by Fred Hopengarten and "HD Radio Implementation," by Tom Ray, CPBE.

Remarking about SBE's relationship with Focal Press, Scherer said, "One of the foundations of the SBE is member services, which includes educa-

tion. Our members have expressed an ongoing interest in in-depth sources of technology and information through books and reference materials. This partnership with Focal Press combines the strengths of both groups to achieve this goal."

SBE and Focal Press have set a target to release three new books each year.



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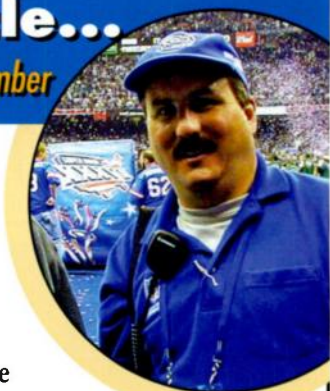
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## In the Circle...

*a snapshot of an SBE Member*



### Sam Caputa, CSRE

Director of Engineering  
EMMIS Radio St. Louis  
St. Louis, MO  
SBE Chapter 55, St. Louis

#### Best known for: I am the

Local SBE Frequency Coordinator for the St. Louis Area and the SBE/NFL Game Day Coordinator for the St. Louis Rams (where I am pictured above). Years ago, I was part of the group that started and ran the SBE Central States Regional Convention which evolved into the SBE National Convention held in St. Louis its first two years.

**Focal Point:** I enjoy the association with other engineers in my market and around the country. They are all talented and professional people. I feel that broadcast engineers are truly the aristocrats of the industry. We are eager and ready to provide service and we do not let anything stand in the way of helping out a fellow engineer, friend or co-worker.

**Sphere of Influence:** Actually, I have two. The first is Dave Obergoenner, now a fellow engineer and SBE member. Dave was working in radio in Southeast Missouri when I was in college. He got me involved with the installation of the campus station and also helped me get work and learn engineering at the other stations in town. Dave taught me a lot about high quality audio, processing, studios and basically how to fix "anything." My second mentor, Jimmy Mitchell, was the Chief Engineer for KSHE-FM. I met him while applying for a job there after returning to St. Louis. Jimmy took me under his wing and taught me all about FM and AM transmitters, antennas and directional arrays. His teaching method was "learn by doing," and he would do anything to help you out. I feel very fortunate for all the knowledge I gained from them.

**You may not know...** I live "On The Hill," an Italian neighborhood in St. Louis in walking distance from the restaurant where Toasted Ravioli was originally discovered (by accident).

**Favorite Gadget:** That would have to be my Palm Treo PDA/Cellphone. Never leave home without it!

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Ph# 469-644-2215  
Jassen Hahn  
jhahn@tower-tci.com

#### East Coast

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Irmo, SC 29063  
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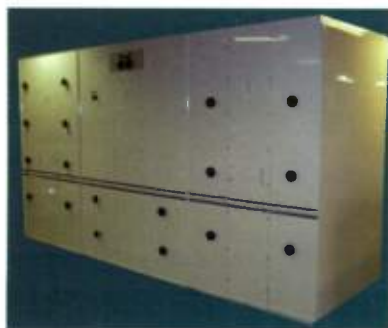


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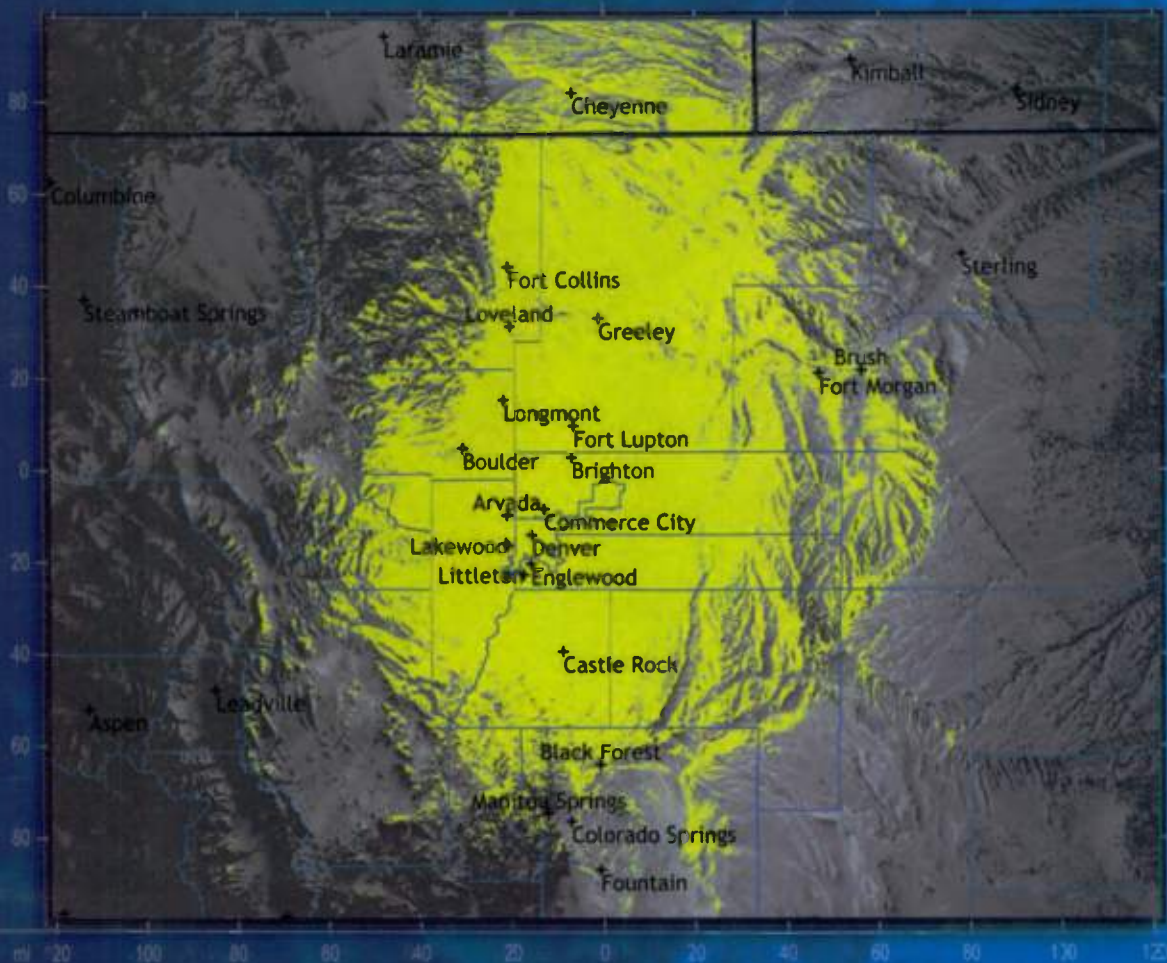
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