



# the SIGNAL

BIMONTHLY PUBLICATION OF THE SOCIETY OF BROADCAST ENGINEERS

OCTOBER 2005

Volume 18, Number 5

3

SBE to launch updated website this month

10

New e-mail rules change how chapters communicate with members

14

Ennes Workshops head to Dallas, Boston, Nashville

28

Ennes scholarship winners announced

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## Scherer elected SBE President

■ Officers, six directors also elected

**C**hristopher H. Scherer, CSRE, CBNT, editor of *Radio* magazine, has been elected the 24th president of the Society of Broadcast

Engineers. Scherer, of Overland Park, Kan., will lead the Society's 5,300 members beginning October 20, following his induction during the SBE Annual Membership Meeting in Dallas, Texas. Scherer is a senior member of SBE. He is completing a term as national vice president and has chaired SBE Chapter 59 in Kansas City and Chapter 70 in Cleveland, Ohio. He currently serves as chairman of the SBE National Certification Committee, a position he has held since 2001. Scherer has been a member of the Society since 1989.

Elected vice president is **Clay Freinwald, CPBE**. Freinwald resides in Auburn, Wash., where he is a corporate engineer with Entercom. He is a member of Chapter 16 in Seattle. He has been a member of the



Christopher H. Scherer, CSRE, CBNT



Clay Freinwald, CPBE



Vincent A. Lopez, CEV, CBNT



Barry Thomas, CPBE, CBNT

national SBE Board of Directors since 1999 and a member of the Society since 1968. He was elected an SBE Fellow earlier this year.

Elected to his first term as secretary is **Vincent A. Lopez, CEV, CBNT**, director of engineering at WSYT/WNYS TV in Syracuse, N.Y. Lopez has been a member of the national board since 2000 and has chaired the national SBE Membership Committee since 2001. He is immediate past chairman of Chapter 22 in Central New York and was elected an SBE Fellow in 2004.

Elected to a term as Treasurer is **Barry Thomas, CPBE, CBNT**, vice president of engineering at Westwood One, Inc.

See **ELECTION** on page 8



**BROADCAST ENGINEERING EXPO.2005**

## hosts SBE National Meeting

**S**BE Chapter 67 and the Dallas/Ft. Worth area will be the host of this year's SBE National Meeting. North Texas Chapter 67 is in its second year of presenting the Broadcast Engineering Expo (BEE), which will offer an Ennes Workshop and broadcast exposition for attendees.

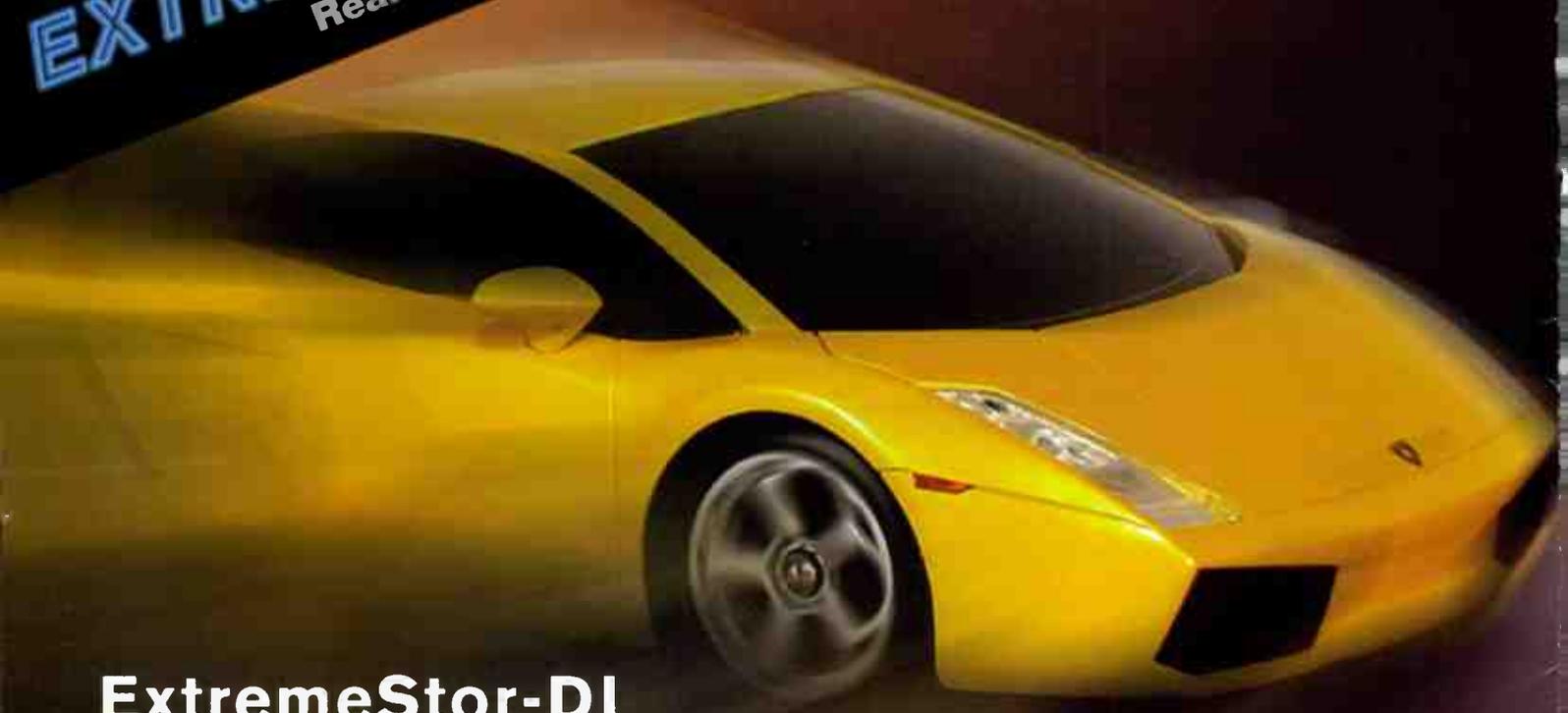
The National Meeting and BEE will be held on Wednesday and Thursday, October 19-20, at the Hilton DFW Lakes Executive Conference Center in Grapevine, which is conveniently accessed from the local freeway system and just a five minute ride from DFW International Airport. The hotel provides complimentary shuttle service to and from the airport.



Chapter 67 volunteers, Sandy Dalton and Jim Shumacher, welcome attendees to the inaugural Broadcast Engineering Expo in October 2004.

See **BEE** on page 6

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# SBE to update website

By the end of October, SBE will introduce a totally revamped website. The new website will feature improved navigation, more functionality and an attractive visual design. The new site will retain the www.sbe.org URL.

Among the new functions available will be an online member application and online ordering of books and logo items from the SBE Store. The website will continue to feature the popular JobsOnline, ResumeBank and Contract Engineer Directory, as well as information

about all of SBE's services and programs. A member search feature will also be available, along with information about SBE chapters and their meetings. The website will continue to be a resource point for those requesting frequency coordination anywhere in the United States.

The new site will restrict some items for members only. Members will access those areas by using their member number and a password, which will be included with the *2005-06 Membership Directory & Buyers'*

*Guide* that will be mailed to all members this month. If you do not receive a copy of the *Directory* with your password by November 1, please contact Scott Jones at kjones@sbe.org or (317) 846-9000.



SBE has maintained a website since 1995. National Board Member Jim Bernier, Jr, CPBE, CBNT, chairs the SBE IT Strategy Committee, which has responsibility for SBE's electronic communications services to members. Bernier has helped guide the National Office staff as they have worked with a local vendor to develop the new website. The new website will serve as a good reflection of the professional level of our members while providing increased value for their memberships.

## SBE assists with Katrina efforts

With the probability that SBE members living in the path of Hurricane Katrina would be severely affected, along with broadcast stations in the area, SBE decided to try and put individuals and companies offering assistance together with those needing help.

The SBE National Office began keeping a log of those offering help several days after the hurricane hit the Gulf Coast. Those responding used a special e-mail address, hurricanehelp@sbe.org, established expressly for this purpose. Several requests for help were also received and, at this writing, the National Office was busy putting those offering assistance in touch with those needing help. At least two SBE members have reported significant property loss.

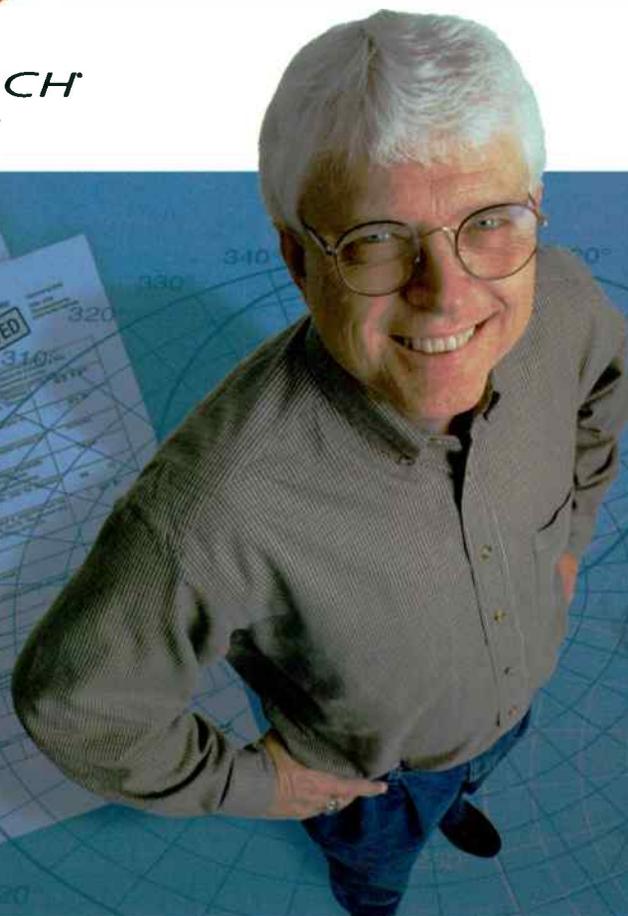
Four SBE members were key players in an effort to put a radio station on the air in Hancock County Mississippi so that the station could broadcast emergency information. Their story will be reported in the December issue of *The Signal*.

Any individuals, chapters or companies wishing to offer assistance to SBE members who suffered severe losses as a result of the hurricane should contact the SBE National Office at hurricanehelp@sbe.org.



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# Many to thank for Society's progress

BY **Raymond Benedict, CPBE**  
*SBE President*

This is the last Signal article that I will write as president of the Society of Broadcast Engineers. I would like say it has been a very rewarding two years.

With this last article, I would like to review some of the SBE activities and accomplishments during my term. However, before doing that, I want to thank some of the people who have served and worked with me.

First of all, I would like to thank the members of the board of directors, the officers and committee chairs that have served with me during my two terms as president. They have given me a lot of advice, ideas and appreciated support.

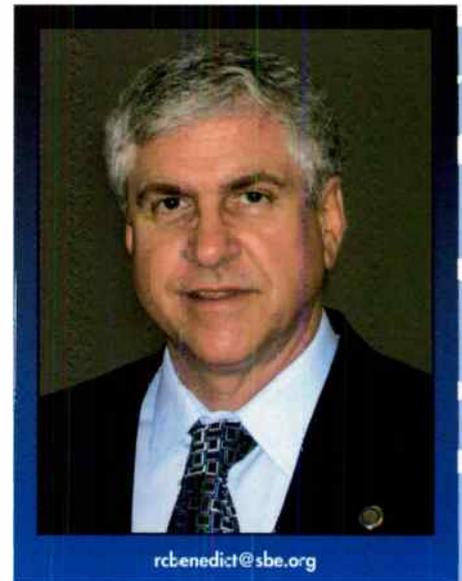
I would like to thank the national staff. As I have said before, the Society is fortunate to have an outstanding, dedicated national office staff directed by Executive Director John Poray. This staff is responsible for the seamless daily operations of the Society. John is one of those unsung heroes that make the president's job so much easier and rewarding. His help and support make it possible for the president to focus his efforts on the strategic issues facing the Society.

As I stated previously, I will now review some of the activities and accomplishments of the Society and its board and officers over the last two years.

- In the past few months, the Frequency Coordination Committee under the leadership of Chairman Ralph Beaver, CBT, and former National Frequency Coordination Director David Otey, CPBE, has rolled out the new SBE Frequency Coordination Accreditation Program. The purpose of this program is to provide industry-wide recognition to our volunteer coordinators and to standardize the coordination process nationwide.
- SBE establishes an agreement with Nextel that provided assistance with the 2 GHz transition. This agreement has helped our members with transition issues.
- The SBE Education Committee is created to focus on a new vision for SBE's role in providing educational opportunities for our members. What I have heard many times

from many different members over the last few years is that they would like more educational assistance from SBE. This assistance is needed by our membership to help them keep up with our flattening world and to train new broadcast engineers. This new committee is the first step in expanding SBE's educational efforts.

- SBE supports the first NFL/SBE GDC Seminar that was held in Las Vegas this past June.
- An online frequency coordination system is created that provides groups or individuals one contact point to start the coordination process. My thanks go to Dan Ryson, CBT, and his employer Cavell, Mertz, and Davis. Dan spent many weeks creating this website. His efforts have resulted in a much more uniform coordination process and a reduction in the time needed to coordinate an event.
- The first update to SBE's frequency coordination software is developed and given the name "SBE Toolbox." The original software, developed in 1989, worked in DOS. The new software is based in Filemaker Pro and integrates seamlessly with the new SBE online coordination system. It assists our coordinators with the coordination of local daily use frequencies and adds a new feature for the coordination of events.
- SBE hits the highest year-end membership count – 5,572 – in SBE history on Dec. 31, 2004.
- SBE publications, *The Signal* and the annual *SBE Membership Directory & Buyers Guide*, continue to grow and improve.
- The Regional Convention Strategies Committee is formed to support existing conventions and promote new SBE regional educational events. Prior to the formation of this committee, SBE regional conventions and educational events worked independently. The purpose of this committee is to create a forum where the individual event committees can share ideas and experiences, with the additional goal of helping these events to thrive and grow.
- The Certification Committee introduces its first specialist certifications – the AM



Directional Specialist and the 8-VSB Specialist. The new specialist certifications have already been very well received by the broadcast industry.

- Under the leadership of Certification Committee Chairman Chriss Scherer, SBE's certification sample tests receive a make-over and are now collectively known as "SBE CertPreview." The various tests, previously DOS-based and saved on multiple floppy disks, are now Windows-based and available on a single CD-ROM.
- Thanks to the efforts of International Committee Chairman Chuck Kelly, SBE is able to participate for the first time in the 2004 International Broadcast Convention (IBC). We are again participating this year in what will probably become an annual event for the Society.
- The Certification Committee, thanks to the efforts of Ralph Hogan, CPBE, CBNT, develops a sample curriculum for higher education institutions.
- SBE continues its relationship with NAB as co-presenter of the Broadcast Engineering Conference. There is an all-time high attendance at the Ennes Workshop at NAB2005 with PBS participation.

As you can see from the list of activities and accomplishments, it has been a busy two years! So as I move from president to IPP (immediate past president), I would like to close by congratulating the new board of directors and officers, and in particular the new president, Chriss Scherer. I have known Chriss for many years and feel confident that under Chriss' leadership, the Society of Broadcast Engineers will continue to grow and prosper.

## BEE from page 1

The BEE is attended by broadcast engineers and those in related fields from all over Texas and the surrounding states. The Wednesday Ennes Workshop will be held from 9 a.m. to 5:45 p.m. and include separate radio and television tracks. A complete description of the program topics and speakers can be found on pages 14-15. The cost to attend the Ennes Workshop is just \$25 and includes lunch and breaks. There will be a special preview, open only to Workshop attendees, of the BEE exhibits immediately following the Workshop.

On Thursday, the exhibit hall will be open from 9 a.m. to 4 p.m. Several manufacturer presentations are also planned for Thursday on the show floor, and there will be an SBE certification exam session from 1 to 4 p.m. (pre-registration strongly encouraged).

The SBE National Meeting officially begins with the fall meeting of the SBE Board of Directors from 6 to 10 p.m. on Wednesday. This meeting is open to any SBE member. Some national committees will also hold meetings on Wednesday afternoon.

Thursday begins with the annual Fellows Breakfast from 8 to 9 a.m., sponsored by Kathrein, Scala Division. All SBE Fellows are

invited to attend. Formal invitations were mailed to SBE Fellows in September.

The Annual SBE Membership Meeting will be held from 4 to 5 p.m. This meeting will include the induction of the newly-elected members and officers of the national SBE Board for 2005-2006, including the new SBE president, Christopher Scherer, CSRE, CBNT. The Membership Meeting will be followed at 5 p.m. by the SBE National Awards Reception, sponsored by Thales Broadcast and Multimedia, and the National Awards Dinner, sponsored by Microwave Radio Communications. The Awards Dinner will feature the presentation of the SBE Engineer of the Year, Educator of the Year, Technology Award winner, the newest SBE Fellows and the winners of individual and chapter awards, such as the Best Technical Article, SBE Chapter Newsletter, Website, Regional Convention and Frequency Coordination Effort.

The National Awards Dinner will also feature special guest speaker Douglas Rasor, Senior Vice President of Strategic Marketing for

Texas Instruments Semiconductor Group. Rasor is a frequent speaker on the future of digital technology for both radio and television. He speaks from an industry-wide perspective and earlier this year addressed the NAB Futures Summit.

The BEE exhibition is free but pre-registration is requested. Visit the BEE website at [www.bee2005.org](http://www.bee2005.org) to register. You can also register there for the Ennes Workshop (\$25) and the National Awards Reception and Dinner (\$12), or call the National SBE Office at (317) 846-9000.

### BEE, SBE NATIONAL MEETING EVENTS

#### WEDNESDAY, OCTOBER 19

|   |                     |
|---|---------------------|
| Ennes Workshop .....  | 9 a.m. to 5:45 p.m. |
| Certification Committee Meeting (mostly a closed meeting) .....     | 1 to 4 p.m.         |
| Frequency Coordination Committee Meeting (closed meeting) .....     | 2 to 4 p.m.         |
| Membership Committee Meeting .....                                  | 2 to 4 p.m.         |
| BEE 2005 Exhibit Hall Preview (Ennes Workshop attendees only) ..... | 6 to 8 p.m.         |
| Board of Directors Meeting .....                                    | 6 to 10 p.m.        |

#### THURSDAY, OCTOBER 20

|   |                  |
|---|------------------|
| Fellows Breakfast (by invitation) ..... | 8 to 9 a.m.      |
| BEE 2005 Exhibit Hall Hours .....       | 9 a.m. to 4 p.m. |
| Certification Exam .....                | 1 to 4 p.m.      |
| Annual Membership Meeting .....         | 4 to 5 p.m.      |
| National Awards Reception .....         | 5 to 6 p.m.      |
| National Awards Dinner .....            | 6 to 8:30 p.m.   |



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## SBE's Broadcast Engineer of the Year 2004



# SBE returns to IBC for second year

For the second year in a row, SBE returned to the International Broadcasting Convention (IBC) to present the Society to an international audience. The annual convention, held in Amsterdam, the Netherlands, since 1992, attracts attendees from all over the world, with a strong attendance from Europe and Asia.

This year, the convention ran September 9-13 and drew more than 40,000 attendees from more than 120 countries. More than 1,000 exhibitors covered 11 halls, plus an outdoor exhibit area of remote broadcast equipment. The convention attracted more than 200 new exhibitors.

SBE Vice President Chriss Scherer, CSRE, CBNT, attended the convention to represent the Society and manned the SBE booth in Hall 8. CDs with information about SBE were available to visitors. Included on the CDs were notes on the benefits of regular and sustaining membership, details on the Program of Certification, a listing of the books available in the SBE Bookstore and more. Overall, there was a great deal of interest from attendees from Europe, Asia and Africa in the Society and the services offered to members.

"Several international SBE members who attended the convention stopped at the booth to say hello," said Scherer.

During the convention, Scherer and SBE International Committee Chairman

Chuck Kelly met with the leaders of the Korean Broadcast Engineers and Technicians Association (KOBETA), including President Hyo-Sun Moon and Vice President Jong-Won Park. SBE has had a standing partnership with KOBETA for many years, and discussions recently began for the Society to work with KOBETA in creating educational programs.

Scherer and Kelly also met with Ted Taylor, president, and Phil Rutter, member of the board of governors, of the British Kinematograph Sound and Television Society (BKSTS). The BKSTS has more than 2,000 members in the United Kingdom and is interested in pursuing an alliance with SBE, particularly to work with the BKSTS as it creates its own certification program. Initiated by Rutter, who is already familiar with SBE through sustaining membership, the initial discussions allowed the two societies to learn about each other and identify potential areas of cooperation.

IBC afforded Scherer and Kelly opportunities to talk to other international organizations as well

about future cooperation. IBC will be held in Amsterdam again in 2006.



SBE Vice President Chriss Scherer (center) speaks with visitors to the SBE booth at IBC.



More than 40,000 people attended IBC in September.

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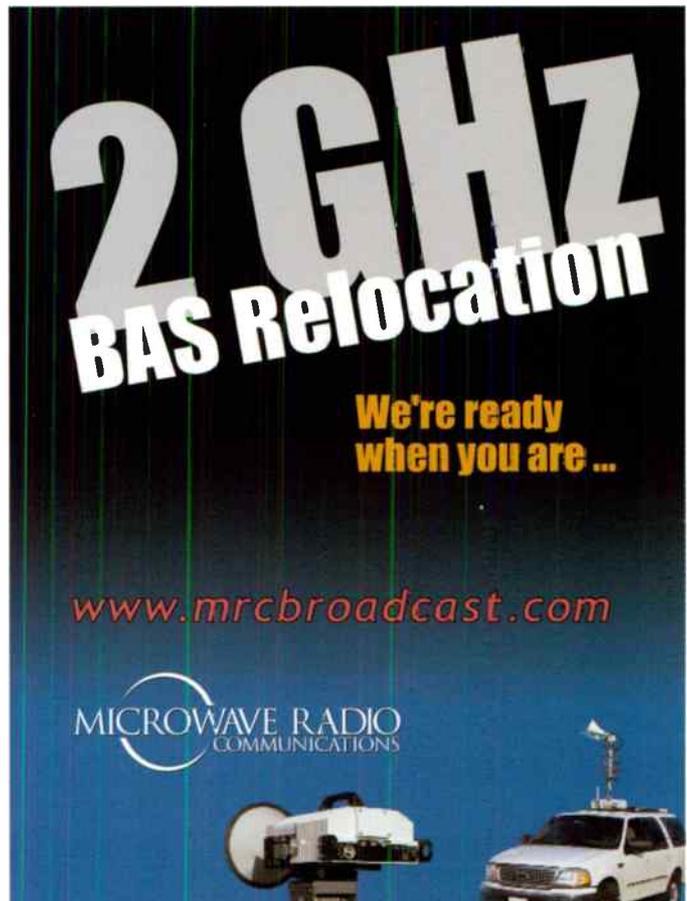


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## ELECTION *from page 1*

in New York City. He is a senior member of SBE and a member of Chapter 15 in New York. Thomas previously served as national secretary and also two terms as a director. He has also served as chairman of the SBE Finance Committee.

Six members were elected to seats on the Board of Directors. Elected to a two-year term on the SBE Board of Directors are:

**Jon A. Bennett, CPBE, CBNT**, director of engineering, Cox Radio-Richmond, Richmond, Va.



Jon A. Bennett, CPBE, CBNT



Andrea B. Cummis, CBT, CTO



Dane E. Ericksen, P.E., CSRTE, CBNT



Ted Hand, CPBE



Hal H. Hostetler, CPBE



Conrad H. Trautmann, CPBE

**Andrea B. Cummis, CBT, CTO**, senior vice president, engineering and technology, American Desi TV, Roseland, N.J.

**Dane E. Ericksen, P.E., CSRTE, CBNT**, senior engineer, Hammitt & Edison, Inc., San Francisco

**Ted Hand, CPBE**, Chesapeake, Va.

**Hal H. Hostetler, CPBE**, senior engineer/I.T. director, KVOA TV, Tucson, Ariz.

**Conrad H. Trautmann, CPBE**, senior vice president engineering, Westwood One Inc., New York City

They will be joined by five returning members of the board and Raymond C. Benedict, CPBE, who will continue his service to the board as immediate past president. The five returning directors are:

Ralph Beaver, CBT, president and CEO, Media-Alert, Inc., Tampa, Fla.

James T. Bernier, Jr., CPBE, CBNT, director of maintenance, design and engineering, Turner Entertainment Networks, TBS, Inc., Atlanta

Keith M. Kintner, CPBE, CBNT, radio-TV-film engineer, University of Wisconsin Oshkosh, Oshkosh, Wis.

Thomas R. Ray, III, CPBE, vice president, corporate director of engineering, Buckley Broadcasting, WOR Radio, New York City

Larry J. Wilkins, CPBE, CBNT, assistant director of engineering, Cumulus Broadcasting, Prattville, Ala.

The director seat currently held by Vincent Lopez will be vacated by virtue of his election to the position of secretary. President-elect Scherer will soon appoint someone to fill the unexpired term, subject to ratification by the Executive Committee.

Our thanks to seven members of Chapter 25 in Indianapolis who served as the official Board of Tellers on election night, September 1. That group, which tabulated the almost 1,000 ballots cast, included Phil Alexander, CSRE, AMD; Dave Fort, CPBE; Al Grossniklaus, P.E.; Larry Oaks; Dale Smiley, CPBE; Mike Rabey and Charlie Sears, CPBE.

Installation of officers and directors will be held at the SBE Annual Membership Meeting, Thursday, October 20, in Grapevine, Texas, as part of the 2005 SBE National Meeting. The National Meeting this year is being held in conjunction with BEE, North Texas Chapter 67's regional convention.



PHOTO BY: ANGEL D. BATES

The 2005 Board of Tellers included: (L-R) Dale Smiley, CPBE; Mike Rabey; Al Grossniklaus, P.E.; Dave Fort, CPBE; Charlie Sears, CPBE; Larry Oaks and Phil Alexander, CSRE, AMD (not pictured).

## “Who’s on First?”

— Lou Costello to Bud Abbott debuting before a national radio audience on the Kate Smith Radio Hour. February, 1938



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# SBE calls for ENG-RO, RPU-RO sites to be added to ULS

BY **Dane E. Erickson, P.E., CSRT, CBNT**  
*Chair, SBE FCC Liaison Committee*

**O**n September 6, SBE filed a Petition for Rulemaking with the FCC's Wireless Telecommunications Bureau (WTB) asking that FCC Form 601 and the Universal Licensing System (ULS) be modified to allow TV Pickup (TVPU) station licensees and Remote Pickup (RPU) station licensees to document the locations and heights of their ENG receive-only (ENR-RO) and RPU receive-only (RPU) sites in the ULS. Further, SBE asked that this information be searchable data so that interested parties could determine if there are any ENG-RO or RPU-RO sites within a given distance of a specified set of coordinates.

## ENG-RO SITES

Most TVPU licensees with electronic news gathering (ENG) operations have one or more central receive sites located on the tops of tall buildings, mountains or near the top of a tall tower. The reason for such ENG-RO sites is to increase the likelihood that, no matter where in the station's coverage area a news event occurs, an ENG truck (or other ENG platform) will have line-of-sight, or at least a useable bounce path, to at least one ENG-RO site.

The problem is that there is no way for TVPU licensees to document the locations or heights of their ENG-RO sites in the ULS. As a result, high power adjacent band base stations, such as Personal Communication Services (PCS) stations or Advanced Wireless Services (AWS, or 3G for third-generation wireless services) stations, sometimes are inadvertently co-sited with an ENG-RO site. Add to this mix 1,900-1,995 MHz Nextel 2 GHz base stations, 2,487.5-2,493 MHz Mobile Satellite Service (MSS) Ancillary Terrestrial Component (ATC) base stations and 2,496-2,502 MHz Broadband Radio Service Channel 1 (BRS1) base stations.

When the adjacent-band base station fires up with an equivalent isotropic radiated power (EIRP) of up to 1,600 watts, the base station can cause severe interference to the nearby, highly sensitive, ENG-RO site, even to the extent of taking the ENG-RO out of service until mitigation measures such as better front-end filtering

or a low noise amplifier (LNA), more immune to brute force overload (BFO), can be installed.

In some cases, the fix will need to occur at the offending commercial mobile radio service (CMRS) base station. For example, if the problem is one of out-of-band emissions (OOBE) from the CMRS base station, the addition of band pass filters, band reject filters, or even both, in front of the ENG receiver's LNA will be of no help because the interfering signal is seen as in-band, co-channel interference by the ENG receiver. The only solution is for the CMRS base station to further reduce the level of its OOBE.

In SBE's comments to WT Docket 04-356, Service Rules for AWS stations, SBE pointed out that if a "lenient" OOBE suppression requirement of just  $43 + 10\log$  (TPO, watts) was adopted, that the OOBE threat distance to a 2 GHz ENG-RO site would be approximately 6.7 km, using the criteria adopted by the Commission in the ET Docket 00-258 Seventh Report & Order (R&O) concerning Department of Defense (DoD) ultra high power uplinks sharing the 2,025-2,110 MHz TV Broadcast Auxiliary Service (BAS) band. This criteria was one of not degrading the receiver's noise threshold by more than 0.5 dB (versus a 1 dB noise floor degradation criteria allowed by TIA Standard TSB-10F, "Interference Criteria for Microwave Systems"). TSB-10F is cited in Section 101.105(c)(1) of the FCC's Private Operational Fixed Service (POFS) rules. Readers of this column will recall that those rules became applicable to BAS fixed link frequency coordinations at 2.5, 7 and 13 GHz, as of Oct. 16, 2003.

The SBE WT 04-356 comments pointed out, however, that if a stricter OOBE limit of  $67 + 10\log$  (TPO, watts) emission limit was adopted, as the Commission did for Educational Broadband Service (EBS) stations (formerly Instructional Television Fixed Service, or ITFS, stations), and for BRS stations (formerly Multi-channel Multipoint Distribution Service, or MMDS stations), in the WT Docket 03-66 rulemaking, that the OOBE threat distance would shrink to a far more manageable 0.42 km for analog ENG operations and 0.47 km for digital ENG operations.

But, CMRS operators can't avoid inadvertently locating their base stations near an ENG-RO site

if they have no practical way of knowing the locations of ENG-RO sites. Accordingly, in the July 2001 SBE comments to the ET Docket 01-75 rulemaking (intended as a general updating of the Part 74 BAS rules and, where possible, a harmonization of those rules with the Part 90 and Part 101 FCC Rules), SBE asked that the ULS be modified to allow TVPU licensees to document the locations and heights of their ENG-RO sites.

Unfortunately, the November 2002 ET 01-75 R&O ruled that this SBE request was "outside the scope of the rulemaking." SBE filed a petition for reconsideration in April 2003, arguing that the ENG-RO site proposal was entirely within the scope of the rulemaking, and asked OET to reconsider its decision. But, the October 2003 Memorandum Opinion & Order (MO&O) declined to do so. However, the MO&O did invite SBE to submit a dedicated petition for rulemaking, or to work informally with WTB staff to achieve the desired modifications to the ULS.

SBE then tried informal contacts with WTB staff to have the ULS and FCC Form 601 modified to all TVPU licensees to document the locations and heights of their ENG-RO sites, but unfortunately without success. Accordingly, SBE has now filed a petition for rulemaking.

## RPU-RO SITES

In the process of drafting the petition, it was decided that the petition should also ask that RPU licensees similarly be given the option of documenting the locations and heights of any RPU-RO sites that their two-way systems may employ. Such sites are sometimes used when a repeater is not allowed due to proximity to a border area (for example, Seattle radio stations with RPU systems north of Line A).

## OTHER FILINGS

By the time you read this, SBE will have most likely filed a second petition for rulemaking, one proposing to adopt minimum antenna performance standards for the 950 MHz Aural BAS stations. The December issue of *The Signal* should have information about that filing.



derickson@sbe.org

# New e-mail rules affect non-profits

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

The advance of personal communications technology has changed how we each communicate, both personally and professionally. In many ways we have become more efficient with our communications, leaving a detailed e-mail for someone to read at their convenience, rather than leaving a request for a call-back or a short voice message.

All of this convenience and potential for efficiency has also brought out the opportunists (and worse) that litter our e-mail boxes with unwanted and sometimes offensive messages. The proliferation of spam, not to mention viruses, has received the attention of the federal government in the last few years. The "Feds" sometimes approach a problem with a sledge hammer instead of a screwdriver and perhaps that is the case when we look at the CAN-SPAM Act of 2003.

The CAN-SPAM (Controlling the Assault of Non-Solicited Pornography and Marketing) Act of 2003, under the jurisdiction of the Federal Trade Commission (FTC), uses a broad brush in its attempt to control spam. Granted, it's a tough problem to get your arms around with its rather stealthy nature. When developing the new rules, the FTC included non-profit organizations right along with for-profit companies, thus making it more difficult for organizations, like SBE and its chapters, to communicate with members via e-mail.

E-mail has become a cost-efficient way for associations to communicate with their members and leadership. SBE regularly uses individual e-mails and e-mail lists to conduct business, host discussions and promote events and services. Many SBE chapters do the same, sending out meeting notices, newsletters or, for those who stage exhibitions, sell tradeshow booths and promote seminars for a fee.

The new rules are cumbersome and get rather complicated. I will attempt to summarize them a bit, to the extent that they affect non-profit organizations. The focus of CAN-SPAM is on messages whose primary purpose is to *sell* something. These are termed "commercial" messages. In the case of a typical SBE chapter, commercial messages would include those which advertise a trade show booth, advertising space in the chapter newsletter or promote a chapter-sponsored seminar that charges a fee to attend.

## COMMERCIAL MESSAGES

Commercial messages, whether unsolicited or not, are covered by the rules and are subject to three requirements:

- 1) They must provide an "opt-out" mechanism.
- 2) They must prominently disclose that the message contains an advertisement or solicitation.
- 3) The sender's valid physical postal address must be included in the message.

The "opt-out" message must give the recipient the opportunity to tell you to take him or her off the e-mail list. It can be in the form of a reply e-mail, phone call or fax, or they can be directed to a web-based location. Some organizations use the latter method as they can list a menu of e-mail topics they typically send (membership, book sales, booth sales, seminar announcements, etc.) and the recipient can check the types they do not wish to receive. If this method is used, the recipient must also be given the opportunity to select an opt-out for "all e-mail."

Further, if a recipient has directed the sender to not send additional commercial messages, CAN-SPAM prohibits the sale, lease, exchange, transfer or release of that person's e-mail address to anyone else for any purpose, except as required by law. Chapters that have used outside vendors to handle e-mail communications to promote attendance or booth sales at a regional convention should take special note of this.

Unless the recipient has provided "affirmative consent" to receive commercial e-mails, messages must include the disclosure that the e-mail contains an advertisement or solicitation. However, it is not required that the notice be placed in the subject line of the header.

As far as providing your valid postal address, the Act does not specify whether a post office box address will suffice, but the FTC has proposed to define "valid, physical postal address" to include any of the following: 1) the sender's current street address; 2) a post office box address the sender has registered with the U.S. Postal Service; 3) a private mailbox the sender has registered with a commercial mail receiving agency.

If a recipient elects to opt-out of receiving your commercial e-mail, you have *10 business days* to remove that e-mail address from the time you are notified. If you have received prior consent from a recipient to accept your

commercial e-mail, the only requirement that is dropped is the notification that the e-mail contains an advertisement or solicitation. The opt-out and physical address requirements still must be met.



## TRANSACTIONAL/RELATIONSHIP MESSAGES

Not all messages sent by associations are commercial in nature. Many are provided to members in the course of delivering benefits that the member expects to receive. These messages are classified by the FTC as "transactional or relationship" messages. To qualify in this category, a message must have at least one of five primary purposes. Of those five, three of the purposes are most associated with non-profit membership organizations like SBE.

- 1) Facilitating, completing or confirming a commercial transaction that the recipient previously agreed to enter into with the sender. This could include facilitating invoicing, processing payments and confirming member dues payments.
- 2) Providing information about membership status or confirmation of a meeting registration or sale of a book.
- 3) Delivering goods or services that the recipient is entitled to receive under the terms of a transaction that the recipient previously agreed to with the sender. Entering into a membership agreement with an association constitutes an existing transaction.

Transactional or relationship messages are exempt from the commercial message requirements except that they must not contain misleading header information, which I will cover shortly. Keep in mind that the same message you sent to a member that qualifies under the transactional or relationship message category, would not qualify if sent to a non-member. There is no "member relationship" established with a non-member.

## ALL MESSAGES

A requirement of all e-mail messages is that the header information cannot be fake or materially misleading. This includes the source, des-

tionation and routing information, domain name, originating e-mail address and anything else in the "from" line. A message has header information that is materially false or misleading if it disguises the origin of the message in such a way that an Internet Service Provider (ISP) processing the message, a state or federal agency enforcing the CAN-SPAM Act or a person receiving the message cannot locate the sender.

The "from" line need not contain the formal or full legal name of someone responsible for transmitting the message but may include the name of a person at the organization sending the message, a screen name, a trade name or a business division or department.

The "subject" line of a commercial message must be accurate and non-misleading and give the recipient some idea of what the body of the message is about.

### ENFORCEMENT

CAN-SPAM is enforceable by way of injunctions, restraining orders and/or fines brought by ISPs, state or federal agencies or officials, such as a state attorney general. There is no private right of action – a recipient of an unlawful e-mail cannot bring suit against the sender. However, the law orders the FTC to establish a "bounty hunting" system that would give 20 percent of any civil penalty collected to people who identify CAN-SPAM violators and provide information leading to their arrest.

In summary, when you are sending a message on behalf of your chapter, be sure you understand the difference between a commercial message and a transactional or relationship message. If you send a commercial message, one that attempts to sell something, be sure to include an opt-out mechanism, prominently disclose that the message contains an advertisement or solicitation and include your valid physical postal address. For all messages you send, be sure the header information is clear and not misleading.

New rules that govern sending faxes are also now in place and overseen by the FCC. I'll have more on this next time.

*Material for this article was obtained largely from the article "The Federal Spam Law: FTC Issues Additional Guidelines and Proposes New Rules for Complying with the CAN-SPAM Act" by Jeffrey S. Tenenbaum and Ellen E. Traupman of Venable LLP, June 2005, and made available to members of the American Society of Association Executives during its annual meeting.*

## SBE to co-sponsor AWRT award

The Society of Broadcast Engineers will serve as a cosponsor of a new award recently announced by the Association of Women in Radio and Television (AWRT). The new award, the 2006 Outstanding Woman in Broadcast Engineering, will be presented at the AWRT Leadership Summit, to be held March 9-11, 2006, in Washington, D.C.

The award is designed to recognize an exceptional individual and salute the inroads being made in achieving success in what has historically been a male-dominated career in electronic media. SBE is assisting AWRT with developing criteria for the award and several SBE members will serve with AWRT members on the selection committee. A call for nominations is expected in January. Nominees must be members of AWRT and/or SBE to be eligible.



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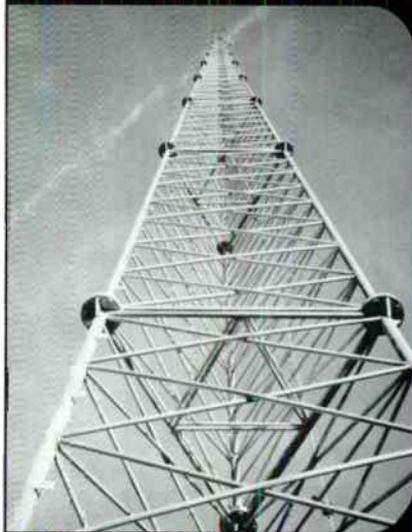
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# SBE recognizes accredited frequency coordinators

**M**ore than 40 individuals have become Accredited Frequency Coordinators since the new program was initiated by the Society of Broadcast Engineers in August.

The Society 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.

Though voluntary, the aim is that every individual who serves in a frequency coordinator capacity would choose to become accredited. This includes local/regional frequency coordinators appointed by an SBE chapter or other entity, as well as event coordinators, including those who serve as National Football League Game Day Coordinators (GDCs) in the SBE/NFL Game Day Coordination Program.

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.

## SBE Accredited Frequency Coordinators

(as of Sept. 12, 2005)

| Coordinator               | Location              | Affiliation  |
|---------------------------|-----------------------|--|
| Ralph Beaver, CBT         | Tampa, FL             | Chapter 39, Buccaneers GDC                                   |
| Scott Cason               | Louisville, KY        | Chapter 35   |
| Christopher Castro, CBT   | Kansas City, MO       | Chiefs Back-up GDC   |
| Jim Cole, CPBE, CBNT      | Phoenix, AZ           | Cardinals Back-up GDC  |
| Bill Cordell              | Houston, TX           | Chapter 105  |
| Howard Fine               | Los Angeles, CA       | SCFCC (Southern California Frequency Coordination Committee) |
| Dave Fort, CPBE           | Indianapolis IN       | Chapter 25, Colts GDC  |
| Jerry Fuehrer, CPBE       | Kearney, NE           | Chapter 87   |
| Andy Funk, CBTE, CBT      | Atlanta, GA           | Chapter 5  |
| Richard Goldy, CPBE       | Houston, TX           | Chapter 105  |
| Ted Hand, CPBE            | Norfolk, VA           | Chapter 54   |
| Rick Hartford, CSTE       | Shreveport, LA        | Chapter 44   |
| John Hellyer              | Denver, CO            | Chapter 48, Broncos GDC                                      |
| Gerald Hill, CBRE         | Federal Way, WA       | Seahawks GDC   |
| Bob Jenkins               | Charlottesville, VA   |  |
| Joe Kamenick, CPBE, CBNT  | Wausau, WI            | Chapter 80, Packers GDC                                      |
| J. Rowland Kraft, CPBE    | Sparks, MD            | Chapter 46   |
| Rick Markey, CPBE         | Lancaster, PA         | Chapter 41   |
| Stephen Mendelsohn, CBT   | Dumont, NJ            | Jets GDC   |
| Edward Miller, CPBE       | Broadview Heights, OH | Browns Back-up GDC   |
| Lloyd Mintzmyer, CPBE     | Hays, KS              | Chapter 3  |
| Lou Mueller, CPBE         | Altamont Springs, FL  | Chapter 43   |
| Dennis Orcutt, CPBE       | Oklahoma City, OK     | Chapter 85   |
| Gibson Prichard, CBNT     | Nashville, TN         | Chapter 103, Titans GDC                                      |
| Paul Reynolds, CPBE, CBNT | San Antonio, TX       | Chapter 69   |
| Larry Ritchie, Sr.        | Woodstock, VA         | Chapter 78   |
| Bill Ruck                 | San Francisco, CA     | NCFCC (Northern California Frequency Coordination Committee) |
| Bob Schneider             | Kansas City, KS       | Chapter 59, Chiefs GDC                                       |
| Rick Serre, CBT, CBNT     | Moline, IL            | Chapter 65   |
| Walter Sidas              | New York, NY          | Chapter 15, Jets Back-up GDC                                 |
| George Shank              | Conroe, TX            | Texans Back-up GDC   |
| William Sien              | Haymarket, VA         | Redskins GDC   |
| Kenneth Stiver            | Amherst, NY           | Bills GDC  |
| Bucky Stover              | Roanoke/Lynchburg, VA | Chapter 78   |
| Craig Strom               | Chicago, IL           | Chapter 26   |
| Mike Szabo                | Cleveland, OH         | Chapter 70   |
| Greg Thies                | Seattle, WA           | Chapter 16   |
| Ron Thompson              | Seaside, CA           |  |
| David Turnmire, CSTE      | Pocatello, ID         | Chapter 115  |
| Ralph Turpen              | Evansville, IN        | Chapter 121  |
| Karl Voss                 | Phoenix, AZ           | Chapter 9, Cardinals GDC                                     |
| Larry Wilkins, CPBE, CBNT | Montgomery, AL        | Chapter 118  |
| Charlie Wooten            | Panama City, FL       |  |

# ENNES

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The Ennes Educational Foundation Trust offers scholarship, presents educational programming and provides grants for educational projects that benefits broadcast engineering and the broadcast engineer. To make a tax-deductible donation, make your check payable to the Ennes Educational Foundation Trust.

After the tragic events of Sept. 11, 2001, SBE and the Ennes Trust established the Broadcast Engineer Relief Fund to benefit the families of the six broadcast engineers who were lost at the World Trade Center. Tax-deductible donations may still be made to the Ennes Educational Foundation Trust, with "Relief Fund" written on the memo line.

Mail donations in care of the Society of Broadcast Engineers, 9247 North Meridian Street, Suite 305, Indianapolis, IN 46260. The Ennes Trust is a 501(c)3 non-profit, charitable organization, EIN# 35-1506445.

## HAMnet

**who?** SBE Hams

**what?**

Meeting of Chapter 73,  
SBE's "Chapter of the Air"

**when?**

Second Sunday of every month at 0000 GMT

**where?** 14.205 MHz

Join host Hal Hostetler, WA7BGX

# Don't kill the golden goose

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

**Y**ou remember the dark times, don't you? The times when the FCC said that broadcasters had to vacate the 1990-2025 MHz band by a date certain, even though there was no agreement in place with an MSS service provider for reimbursement of expenses? When we all knew that most of those MSS providers had already gone bankrupt anyway and had no real ability to commence service to customers in Channels A1 or A2, much less pay to provide you with comparable facilities for your TV BAS hardware.

Perhaps you don't remember (but I do) that when negotiations were attempted on behalf of BAS or LTTS licensees, the MSS providers asked for dates of purchase of equipment so that they could offer to replace it at depreciated cost, rather than replacement cost. With LTTS licensees, the response to offers to negotiate was that the lawyers for the MSS company believed that they were not required to replace hardware for displaced LTTS licensees, even though the FCC Docket 95-18 orders at the time made clear that LTTS licensees were to be treated the same as BAS licensees. In some cases, efforts to commence good faith negotiations with MSS licensees were met with stony silence and no response at all.

Despair ruled the land. Broadcasters assumed (realistically) that they were just going to have to fund the 2 GHz BAS transition themselves. FCC first told us that we would have to do a transition in two parts, thus making us move twice. Then they told us that we would have to move on a market-by-market basis, which we explained to them simply wouldn't work. The adjacent market problem, among other things, made the situation untenable. FCC's response: you figure it out. Make it work somehow. In the words of the Beatles, take this broken wing and learn to fly.

Then, in what has to be among the most callous positions FCC has ever taken, they told us that if we weren't in the top 30 markets, we would not get any reimbursement for the relocation at all. When SBE, NAB and MSTV went to FCC and asked why this obviously fundamentally unfair and arbitrary decision was made, and explained that there is actually more TV ENG in medium and smaller markets than in the largest markets, FCC simply said that the decision was "all about money." Of course it was. The FCC didn't want to saddle the nascent MSS entities with so much expense in relocating incumbent

broadcasters that they couldn't get their technology off the ground (literally). So the broadcasters were told to fly with the broken wing.

I am going through this history, which you all keenly remember anyway, in order to contrast the hopeless situation we were in just a couple of short years ago with the bright situation we are in right now. Onto the scene marches Nextel, a company which has, from the broadcasters' perspective, done absolutely everything right. This is a company that saved our bacon. They came in and announced that they would provide BAS licensees with "comparable facilities" and not retune, but replace all equipment, and with digital equipment yet. They would do the digital transition for us. They not only announced their intention early, but they backed it up with action.

They were not knowledgeable about broadcasting, because that wasn't their business, so they met repeatedly with SBE, NAB and MSTV to learn what they needed to know. They hired cracker-jack and well-respected broadcast engineers (I won't name names here, you know who you are; especially you, Cindy) and a top-notch consulting engineering firm to advise them. They hired teams of broadcast engineers and contract specialists to work with individual markets to get the transition done fast, easily and smoothly. They worked with manufacturers to ensure that there was an adequate supply of replacement equipment. They agreed to do the transition on a regional basis, to eliminate as much as possible the adjacent market problem. And they contracted with SBE to help introduce them, and to explain the transition plans and mechanics to broadcast engineers at the local level, market by market.

In doing all this, Nextel stretched the FCC's concept of "comparable facilities" as far as it can go in this context. They are providing licensees equipment that is inherently better than what they have now, comparing only features and not condition of equipment. They are reimbursing relicensing costs, reasonable attorney's fees, replacement antennas that are unique to the transmitters at issue, tower work and other real, ancillary costs that broadcasters will actually incur in the course of the transition to the narrower 2 GHz channels.

Why are they doing all this? Surely enough, Nextel benefits from a fast, seamless transition. They get the 2 GHz replacement spectrum they need because they are giving up a lot of 800 MHz spectrum in the 800 MHz rebanding proceeding (which itself is a daunting and complex transi-

tion, doubtless more so than ours at 2 GHz). Surely enough, Nextel gets credit against federal obligations, according to the deal they struck

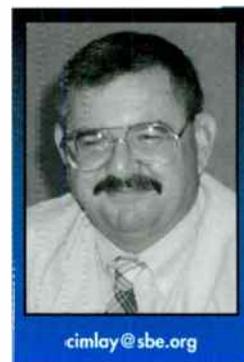
with FCC, for some of the expenses they incur in the 2 GHz transition. No company would take on this large and complicated a project unless there was something in it for them. At least, Nextel stockholders hope they would not.

But the shotgun of some broadcasters seems to be pointed in the direction of the Nextel golden goose, and this is really, really bad. There seems to be a thread of argument, now that the transition is ongoing, that replacement boards, or tripods or other types of ENG equipment ought to be included, or that other types of hardware unrelated to the frequency change ought to be replaced. The negotiations in some markets are going slower than they should because of, in some cases, unreasonable demands by broadcasters in putting their "replacement inventories" together.

If you are tempted to do this, think twice. Think more than twice: think back. Back to where we were before Nextel came on the scene. Nextel has, frankly, done everything right so far. Treat them with the same consideration they have shown to us. Don't try to "gold plate" the replacement equipment. Don't throw the kitchen sink in your inventories. And for gosh sake, don't delay this process.

Nextel expects you to be complete in your inventory. Do that. Take what you are entitled to have. List what needs to be replaced to put you where you were prior to the transition. For most broadcast licensees, that means box-for-box replacement and installation and license modification costs, and perhaps some antenna work. Take the replacement equipment, with comparable features. that *requires* replacement in view of the new band parameters and leave it at that. Don't kill the golden goose.

Not only is it important to work cooperatively with Nextel to get the transition done on a timely basis; you need to treat Nextel the same way they have treated you because it is the right thing to do. As I heard a colleague of mine put it the other day, broadcasters should bow in the direction of Reston, Va., every time they think about where we were and where we are now. What a change.



# Ennes Workshops in Dallas, Boston

## ■ Workshop heads to Nashville in January

The Ennes Educational Foundation Trust, in cooperation with the Society of Broadcast Engineers, will present Ennes Workshops in October in the Dallas/Ft. Worth area and in Marlborough, Mass., outside of Boston.

The Ennes Workshops are full-day programs, and both events are part of SBE regional conventions sponsored by local chapters. The workshops will include both television and radio tracks. Presentations are non-commercial and focus on technology. SBE has partnered with the Advanced Television Systems Committee (ATSC) to support portions of these two workshops.

SBE Education Committee Chairman and Ennes Trustee Fred Baumgartner, CPBE, CBNT, is organizing the workshops and will handle moderator duties. Baumgartner is with Leitch, Inc.

The first Ennes Workshop will be held October 19 at the Hilton DFW Lakes Executive Conference Center as part of the Chapter 67 Broadcast Equipment Expo (BEE), in Dallas/Ft. Worth. This event is being held in conjunction with the SBE National Meeting. Visit the Chapter 67 website, [www.sbe67.org](http://www.sbe67.org), or the SBE national website, [www.sbe.org](http://www.sbe.org), for details and to register. The registration fee is just \$25 and includes lunch and exclusive exhibition hours following the workshop. Free appetizers and a cash bar will be available to Ennes Workshop attendees while they preview the tradeshow.

The second workshop will be held October 25 at the Best Western Royal Plaza Hotel & Trade Center in the Boston suburb of Marlborough. This workshop is being held as a part of the BOS-CON SBE Regional Convention presented by SBE Chapter 11. The registration fee is just \$25 and includes a continental breakfast, lunch and a walk-around dinner during exclusive tradeshow hours after the workshop. To register, visit the BOS-CON website at [www.bos-con.com](http://www.bos-con.com).

The programs in Dallas and Boston have been carefully planned for each venue. Some sessions will be identical to allow the maximum number of attendees to benefit from the same information. Other sessions have been selected specifically for each location.

## SHARED SESSIONS

Registration for both workshops opens at 9 a.m. Sessions begin at 10 a.m. in separate radio and TV tracks. Each workshop will close

with its own venue-specific joint session, ending at 5:45 p.m. Shared sessions include:

**Cost-Effective Implementation of HD Radio Transmission**, presented by Alan White, Broadcast Product Engineer, Continental Electronics Corporation. The enhanced user experience now available with HD Radio™ technology (also known as IBOC) is not without challenges. More stringent requirements on transmission equipment have led to the development of a variety of methods of implementing IBOC technology, often requiring new transmission equipment. This session will address IBOC in general, methods of broadcasting both the analog and digital signal and, in particular, the most cost-effective configurations for implementation.

**New Content Storage Schemes for HD Radio**, presented by Jeff Zigler, Vice President of Sales Engineering, Prophet Systems Innovations. While the process of digitizing and storing content is not new, the ways available to accomplish these tasks have changed in the last 10 years. What are the best ways to store compressed and uncompressed audio? Will I need to store multiple versions of certain content types? How can I expand my storage capacity without disruption of service? Do I need an enterprise class storage system, and how would I implement and manage one? This session will provide answers to these questions, as well as review some of the exciting new storage system architectures available to the HD broadcaster.

**The Truth about Audio Cable**, presented by Steve Lampen, Technology Specialist, Multimedia Products, Belden Electronics Division. What can we measure in wire and cable and what can't we? This session divides what's important in the construction of audio cable and what makes a difference in performance, including resistance, capacitance, inductance, impedance, skin effect, copper purity, directionality and many other parameters. It also addresses high-end home audio and professional audio installations.

**Passive RF Systems and Mask Filters for Television Transmitters**, presented by Scott Burgess, Senior RF Engineer, Electronics Research Inc. This session will outline the function of passive RF systems typically provided with television transmitters. It will explain the reason waveguide and coaxial components are used for various channels / power levels and the key relationships between channel, insertion loss and surface area required for cool operation. It will explain the need for intermodulation filters and the difference between

filters for analog and digital transmitters. Different approaches for dealing with the constraints of high power design will be examined, as will various approaches to channel combiners.

**ATSC Update: The Status of DTV**, presented by Jerry Whitaker, Vice President to Standards Development (Dallas) and Mark Richer, President (Boston), Advanced Television Systems Committee. This session provides an overview of current activities within the ATSC and what they mean to the television industry. Among the subjects covered will be: status of the DTV transition; new transmission concepts, including distributed transmission and E-VSB; interactive television (it's ACAP, and it's here); ENG transmission/communications work currently underway, and PSIP and PMCP.

**DTV Transport System Overview**, presented by Richard Chernock, Director of Technology (Dallas) and Gomer Thomas (Boston), Triveni Digital, Inc. The transition to DTV has resulted in a major change in the base technology for television stations. MPEG-2 transport is now the underlying mechanism for carrying MPEG-2 encoded video and AC-3 encoded audio. This session will examine the fundamentals of DTV transport, video and audio encoding, including the practical aspects of how it all connects together.

**PMCP – Enabling Truly Dynamic PSIP**, presented by Chris Lennon, Harris Broadcast. The FCC requires that PSIP accurately reflect what you broadcast. Without adding manpower, how do you accomplish this? The data required is in your systems, and PMCP will help you get it out and into your ATSC transport stream. This session will examine where the data is and how best to use PMCP. It will also look at the opportunities that dynamic PSIP present to you as a promotional tool, and implementation issues that should be considered. It will review systems presently in place and how to leverage them.

## DALLAS-ONLY SESSIONS

**Improved Spectral Compliance for FM HD Radio**, presented by Wendell Lonergan, Technical Sales Manager, Nautel. HD Radio™ implementation has led to a great deal of discussion about spectral re-growth problems when digital carriers intermodulate with the primary FM carrier, causing spurious emissions on adjacent channels. Conventional fixed pre-correction techniques have not provided a sufficient solution to ensure spectral integrity. Changes in VSWR, adjustments in the output power of the transmitter, changes in amplifier temperature or aging and

failures of RF amplifiers can result in transgressions of the HD Radio mask and interference with other stations. This session presents theory and measured performance of digital adaptive pre-correction under unstable environmental conditions.

**Broadcast Management for Broadcast Engineers**, presented by Terrence M. Baun, CPBE, CBNT, President, Criterion Broadcast Services. This session will examine the relationships between senior management and engineering, uncover points of conflict and agreement and promote and reinforce management skills. The importance of engineering time management skills, cost-saving initiatives and a "larger view" of station goals are emphasized, as is the necessity for a cooperative interdepartmental attitude in promoting a positive workplace experience. Examples of engineering and senior management assessments of each other's roles will be provided in a discussion period at the end.

**Distinct 5.1 Surround Audio**, presented by Kirk Harnack, U.S. Director of Sales, Telos/Omnia/Axia. Surround is the "killer app" for HDFM broadcasting. More and more people are becoming convinced that FM radio has the potential to take a major step forward with this technology. There are currently four proposed methods for surround broadcasting, which can be divided into two categories: the three matrix systems and the MPEG spatial system. This session will point out critical technical issues that broadcasters must be aware of as they consider surround, lest they degrade and damage their FM-stereo service.

**Digital Archiving for the Television Newsroom**, presented by Bob Valinski, Director of Business Development, Crispin Corporation. This session will explore the workflow requirements of the local television newsroom with regards to archiving video assets. A brief analysis of how film and tape is archived in a newsroom will set the stage for examining the requirements of a digital asset management system. Topics will include how to create metadata to enable searches, compatibility of systems and different storage options available today.

**Managing the DTV Closed Caption Transition**, presented by Phil McLaughlin, President, EEG Enterprises, Inc. This session emphasizes the challenges presented by DTV closed captioning, a new required program element. An overview of existing standards, distribution methods and content creation techniques will be given. Examples of broadcast plant architectures will be presented and discussed. Topics will include live creation, upconversion, down-conversion, regeneration of upstream content and monitoring.

**Engineering Considerations for Digital Microwave STL, TSL and ICR**, presented by Scott Nelson, Senior Manager,

Marketing and Business Development / Wireless Transmission Division, Alcatel. Digital microwave radios play a crucial role in broadcasters' transition to DTV. However, impairments due to multipath, as well as adjacent channel and co-channel interference, can render a digital microwave signal unusable without aggressive countermeasures. Fortunately, there is electronic technology and engineering design methods that effectively deal with these impairments and enable broadcasters to use digital microwave with high capacities over long paths.

**FCC Presentation**, Dallas will close the Ennes Workshop with a joint session presented by a representative from the FCC Dallas Office. It will give an overview of FCC enforcement, how it relates to broadcasting and close with a Q&A time.

## **BOSTON-ONLY SESSIONS**

**Spectral Re-growth in Analog Transmitters**, presented by Bob Surette, Shively Labs. As more and more stations implement IBOC transmission, spectral re-growth in analog transmitters is becoming a problem. So far the problem has been seen in High Level Combining, Mid Level Combining and to some degree in back feeding of a multi station combined system. This paper will talk about how the problem is manifesting itself, what the root cause is and what is being done to correct the problem.

**"Top Ten" FCC Violations**, presented by Terrence M. Baun, CPBE, CBNT, President, Criterion Broadcast Services. The Alternative Broadcast Inspection Program (ABIP) offers the opportunity for stations to be inspected by FCC-trained engineers in an informal and relaxed environment. When analyzing station performance following these inspections, a compliance pattern emerges which can be useful in assessing a station's ability to pass a "real" FCC inspection. This session will discuss the most common violations Baun has found in performing more than 500 such inspections. Among hot button issues to be discussed are chief operator requirements, station logging, EAS, tower regulations, occupied bandwidth measurements and some engineering Public File issues.

**What HD Radio Needs to Wow Today's Radio Listeners**, presented by Frank Foti, President of Omnia Audio, Omnia/Telos Systems. Your car may have four speakers – but you use them to listen to two-channel FM broadcasts. Now, imagine your radio feeding you immersive digital surround music and cinematic production effects – the sort of thing that you hear in a movie theater or on a home surround set-up. While the focus for multi-channel audio has been elsewhere, this session will discuss why surround actually makes a lot of sense for radio.

**Measuring the 8-VSB Signal**, presented by Ketan Bhaidasna, Modulation Sciences, Inc. With the advent of DTV, broadcast engineers have to relearn and acquaint themselves with the underlying technology that makes DTV broadcast possible. Many technical issues must be converted into performance metrics for easy monitoring and measurement of the DTV signal. This session introduces the data and signal processing blocks used to make an 8-VSB signal, which is used for terrestrial broadcast in North America.

**The Practical Side of PSIP**, presented by Gomer Thomas, Triveni Digital, Inc. In addition to a brief background on the basic fundamentals of PSIP, the major focus of this session will be on the practical side of PSIP implementation: How PSIP generators fit into the DTV station architecture, how information flows in and out of the PSIP generator, what information is needed for PSIP (including sources) and PSIP solutions for "interesting" configurations (such as central-casting and remote transmitters/multiplexors).

**DTV Closed Captioning**, presented by Gerry Field, Project Manager, WGBH, National Center for Accessible Media, Boston. On Jan. 1, 2006, FCC rules will require closed captioning on virtually all new programming on both analog and digital channels. Closed captioning for DTV involves new techniques and standards. This session will provide an overview of legal requirements and compliance issues, technologies, techniques and system solutions. Examples from the field will illustrate common mistakes, as well as best practices.

Boston will also close the Ennes Workshop with a joint session:

**The Lost City 2005 Undersea Exploration – Behind the Scenes**, presented by Jim Newman, Woods Hole Marine Systems; et. al. The crew that discovered the Titanic will talk about their latest undersea exploration to the Lost City near the mid-Atlantic ridge. Newman will talk about the HDTV-equipped Remotely Operated Vehicles that work their magic underwater to bring live video from 2,000 feet down. Willis Pelagian and Dave Raynes will talk about the video systems and production aspects of the exploration.

## **NASHVILLE**

A third workshop will be held in Nashville, Tenn., on Jan. 10, 2006, hosted by SBE Chapter 103 and held in conjunction with the Tennessee Association of Broadcasters. Details about the location, time and registration fee will be announced soon. Registration will be handled through the SBE National Office.

*Make plans to attend one of these excellent educational programs.*

# Growth and change

BY **Chriss Scherer, CSRE, CBNT**  
*Chair, National Certification Committee*

It's natural for things to change and grow. We see this everyday, especially in our careers. The Society of Broadcast Engineers and the Program of Certification have seen tremendous growth over the past few years, and now a change in leadership is about to shape this future growth.

The newly elected officers and board members will take on some new responsibilities, and they will also carry the existing momentum forward. But as we look forward, it's important to look back as well. Unless you

know where you come from you have no idea where you are going.

Troy Pennington appointed me to be the chairman of the SBE National Certification Committee at the end of 2001 after serving two terms on the Board of Directors. I felt that I had some big duties to fill, especially following the previous committee chairmen: Terry Baun, CPBE, CBNT; David Carr, CPBE, and Jim Wulliman, CPBE. I admit that I was unsure of my ability to accept the task. I considered declining the reappointment in 1998, but I'm glad I did not.

The National Certification Committee – Jim Bernier, CPBE, CBNT; David Carr, CPBE; Dane Ericksen, P.E., CSRTE, CBNT; Doug Garlinger, CPBE, CBNT; Ralph Hogan, CPBE, CBNT; Troy Pennington, CSRE, CBNT; Rick Ryan, CPBE; Joe Snelson, CPBE; Roy Trumbull, CSBE, and Larry Wilkins, CPBE, CBNT – is a talented group of dedicated people. Each of them has a dedication to the Program of Certification that makes working with this group a gratifying experience. Likewise, Certification Director Linda Baun and Certification Assistant Megan Clappe are invaluable to the Program. They have kept the committee and me on task and focused.

The unsung champions are the local certification committee chairmen. We have recognized their commitments at the SBE Membership Meeting at the NAB convention, but they work in the background and too often do not receive the recognition they deserve. I thank all of them for their efforts.

Looking back on the past four years, there are several certification accomplishments of which I am proud. These accomplishments are listed in the sidebar at left, and they reflect the efforts of many people.

In addition, there are a few projects that I hope to see completed in the coming months. SBE CertPreview has seen success since it debuted, and now that two specialist certifications have been introduced, we will add sections for these exams. We have also received a great deal of feedback on CertPreview, and I hope that we can incorporate some of these ideas into a new version.

Part of the specialist certifications plan was to also provide tutorials on the subjects. This has proved to be a challenge because of logistic and implementation issues, but as president

I will work with the various committees to see this happen.

While I accept my new responsibilities as president of the Society, I will be appointing someone to take on the Certification Committee chairman's duties. I am pleased that Jim Bernier, who has served on the National Certification Committee for more than 10 years, has already agreed to accept the appointment. I have shared my ideas for future certification plans with Jim, and it is now up to him to lead the committee and the program. I have every confidence in his ability. I will remain a member of the Certification Committee.

There is one other change to the makeup of the National Certification Committee. After 16 years of serving on the Committee, Roy Trumbull has decided to step down. Roy has been a strong supporter of certification and has always brought a scientific point of view to many of the discussions of the committee. His ability to cite ATSC documents, chapter and verse, is amazing. Thanks, Roy, for all you have done.

As Roy steps down, another person has been appointed to the committee. Actually, I should say reappointed. Terry Baun has agreed to rejoin the committee. Terry stepped down from the committee in 2001. Welcome back, Terry.



## RECENT CERTIFICATION ACCOMPLISHMENTS

**2002:** Fifth edition of the *Television Operator's Certification Handbook* is released; work on the *Certification Handbook for Radio Operators* begins; Program of Certification receives approval from the Department of Veterans Affairs

**2003:** *Certification Handbook for Radio Operators* is released; National Skill Standards Board recognizes SBE Certification Program; Sample School Curriculum Subcommittee forms; process begins to release certification sample tests on CD; chapter certification chairmen service recognition at the spring SBE Membership Meeting begins; *SBE Certification & Membership Handbook* gets a new look

**2004:** SBE CertPreview, Certification Sample Test Software, is released; Certification Committee holds strategic planning meeting and sets several goals; sample curriculum is released; *Certification Handbook for Radio Operators*, like the *Television Operator's Certification Handbook*, sees university use as textbook and final exam; certification hits all-time high of 5,400

**2005:** Sixth edition of the *Television Operator's Certification Handbook* is released; AM Directional Specialist Certification is introduced; certification synchronization is created; 8-VSB Specialist Certification is introduced

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

**What should you do if your station does not receive an EAS RWT or RMT?**

- A. Investigate to determine why.
- B. Assume that the sending station failed to send a test.
- C. Log that no test was received.
- D. Contact the local emergency preparedness center.

From the CSRE and CSTE sections of CertPreview.  
Turn to page 30 for the answer.

# New SBE Certification Achievements

## LIFE CERTIFICATION

Professional Broadcast Engineers and Senior Broadcast Engineers who have maintained SBE Certification continuously for twenty (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)

Jerry Brown, Oxford, NC - Chapter 60  
Ted Hand, Spokane, WA - Chapter 54  
Jacky McCarty, Friendswood, TX - Chapter 105  
Gary Porter, Viola, KS - Chapter 3  
Dave Rattener, Spokane, WA - Chapter 16  
Edmund Reid, Arlington, TX - Chapter 67  
George Werl, Jr., Minneapolis, MN - Chapter 17

## NEWLY CERTIFIED CPBE

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

### CERTIFIED PROFESSIONAL BROADCAST ENGINEER (CPBE)

Benjamin Britzler, Charlotte, NC - Chapter 93  
Donald Driskell, Brandon, MS - Chapter 125  
Richard Funk, Richmond, IN - Chapter 33  
Paul Kempter, Palm Harbor, FL - Chapter 39  
Gary Krohn, Topeka, KS - Chapter 3  
Thomas Rogers, Fort Worth, TX - Chapter 67

## SBE CERTIFIED SCHOOL COURSE COMPLETION

### CERTIFIED BROADCAST TECHNOLOGIST (CBT)

**Bates Technical College**  
Derek Bennet, Enumclaw, WA  
Marcello Liguori, Tacoma, WA  
Alan Oakland, Tacoma, WA  
Allan Steinberg, Puyallup, WA

**Defense Information School**  
Jason Alestra, Barstow, CA

## AUGUST EXAMS

"Thank You" CHAPTER CERTIFICATION CHAIR FOR YOUR ASSISTANCE

### CERTIFIED SENIOR RADIO ENGINEER (CSRE)

Michael Hayden, Dekalb, IL - Chapter 26  
Gary Richardson, Midfield, AL - Chapter 68

### CERTIFIED BROADCAST RADIO ENGINEER (CBRE)

Gregory Armstrong, Columbus, OH - Chapter 52  
Perry Carter, St. Paul, MN - Chapter 17  
Richard Hall, Madison, TN - Chapter 103  
Mike Raude, Shortsville, NY - Chapter 57  
Timothy Stephens, Toccoa, GA - Chapter 5  
Christopher Tarr, Delafield, WI - Chapter 28

### CERTIFIED BROADCAST TELEVISION ENGINEER (CBTE)

John Cleary, Rome, GA - Chapter 5  
Don Hackler, Sunnyvale, CA - Chapter 40

### CERTIFIED AUDIO ENGINEER (CEA)

Harry Scott, Woodbridge, VA - Chapter 37

### CERTIFIED VIDEO ENGINEER (CEV)

Dan Stark, Leawood, KS - Chapter 59

### CERTIFIED BROADCAST NETWORKING TECHNOLOGIST (CBNT)

Paul Bean, Mililani, HI - Chapter 63  
Perry Carter, St. Paul, MN - Chapter 17  
Ronald Day, Taylor, MI - Chapter 82  
Michael Ellis, Research Triangle Park, NC - Chapter 93  
Mohammad Fatmi, Raleigh, NC - Chapter 93  
Sarah Fisher, Research Triangle Park, NC - Chapter 93  
Michael Hayden, Dekalb, IL - Chapter 26  
Bonita Head, Raleigh, NC - Chapter 93  
Jack Hicks, Ashburn, VA - Chapter 57  
Lonny Leach, Redford, MI - Chapter 82  
Daryl Mukai, Honolulu, HI - Chapter 63  
Larry Price, Los Angeles, CA - Chapter 47  
Jerald Rathbun, Mesa, AZ - Chapter 9  
Kimberly Stahl, Research Triangle Park, NC - Chapter 93  
Claire Womack, Raleigh, NC - Chapter 93

### CERTIFIED BROADCAST TECHNOLOGIST (CBT)

Eric Smith, Arvada, CO - Chapter 48  
Steven Carlton, Rochester, NY - Chapter 57

### CERTIFIED TELEVISION OPERATOR (CTO)

Quinton Bates, Indianapolis, IN - Chapter 25  
David Madilla, Albuquerque, NM - Chapter 34

## CERTIFIED BY SPECIAL PROCTORED EXAMS

### CERTIFIED BROADCAST TELEVISION ENGINEER (CBTE)

Steven Barousse, Misawa Air Base, Japan

### CERTIFIED BROADCAST NETWORKING TECHNOLOGIST (CBNT)

Jesse Pangelinan, AFN Korea  
Tanja Waite, AFN Korea

### CERTIFIED BROADCAST TECHNOLOGIST (CBT)

Steven Buffett, Etobicoke, Ontario, Canada  
Anthony Guerra, Toronto, Ontario, Canada

## CERTIFIED BY LICENSE

### CERTIFIED BROADCAST TECHNOLOGIST (CBT)

Kenneth Denson, Muscle Shoals, AL - Chapter 111  
Michael Ketchersid, Yukon, OK - Chapter 85  
John Majka, Louisville, KY - Chapter 35  
Arthur Mendell, Kirklint, IN - Chapter 25  
Dwight Morgan, Fountain Hills, AZ - Chapter 9  
Armond Noble, Sacramento, CA - Chapter 43  
Michael Ridley, Welland, Ontario, Canada

## CERTIFIED RADIO OPERATOR (CRO)

### CERTIFIED RADIO OPERATOR (CRO)

William Hill, Mesa, AZ

## CERTIFIED TELEVISION OPERATOR (CTO)

### CERTIFIED TELEVISION OPERATOR (CTO)

Marvin Cox, Morrison, CO  
Chris Edmonds, Sylva, NC  
Stephen Small, Indianola, MS

### Colorado Satellite Broadcasting

Eileen Agosta, Westminster, CO

### Equity Broadcasting

Jermiah Ashcraft, Little Rock, AR

### KFVS

Jared Toney, Cape Girardeau, MO

### KPNB

Staci DeGagne, Reno, NV

### KWCV

Nicolas Russell, Wichita, KS  
Vernon Stephens, Wichita, KS

### New Frontier Media

Antonio Lucio, Lakewood, CO  
Kevin Roper, Denver, CO

### WHNS

Thomas Beebe, Greenville, SC  
Scott Bishop, Greenville, SC  
Jonathan Randall, Simpsonville, SC

### WRCB

Henry McKinney, Chattanooga, TN  
Geoff McRae, Chattanooga, TN

### WSFJ

Jason Krapp, Columbus, OH

## RECERTIFICATION

The following applicants completed the recertification process either by re-examination, point verification through the Local Chapters & National Certification Committee approval and/or met the service requirement

### CERTIFIED PROFESSIONAL BROADCAST ENGINEER (CPBE)

Mansur Abdulhussain, Westmont, IL - Chapter 26  
Paul Brown, Arlington, TX - Chapter 67  
Gordon Carter, Lagrange, IL - Chapter 26  
Kenneth Fine, Ft. Worth, TX - Chapter 67  
Derk Van Rijsewijk, Ballston Spa, NY - Chapter 58  
Johnny Vines, Sullivan, MO - Chapter 55  
Eugene Zastrow, San Francisco, CA - Chapter 40

### CERTIFIED SENIOR RADIO TELEVISION ENGINEER (CSRTE)

Thomas Lowther, Twin Falls, ID - Chapter 115

### CERTIFIED SENIOR RADIO BROADCAST TELEVISION ENGINEER (CSRBTTE)

Clarence Bryant, Greenville, SC - Chapter 86

### CERTIFIED SENIOR RADIO ENGINEER (CSRE)

James Thompson, Abilene, TX - Chapter 67

### CERTIFIED SENIOR TELEVISION ENGINEER (CSTE)

Robert Chambers, Orange City, FL - Chapter 42  
Thomas Sibenaller, Onalaska, WI - Chapter 112  
Jeffrey Tucker, Terre Haute, IN - Chapter 25

### CERTIFIED BROADCAST RADIO/TELEVISION ENGINEER (CBRTTE)

Leon Amstutz, Fort Wayne, IN - Chapter 30  
Yidong Chen, Cortland, OH - Chapter 122  
Brian Goodman, Eau Claire, WI - Chapter 112  
John Humpal, Waterloo, IA - Chapter 109

### CERTIFIED BROADCAST RADIO ENGINEER (CBRE)

Martin Acuff, San Lorenzo, CA - Chapter 40  
David Antoine, Bronx, NY - Chapter 15  
Richard Barnes, Pasadena, MD - Chapter 46  
Theodore Bordelon, Vidor, TX - Chapter 134  
Pablo Garcia, Burbank, CA - Chapter 47  
Jesus Gomez, Rio Piedras, PR  
Albert Muick, New York, NY - Chapter 15  
Kevin Smith, Burnt Hills, NY - Chapter 58

### CERTIFIED BROADCAST TELEVISION ENGINEER (CBTE)

John Langer, Manhattan, KS - Chapter 3  
Michael Mattson, Dallas, OR - Chapter 124  
Michael Regan, Anaconda, MT - Chapter 132  
Eric Reinert, Alburtis, PA - Chapter 120  
Steven Robinson, Deerfield, IL - Chapter 26  
Eric Schultz, Centennial, CO - Chapter 48

### CERTIFIED BROADCAST NETWORKING TECHNOLOGIST (CBNT)

David Antonie, Bronx, NY - Chapter 15  
Peter Burkett, Colton, CA - Chapter 131  
Victoria Way Kipp, Madison, WI - Chapter 24  
Randolph Kohout, Geona, IL - Chapter 26  
Thomas Lowther, Twin Falls, ID - Chapter 115  
Randall Mullinax, Gainesville, GA - Chapter 5  
Michael Norton, Madison, WI - Chapter 24  
Richard Rarey, Kesington, MD - Chapter 37  
Michael Vranisky, Moreno Valley, CA - Chapter 131  
Bruce Ziemenski, Riverside, CA - Chapter 131

### CERTIFIED BROADCAST TECHNOLOGIST (CBT)

Richard Alfraro-Zayas, San Juan, Puerto Rico  
Ralph Beaver, Tampa, FL - Chapter 39  
David Benson, Jackson, MI - Chapter 91  
Wesley Boyd, Girard, OH - Chapter 122  
Robert Callaway, Crofton, MD - Chapter 132  
Sang Choi, Tampa, FL - Chapter 39  
Richard Feinberg, Norman, OK - Chapter 85  
William Graves, San Antonio, TX - Chapter 69  
William Hamm, Chattanooga, TN - Chapter 5  
Robert Henry, Albuquerque, NM - Chapter 34  
Eric Khentigan, Cromwell, CT - Chapter 14  
Steven Knox, Alexandria, VA - Chapter 37  
Griffith Lewis, Blakely, PA - Chapter 2  
Dan Maney, Madison, WI - Chapter 24  
James Martin, Richardson, TX - Chapter 67  
Chad Thielen, Schaumburg, IL - Chapter 26  
Melanie Walker, Lansing, MI - Chapter 91  
Bryan Waterby, Sacramento, CA - Chapter 43

### CERTIFIED TELEVISION OPERATOR (CTO)

Denise Allen, Indianapolis, IN  
Michael Kluger, Brooklyn, NY  
Jim Roberts, Reno, NV  
Scott Sheriff, Delta, CO  
Keith Silvester, Medford, OR  
Matt Welhouse, Green Bay, WI



The Society of Broadcast Engineers' Program of Certification is recognized by the National Skill Standards Board (NSSB) Certification Recognition program, providing quality assurance in the certification marketplace and providing national recognition for technicians that meet the quality benchmarks.

# SBE, NAB partner on 2006 BEC

The Society of Broadcast Engineers is partnering with the National Association of Broadcasters to plan the 2006 NAB Broadcast Engineering Conference (BEC). The 2006 BEC marks the 12th consecutive year that SBE has been a co-organizer with NAB of the event. The BEC is held as part of NAB2006, which will be held at the Las Vegas Convention Center April 22-27.

SBE Board Member Thomas R. Ray, III, CPBE, has been asked by NAB to chair the BEC planning committee for a second year. Ray is Vice President, Corporate Director of Engineering for Buckley Broadcasting/WOR Radio in New York City. Other SBE members serving on the committee for the 2006 BEC include SBE President Raymond Benedict, CPBE; Steve Davis, CSRE, Clear Channel Radio; Martin Hadfield, CPBE, Entercom/KIRO-AM; Michael Keller, Hearst Broadcasting; John Lyons, CPBE, The Durst Organization; Norm Philips, CBNT, Susquehanna Radio Corporation; Joe Snelson, Jr., CPBE, Meredith Broadcast Group, and Lewis Zager, PBS.

Fred Baumgartner, CPBE, CBNT, of Leitch Corporation will be organizing the Ennes Workshop, which is held each year on Saturday as a part of the conference, and will represent the Ennes Trust on the committee. SBE Executive Director John Poray, CAE, will also participate on the committee.

NAB has released a Call for Papers for the BEC. Visit the NAB website at [www.nabshow.com/becproposals.asp](http://www.nabshow.com/becproposals.asp) for details. The deadline for submissions is October 7.

*Where can I find a good job  
in broadcasting?*

*WHO CAN WE HIRE  
FOR THAT TECHNICAL POSITION?*

## Jobs **ONLINE**

Check out the latest broadcast industry job openings across the nation. Contact Scott Jones at [kjones@sbe.org](mailto:kjones@sbe.org) for information on current openings or on posting a position.

## RESUME *Bank*

Deposit your resume where prospective employers can view your profile and make a withdrawal from SBE. Contact Angel Bates at [abates@sbe.org](mailto:abates@sbe.org) for information on submitting or accessing resumes.

**Visit [www.sbe.org](http://www.sbe.org)**

*Both services updated weekly!*

## MARK YOUR CALENDAR

**October 11-13**

### **2005 Broadcasters Clinic**

**Marriott-Madison West Hotel, Madison, Wis.**

**Presented by:** Wisconsin Broadcasters Association (WBA) and SBE Chapter 24

**Information:** Torrie Kennedy, WBA, at (800) 236-1922 or [torrie@wi-broadcasters.org](mailto:torrie@wi-broadcasters.org); or visit [www.wi-broadcasters.org](http://www.wi-broadcasters.org)

**October 19-20**

### **2nd Annual Broadcast Engineering Expo, Ennes Workshop & SBE National Meeting**

**Hilton DFW Lakes Executive Conference Center, Grapevine, Texas**

**Presented by:** SBE Chapter 67

**Information:** Sandy Sandberg at (214) 343-3555 or [Sandytex@swbell.net](mailto:Sandytex@swbell.net)

**Information on the Ennes Workshop or SBE National Meeting:** SBE National Office at (317) 846-9000 or visit [www.sbe.org](http://www.sbe.org) and **stories on cover and pages 6, 14-15**

**The 2005 SBE National Meeting will be held in conjunction with the Broadcast Engineering Expo**

**October 20**

### **SBE Chapter 20 – Pittsburgh Regional Broadcast Expo**

**Radisson Pittsburgh, Greentree, Pa.**

**Information:** Joann Garvin at [joanngarvin@verizon.net](mailto:joanngarvin@verizon.net); or visit [www.broadcast.net/~sbe20](http://www.broadcast.net/~sbe20)

**October 25-26**

### **BOS-CON 2005 Boston SBE Regional Convention & Ennes Workshop**

**Best Western Royal Plaza Hotel & Trade Center, Marlborough, Mass.**

**Information on BOS-CON:** Robert Yankowitz at (781) 444-5837 or visit [www.bos-con.com](http://www.bos-con.com)

**Information on the Ennes Workshop:** SBE National Office at (317) 846-9000 or visit [www.sbe.org](http://www.sbe.org)

**November 3**

### **PAB's 21st Annual Broadcast Engineering Conference**

**Hershey Lodge and Convention Center, Hershey, Pa.**

**Presented by:** Pennsylvania Association of Broadcasters

**Information:** R. Dale Gehman at (717) 482-4820 or [gehman@pab.org](mailto:gehman@pab.org) or visit [www.pab.org](http://www.pab.org)

**November 14**

### **3rd Annual Ohio Broadcast Engineering Conference**

**Columbus Airport Marriott Hotel, Columbus, Ohio**

**Presented by:** Ohio Association of Broadcasters, SBE Chapter 70 and SMPTE

**Information:** Patricia Geary at 866-OAB-5794 (toll free) or [pgeary@oab.org](mailto:pgeary@oab.org) or visit [www.oab.org/2004calendar](http://www.oab.org/2004calendar)

# Building better events



BY **Vincent A. Lopez, CEV, CBNT**  
Chair, Regional Convention Strategies and Membership Committees

**Y**ou've probably seen them listed in The Signal and on the SBE website. You may even be located close enough to have attended one. You may be a member of a chapter that presents one. What am I talking about? An SBE regional convention.

There are many types of regional conventions. Some are educational only; some combine presentations with an equipment trade show; others just have a trade show. But no matter the type, they are opportunities to go and learn something about our industry. Currently, local SBE chapters play a role in approximately 10 or so conventions each year. They are presented around the country, and your local SBE chapter may play a part in hosting one.

The SBE Regional Convention Strategies Committee is the newest national-level committee. The idea for it came into being about a year ago at BOS-CON, the Boston-area regional convention hosted by SBE Chapter 11. Over lunch in the exhibit hall, SBE President Ray Benedict learned

that during the first year of BOS-CON, Central New York Chapter 22 provided their computerized registration and badging system to BOS-CON, as well as my services to set it up and operate it. We also had given Chapter 11 lots of advice about how we operate our convention and offered some suggestions for their upcoming convention.

President Benedict then suggested that maybe SBE should have a committee for just such a purpose – the dissemination of knowledge and strategies among the various SBE regional conventions. Doing so would help the established conventions improve their events and create a resource for newer conventions to more easily produce successful events. President Benedict asked me to draft a proposal for such a committee, and it was submitted to and approved by the SBE Executive Committee at its January 2005 meeting.

The Regional Convention Strategies Committee is currently made up of representatives from some of the regional SBE conventions, as well as some representatives from industry vendors. Current members of the committee are: Tom McNicholl, CBTE, of Central New York Chapter 22; Vicki Kipp, CSTE, CBNT, of Madison, Wis.,

Chapter 24; Jim Dalke, CPBE, and Earl Fleehtart of Seattle Chapter 16; Sandy Sandberg, CPBE, and Gerry Dalton, CBRE, CBNT, of North Texas Chapter 67; Nick Cap of Pittsburgh Chapter 20; Neil Glassman of Broadcast Electronics and Frank Grundstein, CBRE, of Logitek.

We have already begun to work, having had our first conference call on August 1. We will be working with the various SBE regional events to help them improve their conventions and to share information on things such as planning, vendor recruitment, presentations, operations, facility matters and other annoying little things that crop up. One of our goals is to put out a white paper for interested chapters that details techniques and plans on how to hold a successful regional convention. We also feel that there are areas of the country where local chapters could develop some very successful shows.

Our industry has been changing rapidly in the past few years. By building a strong network of SBE regional conventions our members, especially those who cannot afford to travel to the NAB convention or IBC, will have more opportunities to see the latest in technology and get some great education in locations that are nearby and thus cost-effective.

We are always looking for ideas and recommendations for the committee to consider. If you play a part in a regional SBE convention and want to experience life on an SBE national committee, we have some spots left. Contact myself at vlopez@sbe.org or John Poray at jporay@sbe.org for more information.

## 2005-06 Exam Dates

### DATES

October 20, 2005  
November 11-21, 2005  
  
February 10-20, 2006  
April 25, 2006  
June 2-12, 2006  
August 11-21, 2006  
November 10-20, 2006

### LOCATION

BEE2005, Dallas/Ft. Worth  
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# SBE, NFL together for seventh season

For the seventh consecutive season, the Society of Broadcast Engineers is providing game day coordination for all pre-season and regular season games of the National Football League. SBE also provides game day coordination for all NFL playoff games, with the exception of the Super Bowl, which the NFL covers with a large frequency coordination team. Though the Super Bowl is not an official part of SBE's game day coordination program, SBE members are always involved.

Each NFL team city has an SBE Game Day Coordinator (GDC) and most have one or more back-up coordinators. Our thanks to the GDCs and their backups in all 32 NFL cities for the great job they do.

SBE's Frequency Coordination Committee is responsible for all of SBE's national-level coordination activities, as well as supporting the SBE volunteer network of local and regional frequency coordinators across the country. Ralph Beaver, CBT, of Media Alert in Tampa, Florida chairs this committee.

SBE works closely with Jay Gerber, CBT, manager of the NFL Frequency Coordination Group, who oversees communications and activities among the league, its 32 teams, the GDCs and SBE. Our continued thanks to Gerber and also to the NFL's director of game operations, Peter Hadhazy. The team effort on the part of both the NFL and SBE has made the Game Day Coordination program a valued and important part of every NFL game, while also ensuring the most interference-free atmosphere possible for local and visiting broadcasters.

Broadcasters covering NFL games in or away from their home city are reminded to coordinate any wireless communications equipment with the local Game Day Coordinator. You can connect to them directly via the Internet by

addressing a message to "nfl(*team name*)@sbe.org." For example, to contact the GDC for the Indianapolis Colts, the address is nflcolts@sbe.org.

A list of all SBE and affiliate local and regional frequency coordinators with contact information can be found at the SBE website at [www.sbe.org](http://www.sbe.org).

## SBE NFL Game Day Coordinators for 2005 Season

| Team                 | Primary GDC                                      | Backup GDC                                |
|----------------------|--|---|
| Arizona Cardinals    | Karl Voss  | Jim Cole                                  |
| Atlanta Falcons      | Jessica Carter                                   | Jeff Carter                               |
| Baltimore Ravens     | Judy Rice  | Melissa Davis                             |
| Buffalo Bills        | Ken Stiver                                       | Mark Ewart/Greg Carter                    |
| Carolina Panthers    | Stu Albert                                       | Ed McKay                                  |
| Chicago Bears        | Mike McCarthy                                    | Craig Strom                               |
| Cincinnati Bengals   | Jim Plummer                                      | Jim Hornsby                               |
| Cleveland Browns     | Dave Bobco                                       | Ed Miller                                 |
| Dallas Cowboys       | Keller McCrary                                   | Craig Marks                               |
| Denver Broncos       | John Hellyer                                     | Paul DesChenes                            |
| Detroit Lions        | Russell Harbaugh                                 | Joe Huk                                   |
| Green Bay Packers    | Joe Kamenick                                     | Tim Laes                                  |
| Houston Texans       | Fred Morton                                      | John Ritter/George Schank                 |
| Indianapolis Colts   | Roger Bishop/Dave Fort/Al Grossniklaus/Tom Weber |   |
| Jacksonville Jaguars | Clayton Roney                                    | Cary Martin                               |
| Kansas City Chiefs   | Bob Schneider                                    | Chris Castro/Tom Casey                    |
| Miami Dolphins       | Dan Collins                                      | Tony Delciello/Rick Edwards               |
| Minnesota Vikings    | Marc Majerus                                     | Bill Hutchinson/Jamin Johnson/Mike Strand |
| New England Patriots | Joe Sweeney                                      | David McVay                               |
| New Orleans Saints   | Chad Pfeiffer                                    | Ernie Kain/Danny Miller                   |
| New York Giants      | Rod Barton                                       | Peter Erskine/Joe Russo/Lou Libin         |
| New York Jets        | Stephen Mendelsohn                               | Heidi Mendelsohn/Walt Sidas/Peter Erskine |
| Oakland Raiders      | Paul Marks                                       | Deveral Ross/Bill Ruck                    |
| Philadelphia Eagles  | Tobias Poole                                     | Alicia Bullock                            |
| Pittsburgh Steelers  | Otto Schellin                                    | Glenn Romsos                              |
| St. Louis Rams       | Sam Caputa                                       | Craig Rutledge                            |
| San Diego Chargers   | John Weigand                                     | Jack Moreno                               |
| San Francisco 49ers  | Sue Sunder                                       | Ben Carlucci/Vance Sacci                  |
| Seattle Seahawks     | Jerry Hill                                       | Greg Ristau/Madison Batt                  |
| Tampa Bay Buccaneers | Ralph Beaver                                     | Casey Knoettgen/Jeffy Beaver/Molly Donsky |
| Tennessee Titans     | Gibson Prichard                                  | Carl Campbell                             |
| Washington Redskins  | Bill Sien  | Hank O'Rourke/Andy Sien                   |

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# SBE certifies Michigan Area Technical College

The Society of Broadcast Engineers announces the addition of Michigan Area Technical College in Plainwell, Mich., to its list of Certified Schools. The schools on this list offer technical training in broadcast engineering and/or related fields. These programs have been reviewed and approved by the SBE National Certification Committee.

Students who complete a certified curriculum with a grade B or better and apply for SBE certification will be awarded the classification Certified Broadcast Technologist (CBT).

One of the original objectives of the SBE Certification Program was to encourage broadcast engineers to continue their professional development. The growth of professional status of the entire industry is still one of our major goals.

The National Certification Committee is aware that other schools exist that warrant certified school status. If you are aware of a school in your area that offers a two- or four-year program that fits the Society's criteria, you are encouraged to bring it to the attention of the Certification Committee. For questions about the certified schools or to make a rec-

ommendation, please contact Certification Director Linda Baun at lbaun@sbe.org or (317) 846-9000.

## SBE CERTIFIED SCHOOLS

### Bates Technical College

Tacoma, Wash., www.bates.ctc.edu

### Boise State University – Seland College of Applied Technology

Boise, Idaho, www.boisestate.edu

### Cayuga Community College

Auburn, N.Y., www.cayuga-cc.edu

### Cleveland Institute of Electronics

Cleveland, Ohio, www.cie-wc.edu

### Cuyahoga Community College

Cleveland, Ohio, www.tri-c.cc.oh.us/Metro

### Hocking College

Nelsonville, Ohio, www.hocking.edu

### Michigan Career & Technical Institute (MCTI)

Plainwell, Mich., www.michigan.gov/mcti

### Milwaukee Area Technical College

Milwaukee, Wis., www.matc.edu/documents/catalog/Electronic\_.html

### Mitchell Technical Institute

Mitchell, S.D., www.mti.tec.sd.us

### Napa Valley College

Napa, Calif., www.nvc.cc.ca.us

### Pasadena City College

Pasadena, Calif., www.paccd.cc.ca.us

### Southern Alberta Institute of Technology

Calgary, Alberta, Canada, www.sait.ca

### Spartan School of Aeronautics

Tulsa, Okla., www.spartanaero.com

### Spokane Community College

Spokane, Wash., www.scc.spokane.edu

### St. Louis Community College at Florissant Valley

St. Louis, Mo., www.stlcc.cc.mo.us/fv

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Defense Information School, Fort George G. Meade, Md., www.dinfos.osd.mil

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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

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

## NEW MEMBERS

Michael J. Aguilar – Grand Forks, ND  
 Jason A. Alestra – Barstow, CA  
 Richard L. Andes – Oklahoma City, OK  
 David Beasley – Leesburg, FL  
 Mike A. Boyle – Costa Mesa, CA  
 Leon L. Crowder, III – Fresno, CA  
 Jon M. Cyphers – Wichita, KS  
 Kenneth W. Denson – Muscle Shoals, AL  
 Keith A. Desautels – Gallup, NM  
 Jimi Diaz – Phoenix, AZ  
 Eugene Endres – Trumansburg, NY  
 Christopher S. English – Silver Springs, FL  
 Ron G. Fuller – Arlington, TX  
 David L. Gregory – Cutler, CA  
 Douglas G. Harding – Miami, FL  
 Mike W. Hoffman – Lawton, OK  
 Michael N. Johnson – Oklahoma City, OK  
 Slade Kennedy – Ithaca, NY  
 Duane J. Kolensky – Miramar, FL  
 Glenn E. Little – Goose Creek, SC  
 Robert L. Lynch – Roanoke, VA  
 John R. Majka – Louisville, KY  
 Greg C. Manfroi – Macomb, IL  
 Warren B. McFerren – Calumet City, IL  
 Jerry F. McSwain – Gastonia, NC  
 Arthur J. Mendell – Kirklint, IN  
 Daniel J. Monti – Secaucus, NJ  
 Trent E. Muldrow – Columbia, SC  
 Randall C. Mullinax – Shawnee, OK  
 Steven M. Pennington – Edmond, OK  
 Alyca A. Pommerening – Los Angeles, CA  
 Alfred A. Reyes – Miami, FL  
 Michael S. Ridley – Welland, Ontario, Canada  
 Daniel D. Rousseve – Granger, IN  
 Steven M. Slocum – Tulsa, OK  
 Winfield S. Standiford – Rehoboth Beach, DE  
 Paul G. Stanion – Ithaca, NY  
 Darwin D. Stinton – Omaha, NE  
 Daniel L. Thieneman – Kissimmee, FL  
 Terron L. Tyner – Palmdale, CA  
 Richard G. Van de Wall – Waverly, NY  
 Timothy R. Van Den Bos – Tigard, OR  
 David M. Vermaak – Ithaca, NY  
 Alan M. Vernick – Tampa, FL

## NEW ASSOCIATE MEMBERS

Joseph B. Giuliano – Crystal Lake, IL  
 John D. Langridge – Duncanville, TX  
 Michael P. Perez – Atlanta, GA

## NEW STUDENT MEMBERS

Bryan C. Bettencourt – Malden, MA  
 Jeff B. Orr – Dresden, OH  
 Laura R. Seivert – Orchard Park, NY

## NEW YOUTH MEMBER

Cameron R. Wilt – Austin, TX

## REINSTATED MEMBERS

David M. Arendt – Highspire, PA  
 David E. Armstrong – Spring, TX  
 Gary N. Babcock – Hagerman, NM  
 Steven R. Bottkol – Yukon, OK  
 James M. Bush – Clay Center, KS  
 Timothy L. Coucke – Nount Juliet, TN  
 Kirk Davis – Pembroke Pines, FL  
 Robert B. Erickson – Edmond, OK  
 Mark R. Etchieson – Spokane, WA  
 Raymond A. Fodge, Jr. – Las Vegas, NV  
 Gregory S. Garst – Williamsfield, IL  
 William H. Gillman – Salt Lake City, UT  
 Fred W. Heineman – Newport, NH  
 Larry G. Oliver – Rio Rancho, NM  
 Christopher J. Quinn – Painesville, OH  
 Paul S. Shulins – Andover, MA  
 Garth J. Sims – Charlotte, MI  
 Edward I. Stoner – Indianapolis, IN  
 Robert M. Unetich – Pittsburgh, PA

## SBE Members on the Move

Steven B. Johnston, CBRE, CBNT, has accepted the position of Director of Engineering and Operations of Wisconsin Public Radio in Madison, Wis. Johnston was previously the Director of Engineering and Operations, and Interim General Manager, of Boise State Radio in Boise, Idaho.

*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 [abates@sbe.org](mailto:abates@sbe.org) or to Attn: Angel Bates, 9247 N. Meridian St., Suite 305, Indianapolis, IN 46260.*

## Coming Soon!

The 2005-06 Membership Directory & Buyers' Guide will be in your mailboxes this month.

With the Directory, SBE Members will also receive an SBE password that will give you access to members-only areas of the new and improved SBE website, still at [www.sbe.org](http://www.sbe.org), launching by the end of October.

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**RF Engineering for Wireless Networks; Hardware, Antennas, and Propagation**

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This book covers every aspect of RF engineering necessary for wireless networks and can help you design and implement any type of wireless network. It discusses bandwidth, network concepts, radio system architectures, RF amplifiers, mixers and frequency conversion, antenna theory and designs, signal propagation and more, and includes a CD with software tools. Pub. 2004

448 pages  
Item #F-80

Member Price: \$62.96  
Non-Member Price: \$69.95

**Television Operator's Certification Handbook, 6th Ed.**

FRED BAUMGARTNER, CPBE, CBNT,  
AND DOUG GARLINGER, CPBE, CBNT

This handbook is designed for the entry-level, non-technical pool of applicants that fill master control positions in today's television marketplace. This edition reflects the latest technology and broadcast practices, including video file servers, automation and centralized or "Hub" broadcasting. There is updated information on the Emergency Alert System (EAS). Other topics include: operating the station, keeping the log, tower lights, staying on the air, legal requirements, television signal fundamentals, closed captioning, FCC issues and more. In addition, after completing the handbook, you can schedule to take the SBE Certified Television Operator Exam. Pub. 2005

68 pages  
Item #S-06

Member & Non-Member Price: \$42

**Introduction to DTV RF**

DOUGLAS GARLINGER, CPBE, CBNT

This guide is intended to assist the Broadcast Engineer in understanding the technical issues involved in the transition to DTV. Pub. 1998 - \$30 for non-members and \$20 for members - while supplies last! Item #S-03

**Books You Can Use!**

A complete list of available titles can be requested from the SBE office or find it on our website at: [www.sbe.org](http://www.sbe.org)

**Digital Television: MPEG-1, MPEG-2 and Principles of the DVB System, 2nd Ed.**

HERVE BENOIT

This introduction to digital television broadcasting gives a thorough, but concise, technical description of the underlying principles of the DVB standard following the logical progression of signal processing steps. It also covers COFDM modulation, source and channel coding, MPEG compression and multiplexing methods, conditional access and set-top box technology. Pub. 2002

216 pages  
Item #F-60

Member Price: \$37.76  
Non-Member Price: \$41.95

**Certification Handbook for Radio Operators**

RON BARTLEBAUGH, CBNT

This handbook helps radio board operators learn more about the broadcasting business from the technical and business side. It covers topics such as FCC rules, technical layout of a typical station and the general responsibilities of a radio operator. An overview of station management structure and professional etiquette is presented. Other chapters cover station logs, the Emergency Alert System (EAS), safety requirements and operational procedures for trouble situations. In addition, after completing the handbook, you can schedule to take the SBE Radio Operator's Certification Exam. Pub. 2003

72 pages  
Item #S-09

Member & Non-Member Price: \$42

**Handbook for Sound Engineers, 3rd Ed.**

GLEN M BALLOU

This comprehensive reference for audio engineers includes the latest in digital technology. Key topics include interpretation systems, image projection, MIDI, amplifier design, audio transformers and preamplifiers, virtual systems and digital interfacing, computer-aided sound system design and more. Pub. 2001

1,552 pages  
Item #F-54

Member Price: \$71.96  
Non-Member Price: \$79.95

**Radio Chief Operator's Handbook, 2nd Ed.**

JACK LAYTON, CPBE

This handbook is written specifically for the non-technical radio chief operator. Its purpose is to enable one with some exposure to the equipment in a broadcast radio facility to be able to carry out the duties of a chief operator. It provides information a chief operator needs to be able to recognize problems that cause the operation of the radio station to be beyond the limits of the station license and/or the FCC Rules. It also includes excerpts from the FCC Rules relevant to the chief operator. This updated edition has a new section explaining digital audio broadcasting. Pub. 2005

71 pages  
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Member Price: \$39  
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**Communications Systems, 4th Ed.**

A. BRUCE CARLSON, PAUL CRILLY, JANET RUTLEDGE

This book covers three major areas: signal and system analysis, analog communication and digital communication, with an emphasis on HDTV, LANs and WANs. It also features examples and exercises to help you master concepts as they are introduced. Pub. 2001

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 RF Safety Instrumentation

**FREELAND PRODUCTS • 1997**

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**FRONTLINE COMMUNICATIONS CORP. • 2000**

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Tom Moretti  
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**MAXELL CORPORATION OF AMERICA • 1991**

Patricia Byrne  
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**MICROWAVE FILTER COMPANY, INC. • 2003**

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**MICROWAVE RADIO COMMUNICATIONS • 1991**

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**MOHAWK • 1995**

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**MORROW TECHNOLOGIES, INC. • 2002**

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**MOSLEY ASSOCIATES, INC. • 1977**

Dave Chaney  
 (805) 968-9621  
 RF & TV STLs

**NATIONAL ASSOCIATION OF BROADCASTERS • 1981**

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 Industry Trade Association

**NATIONAL FOOTBALL LEAGUE • 1999**

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 Director of Game Operations

**NAUTER MAINE, INC. • 2002**

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**NEMAL ELECTRONICS • 2004**

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**NVISION, INC. • 1997**

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**OMT TECHNOLOGIES INC. • 2001**

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 Software

**ORBAN • 1996**

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

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**PASTERNAK ENTERPRISES • 2001**

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 Integration

**PULSECOR • 2003**

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 (603) 961-3253  
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**QUINTEON ELECTRONICS AND COMMUNICATIONS INC. • 2002**

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**RADIAN COMMUNICATION SERVICES INC. • 1986**

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**RDL • 2004**

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**RICHLAND TOWERS • 2001**

David Denton  
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**ROHDE & SCHWARZ • 2003**

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 Broadcast Transmitters, Test &  
 Measurement

**ROSCOR CORPORATION • 1998**

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 (847) 249-8080  
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**ROSS VIDEO LTD. • 2000**

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

**SCMS, INC. • 2000**

Ron Cauthen  
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**SEACOMM ERECTORS, INC. • 1997**

# Chapter PRIDE

**N**ashville Chapter 103 just concluded its "Members Are Winners" Membership Drive, a blitz that netted the chapter nine new members between May and August of this year. The chapter celebrated the close of the drive September 8 at a chapter meeting.

SBE Executive Director John Poray, CAE, was on hand to announce the winners and present the prizes. Top new member recruiter Gary Griffey, CEA, CBT, was the grand prize winner. He received a Panasonic in-dash HD radio receiver, courtesy of Jim Thomason of Harris Corporation. Ray Comfort received the second place



Ray Comfort and Gary Griffey, CEA, CBT, are the top winners in the Chapter 103 Membership Drive. Nine new members were added to the chapter.

prize, a "Made in Maine" gift basket provided by John George of Dielectric.

Holding a membership drive at the chapter level was the brainchild of SBE Immediate Past President and Chapter 103 Membership Chairman Troy Pennington, CSRE, CBNT.

Even though the formal membership drive is over, Pennington is optimistic for the near future, "We are not giving up on our goal of 13 new members before the end of this year."

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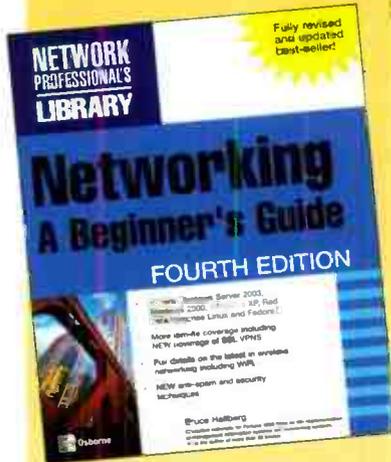
# SPOTLIGHT ON NEW EDITIONS:

## Networking: A Beginner's Guide, 4th Ed.

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This introduction to networking offers easy-to-follow details on design and configuration, hardware, networking protocols, remote access and security. This updated edition contains expanded coverage of wireless networking, the latest Windows and Linux releases

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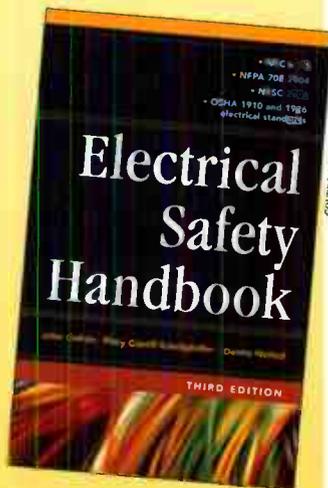
## Electrical Safety Handbook, 3rd Ed.

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SCHELLPFEFFER, DENNIS K.  
NEITZEL

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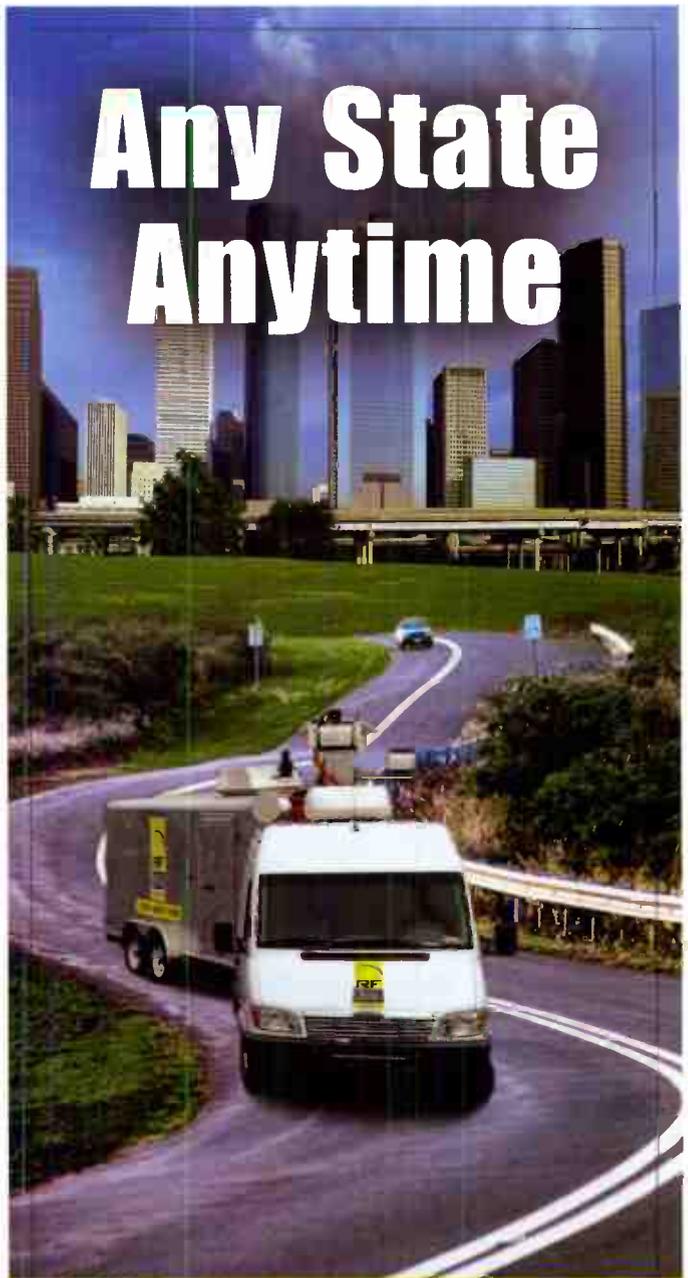
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# Ennes Trust scholarships awarded for 2005

The Ennes Educational Foundation Trust has awarded three educational scholarships for 2005. Winners are chosen from applications received by July 1 from the previous 12 months.

The Harold E. Ennes and Robert D. Greenberg scholarships are awarded to individuals interested in continuing or beginning their education in broadcast engineering and technology. The Youth Scholarship is specifically for a graduating high school senior interested in broadcast engineering as a career. Each scholarship awarded this year is for \$1,000. This year's recipients are:



David Drumm

## HAROLD E. ENNES SCHOLARSHIP

David Drumm, Miamisburg, Ohio, will be a sophomore in Ohio University's External Stu-

dent Program. He is employed as a staff engineer for Sinclair Broadcast Group, Inc., at WKEF/WRGT affiliate in Dayton, Ohio. In his role as a staff engineer, Drumm has experienced changes in facility ownership, network affiliation, the construction of a transmitter building, a new tower and installations of two digital transmitters, all amid the normal demands for 24/7 availability, regardless of prevailing weather conditions. He has been a member of SBE since 1997 and is a member of Southwestern Ohio Chapter 33.



Josh Boche, CBT

## ROBERT D. GREENBERG SCHOLARSHIP

Josh Boche, CBT, Tacoma, Wash., will be a sophomore at Bates Technical College. His work history consists of a variety of different fields ranging from commercial fishing in Alaska to aspects of commercial construction and the pharmaceutical business. His first experience in the broadcast industry came in 2001 when an opportunity arose to work with ESPN at the NASCAR and NHRA events in Las Vegas where he was living at the time. He is working hard to become a

broadcast systems engineer, specializing in the installation and maintenance of video, compression, transcoding and digital delivery systems. Boche joined the Society this year as a student member and is a member of Seattle Chapter 16.

## YOUTH SCHOLARSHIP

Skylar Nowinski, Houston, Texas, graduated from the High School for Performing and Visual Arts in Houston. He has also served as a production intern with Houston Public Television for the past two summers. While he was offered scholarships to other institutions, Nowinski has chosen to attend the University of Minnesota in Minneapolis because of their high academic standards and technically rigorous program. The University of Minnesota has also honored Nowinski by selecting him from hundreds of applicants to be among 20 individuals who will participate in their Guthrie Theatre program.



Skylar Nowinski

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

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## HD Systems Analysed

| Common Name | Pixel/Rate/Scan Nomenclature | SMPTE Standard Reference | SMPTE 292 Levels | Scan Type | Frame Rate | Total Lines | Active Lines | Active Horiz. Pixels | Data Rate       | Major Use                           | Major Tape Recording Formats                 | Connection Type     |
|-------------|------------------------------|--------------------------|------------------|-----------|------------|-------------|--------------|----------------------|-----------------|-------------------------------------|--|---------------------|
| 1080p80     | 1920x1080/60/1:1             | 274M - 1                 |                  | P         | 60         | 1125        | 1080         | 1920                 | 2.970Gb/s       | HD Production                       |  | Dual Link / Fibre   |
| 1080p59     | 1920x1080/59.94/1:1          | 274M - 2                 |                  | P         | 59.94      | 1125        | 1080         | 2.970/1.001Gb/s      | for Film        |                                     |  |                     |
| 1080p50     | 1920x1080/50/1:1             | 274M - 3                 |                  | P         | 50         | 1125        | 1080         | 2.970Gb/s            |                 |                                     |  |                     |
| 1080i60     | 1920x1080/60/2:1             | 274M - 4                 | D                | I         | 30         | 1125        | 1080         | 1920                 | 1.485Gb/s       |                                     | DVCPro-HD, HDCAM, HDV                        | Single Link / Fibre |
| 1080i59     | 1920x1080/59.94/2:1          | 274M - 5                 | E                | I         | 29.97      | 1125        | 1080         | 1920                 | 1.485/1.001Gb/s | US TV Networks                      | DVCPPro-HD, HDCAM, HD-D5, DVCPPro-HD, HDCAM, |                     |
| 1000i50     | 1920x1000/50/2:1             | 274M - 6                 | F                | I         | 25         | 1125        | 1000         | 1920                 | 1.485Gb/s       | Euro1080/HD1                        | HD-D6, HDV                                   |                     |
| 1080p30     | 1920x1080/30/1:1             | 274M - 7                 | G                | P         | 30         | 1125        | 1080         | 1920                 | 1.485Gb/s       |                                     | HDCAM  |                     |
| 1080p29     | 1920x1080/29.97/1:1          | 274M - 8                 | H                | P         | 29.97      | 1125        | 1080         | 1920                 | 1.485/1.001Gb/s |                                     | HDCAM  |                     |
| 1080p25     | 1920x1080/25/1:1             | 274M - 9                 | I                | P         | 25         | 1125        | 1080         | 1920                 | 1.485Gb/s       |                                     | HDCAM, HD-D5                                 |                     |
| 1080p24     | 1920x1080/24/1:1             | 274M - 10                | J                | P         | 24         | 1125        | 1080         | 1920                 | 1.485Gb/s       |                                     | HDCAM, HD-D5                                 |                     |
| 1080p23     | 1920x1080/23.98/1:1          | 274M - 11                | K                | P         | 23.98      | 1125        | 1080         | 1920                 | 1.485/1.001Gb/s |                                     | HDCAM, HD-D5                                 |                     |
| 1080i30     | 1920x1080/30/1:1SF           | RP211 - 12               |                  | SF        | 30         | 1125        | 1080         | 1920                 | 1.485Gb/s       |                                     |  |                     |
| 1080i28     | 1920x1080/29.97/1:1SF        | RP211 - 13               |                  | SF        | 29.97      | 1125        | 1080         | 1920                 | 1.485/1.001Gb/s |                                     |  |                     |
| 1080i26     | 1920x1080/26/1:1SF           | RP211 - 14               |                  | SF        | 26         | 1125        | 1080         | 1920                 | 1.485Gb/s       |                                     | HD-D5  |                     |
| 1000i24     | 1920x1080/24/1:1SF           | RP211 - 15               |                  | SF        | 24         | 1125        | 1080         | 1920                 | 1.485Gb/s       | HD Production                       | HD-D6  |                     |
| 1080i23     | 1920x1080/23.98/1:1SF        | RP211 - 16               |                  | SF        | 23.98      | 1125        | 1080         | 1920                 | 1.485/1.001Gb/s |                                     | HD-D5  |                     |
| 720p80      | 1280x720/80/1:1              | 298M                     | L                | P         | 80         | 750         | 720          | 1280                 | 1.485Gb/s       |                                     | DVCPPro-HD, HDV                              | Single Link / Fibre |
| 720p59      | 1280x720/59.94/1:1           | 298M                     | M                | P         | 59.94      | 750         | 720          | 1280                 | 1.485Gb/s       | US TV Networks                      | DVCPPro-HD, HD-D5                            |                     |
| 720p50      | 1280x720/50/1:1              |                          |                  | P         | 50         | 750         | 720          | 1280                 | 1.485Gb/s       |                                     | HDV  |                     |
| 720p30      | 1280x720/30/1:1              |                          |                  | P         | 30         | 750         | 720          | 1280                 | 1.485Gb/s       |                                     | HDV  |                     |
| 720p29      | 1280x720/29.97/1:1           |                          |                  | P         | 29.97      | 750         | 720          | 1280                 | 1.485Gb/s       |                                     |  |                     |
| 720p25      | 1280x720/25/1:1              |                          |                  | P         | 25         | 750         | 720          | 1280                 | 1.485Gb/s       |                                     | HDV  |                     |
| 720p24      | 1280x720/24/1:1              |                          |                  | P         | 24         | 750         | 720          | 1280                 | 1.485Gb/s       |                                     |  |                     |
| 720p23      | 1280x720/23.98/1:1           |                          |                  | P         | 23.98      | 750         | 720          | 1280                 | 1.485Gb/s       |                                     |  |                     |
| 1035i60     | 1920x1035/60/2:1             | 280M                     | A                | I         | 30         | 1125        | 1035         | 1920                 | 1.485Gb/s       |                                     |  |                     |
| 1035i59     | 1920x1035/59.94/2:1          | 280M                     | B                | I         | 29.97      | 1125        | 1035         | 1920                 | 1.485/1.001Gb/s | Japanese TV                         |  |                     |
| 1080p50a    | 1920x1080/50/1:1             | 295M                     |                  | P         | 50         | 1250        | 1080         | 1920                 | 2.970Gb/s       | Graphics (Includes "Alpha Channel") |  |                     |
| 1080i25a    | 1920x1080/25/2:1             | 295M                     | C                | I         | 25         | 1250        | 1080         | 1920                 | 1.485Gb/s       |                                     |  |                     |
| 625i60      | 825/60/2:1                   | 125/259M                 |                  | I         | 25         | 825         | 678          | 720                  | 270Mb/s         | Current SD standard                 |  |                     |
| 525i59      | 525/59.94/2:1                | 125/259M                 |                  | I         | 29.97      | 525         | 486          | 720                  | 270Mb/s         | (PAL/NTSC)                          |  |                     |

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Defining High Definition



Defining High Definition



# Defining High Definition

## What makes us better...

It would be great if all your HD output could come from genuine HD source material – stuff shot with HD cameras. But life isn't like that, so you'll have to deal with SD material some of the time. And you're right to be concerned that it won't look as good as the real HD material around it.

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Now you're saying – that's just another manufacturer puffing things up. After all, they all use the same chips these days, there's nothing to choose between them. Well that may be true of other manufacturers, but we think differently at Vistek.

You see, we know about signal conversion. After all, we made the

world's first practical motion vector compensated standards converter, and we've used the same design team to build the V6406 Up Converter – that's nearly 100 man-years of experience and know-how.

The key to quality Up Conversion is controlling how interlaced fields become contiguous frames – both with static image areas and fast moving fine detail. Most competing converters are good at one or the other, but not both. Vistek's 3-dimensional multilayer motion adaptive de-interlacing sorts out statics, dynamics and fine details – all without boundary effects.

The result is up converted pictures that you can't tell from original HD.

Don't believe us? Just ask for a demonstration – but be warned, if you've recently bought an up converter from someone else, you'll end up wishing you hadn't.

## Product Information

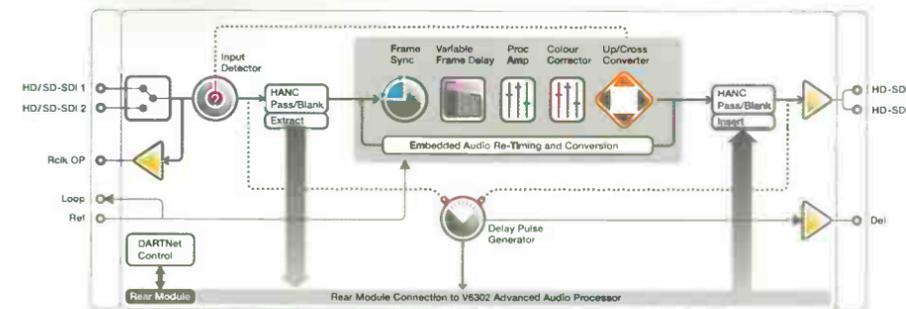
**The V6406 is a modular SD to HD Up Converter, designed to operate in any of Vistek's standard equipment frames, alongside the entire Vistek modular range.**

The Up Converter picture performance is second to none, and uses ultra high speed RAM processing (MPMA) to achieve data processing speeds that allow the sophisticated 3D conversion algorithms to function properly.

Equipped with sophisticated noise reduction and image enhancement, the module has all necessary colour space and aspect ratio conversion. A full proc amp facility ensures correct signal levels as well.

Optional features allow for internal processing / conversion of embedded audio, passage / conversion of closed caption data, and the addition of extra frames of video delay. An optional synchroniser allows the output to be timed to station syncs, while Vistek's Auto Bypass Mode guarantees that the output will always be at the same video time datum regardless of which conversion process is being applied.

The module is equipped with an LVDS bus that allows it to be linked to the V6302 Advanced Audio Processor (see panel) for more complex audio processing. The LVDS bus can also be used to link to other Vistek HD modules for other applications.



V6406 HD

## The Perfect Companion

The V6302 Advanced Audio Processor has been designed to support any of Vistek's HD modular video signal processing range, using a LVDS bus link between the modules, and allows embedded audio to be extracted, processed, converted (if necessary) and re-inserted into the video stream.

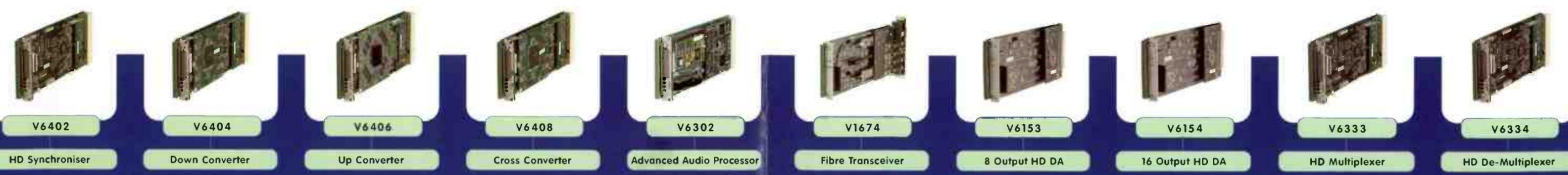
It can also accommodate up to 6 external AES feeds, and can provide 4 external output feeds, independently of the embedded signals.

A 26 x 8 router forms the core of the module, while also providing control of things like level and phase reversal. The router is "ring-fenced" with audio rate converters, adding to the universality of the product. Tracking audio delay is also built in, with independent delay for the embedded feeds and the external ones.

A Dolby Digital (AC-3) / Dolby E decoder is an option, and can be fed from any of the available source signals.

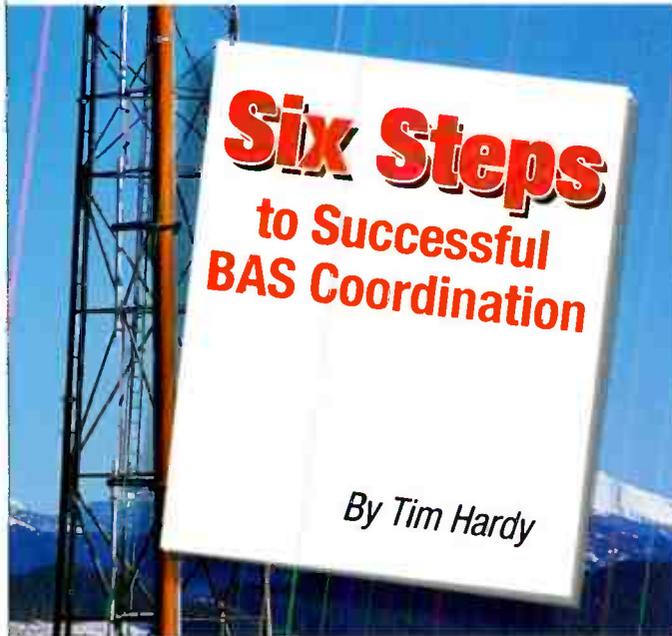
We've tried to deal with every audio scenario our customers could come up with, so that the routing, mixing and processing capacity of the V6302 offers real flexibility and quality.

Contact us for more information on this exceptional product.





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## In the Circle...

*a snapshot of an SBE Member*

### Dale E. Smiley, CPBE

Senior Maintenance Engineer  
WTHR-TV  
Indianapolis, Indiana  
Chapter 25, Indianapolis  
Joined SBE in 1970;  
Senior Member

**Pictured here:** I love to travel. Here I am under the signpost at John O'Groats, the most northeast spot in Scotland. My daughter and I had just gotten off the ferry from the Orkney Islands. Behind me is the place where the North Atlantic meets the North Sea!

**Best known for:** I'm currently entering my third term as Secretary of Chapter 25 and am a past Chairman and Vice Chairman of the chapter. I have participated on the Board of Tellers in all but one of the national election vote counts since 1970.

**Focal Point:** I have always enjoyed meeting other SBE members and exchanging ideas and methods of doing things. Regional conventions and seminars are a great way to keep up with industry trends and advancements. I also enjoy the opportunity to visit other stations and electronic facilities that I might not otherwise visit.

**Getting Started:** Growing up, I spent many weekends with my dad at his best friend's TV repair shop. I built my first "AM Broadcaster" kit when I was 10 and was hooked from that time on! When I was a college freshman, a magazine salesman came to sell subscriptions. I was the only one to pick up a rather thin rag called *Broadcast Engineering*. He tried his best to talk me out of it, saying he didn't think it would last... I am still a subscriber!

**Sphere of Influence:** Harold Ennes is the person I most admired in this industry. I was privileged to know Hal during his short time as a member of Chapter 25, and I have all his books. He was a very nice person and I learned much of what I know about television from him.

**When I'm not working...** I like to travel and read mysteries; I am involved with the local Quarter Midget Club (open wheel racing for kids ages 5-16) and I collect and restore Corvairs. Plus all the usual stuff: ham radio, computers, electronics in general!

**You may not know...** I am an avid reader, mostly of older books. When traveling in Scotland this summer, I found a used book store on the Isle of Iona that had two books by Earle Stanley Gardner that I had been looking for for years. I only had to travel about 5,000 miles to find them!



A. While an entry could be made into the station log that no test was received, any FCC inspector will want to know why. Determining the reason for the missed test might reveal a simple error from the originating station, but it can also reveal a problem in the station's EAS system. The explanation and corrective action should be noted in the log. The tests are designed to identify problems and provide practice for all those involved.



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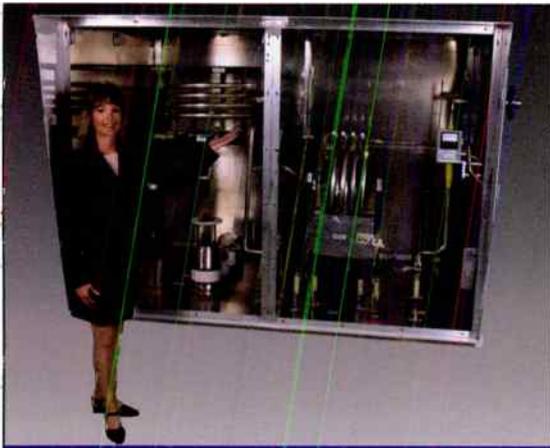
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# AM Antenna Solutions

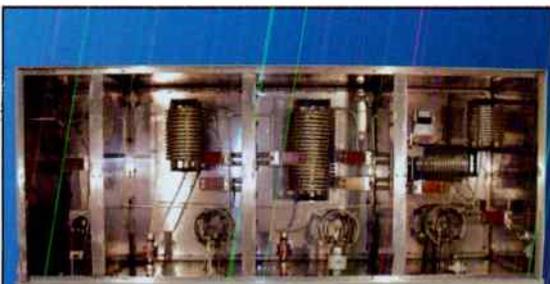
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