



# the SIGNAL

BIMONTHLY PUBLICATION OF THE SOCIETY OF BROADCAST ENGINEERS

**FEBRUARY  
2007**

*Volume 20, Number 1*

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*Have you visited us on the web yet?*

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

## Join together with SBE at NAB2007

The Society of Broadcast Engineers will be hard to miss this year at the NAB spring convention in Las Vegas. SBE has partnered with NAB in the production of the NAB Broadcast Engineering Conference and will be an active exhibitor in this year's convention. The conference runs from April 14 through April 19. SBE will present an Ennes Workshop and a number of meetings, including the SBE spring Membership Meeting.

### SBE SPRING MEMBERSHIP MEETING

At 5 p.m. on Tuesday, April 17, the annual spring Membership Meeting will highlight the week for SBE. The meeting will be held in room S226/227 of the Las Vegas Convention Center.

Some special prizes are in the works including a digital camera so be sure to include the SBE Membership Meeting on your NAB convention schedule. We are pleased to announce that this year's Member-



This year's SBE booth will be in the same location as last year's in the South Hall.

ship Meeting is being sponsored once again by SBE Sustaining Member, Microwave Radio Communications (MRC).

See **NAB2007** on page **8**



## Reaching new heights

■ RECRUIT A NEW MEMBER AND WIN IN THE 2007 MEMBERSHIP DRIVE

It's that time of year again — time for the SBE Membership Drive.

Springtime and membership renewal time are good times to recruit new members for SBE because a growing membership helps make the Society strong. This year we

are hoping to reach new heights, both in the number of members recruited, and in success for our members.

The time for "Reaching new heights" is now, and it is the theme for this year's drive which runs from March 1 through May 31, 2007.

See **REACHING** on page **14**

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# Recognize best of 2006

Some SBE Members go above and beyond the call of duty to do their jobs *and* serve SBE and the broadcast industry, and some local SBE chapters do an absolutely excellent job of serving their members. But often these efforts can go unrecognized. Don't let that happen this year. Pull out a pen or pencil, turn to page 19 of this issue and make your nominations now for the 2006 SBE Chapter and Individual Awards.

There are five chapter and five individual award categories from which to choose when making a nomination. Three chapter awards are determined by using statistical information on record at the SBE National Office. In addition, five of the chapter awards are divided into two classes so that chapters with vastly different membership sizes are not competing with each other. This means that up to 18

awards could be presented.

Award winners will be notified in July and invited to attend the 2007 SBE National Meeting, which will be held October 10-11 in conjunction with the Pittsburgh SBE Regional Convention, sponsored by Chapter 20 in Pittsburgh, Pa. Winners will be presented with either a certificate or a plaque at the SBE National Awards Dinner held during the National Meeting.

Nominations are due to the SBE National Office no later than May 31, 2007. For additional information, please contact Larry Wilkins, Awards Committee Chair, at larry.wilkins@cumulus.com or (334) 303-2525 or Whitney Allen at wallen@sbe.org or (317) 846-9000.

*NOMINATION FORM on page 19*

## Time to renew your membership

It's that time of year again — time for Regular, Senior, Associate and Student Members to start thinking about renewing their SBE memberships.

SBE membership dues for Regular, Senior and Associate Members are \$63. Dues for Students Members are \$20.

Membership renewal notices

were mailed out to all Regular, Senior, Associate and Student members in early February. If you do not receive your renewal notice, contact the SBE National Office at (317) 846-9000.

Membership Renewal for Youth and Sustaining members is due on the anniversary month of joining the Society.

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

*WHO CAN WE HIRE FOR THAT TECHNICAL POSITION?*

## RESUME Bank

Deposit your resume where prospective employers can view your profile and make a withdrawal from SBE. For information on submitting or accessing resumes, contact Scott Jones at kjones@sbe.org or visit: [www.sbe.org/career\\_resume.php](http://www.sbe.org/career_resume.php)

## Jobs ONLINE

Check out the latest broadcast industry job openings across the nation. For information on submitting or accessing positions, contact Scott Jones at kjones@sbe.org visit: [www.sbe.org/career\\_jobsonline.php](http://www.sbe.org/career_jobsonline.php)

# Candidates sought for National Board

**Y**our national professional society needs you! The Society of Broadcast Engineers is governed by a 17 person board of directors that determines the policies and programs for the national organization. Capable members, from all corners of the field of broadcast engineering, are needed to serve.

The SBE Nominations Committee is currently seeking candidates to run this summer. Six of the twelve director positions on the Board, in addition to all four officer positions will be up for election. All of the director positions are at-large positions.

To be eligible, candidates for national office must be Regular, Senior or Life members of SBE, or be the designated representative of a SBE Sustaining Member, in good standing and hold a current SBE engineering-level certification.

Directors serve terms of two years and are

expected to attend two full meetings of the Board each year. They include the spring meeting, held in conjunction with the NAB spring convention, and the fall meeting, held during the SBE National Meeting. Terms of officers are one year. Officers are expected to attend the two full meetings of the board plus two Executive Committee meetings, held during the winter and summer.

Members of the Board may be appointed by the President to serve as a chairman or as a member of a national committee. All those who serve must be willing to cover their own travel expenses to attend the meetings. Some employers and chapters have helped cover this expense for some members of the Board in the past.

Eligible members of the Society interested in running for office should contact any member of the Nominations Committee to express his or her interest:

Chairman: **Jim Bernier**, CPBE, CBNT  
*jim.bernier@sbe.org*  
**Ralph Beaver**, CBT  
*bevo@media-alert.com*  
**Larry Wilkins**, CPBE, AMD, CBNT  
*larry.wilkins@cumulus.com*

The deadline to contact the Nominations Committee is April 30. Ballots will be mailed no later than July 30th to all voting members. The results will be known on August 30th when all ballots mailed to SBE National Headquarters are counted by the official Board of Tellers. Those elected will be inducted into office during the SBE National Meeting, to be held in Pittsburgh, PA in conjunction with the SBE regional convention, sponsored by Chapter 20 of Pittsburgh, October 10-11.

Please seriously consider contributing to your Society by serving as a member of the national Board of Directors. Not only will your Society benefit but you will to, as you meet and develop friendships with other members from around the country.

## SBE Accredited Frequency Coordinators

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

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

Accredited Sept. 15, 2006 through Nov. 6, 2006

| Coordinator        | Location        | Affiliation |
|--------------------|-----------------|-------------|
| Frank Lovre        | Maitland, FL    | Chapter 42  |
| Christopher Taylor | Kansas City, MO |             |

## Fellow nominations open

The SBE Fellowship Committee will continue to accept nominations for SBE Fellow through April 1, 2007.

The Fellow designation is the most distinguished recognition presented to members by the Society of Broadcast Engineers. Members of SBE may earn the Fellow rank through several paths of achievement including conspicuous service, valuable contributions to the advancement of broadcast engineering or its allied professions, or by disseminating their broadcasting knowledge and promoting its application in practice.

Candidates for election to Fellow must be proposed in writing by a voting member to the Fellowship Committee. Use the Fellow Nomination form found at the SBE web site, [www.sbe.org](http://www.sbe.org) or request a copy from the SBE National Office. The nomination must include an appropriate and complete professional history of the nominee and the written endorsement of at least five other voting members. Nominations are confidential. Candidates should not be aware that they have been nominated.

Submit nominations to: Martin Sandberg, CPBE, Chairman, SBE Fellowship Committee, 9807 Edgecove Drive, Dallas, TX, 75238-1535, or to [sandytex@swbell.net](mailto:sandytex@swbell.net).

## 2007 Exam Dates

| DATES               | LOCATION       | APPLICATION DEADLINE |
|---------------------|----------------|----------------------|
| February 9-19, 2007 | Local Chapters | CLOSED               |
| April 17, 2007      | NAB, Las Vegas | March 2, 2007        |
| June 1-11, 2007     | Local Chapters | April 20, 2007       |
| August 10-20, 2007  | Local Chapters | June 8, 2007         |
| November 9-19, 2007 | Local Chapters | September 21, 2007   |

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**what?** Meeting of Chapter 73

**HAMnet**

**when?** Second Sunday of every month at 0000 GMT

**where?** 14.205 MHz

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# Membership counts

BY **Chriss Schorer, CPBE, CBNT**

*SBE President*

**W**hen I am asked how many members are in the SBE, I say 5,500. That's typically an average number and it has been so for several years. On the last day of the year, the SBE reconciles its membership records, and this year showed an interesting result. As of Dec. 31, 2006, the SBE had exactly 5,500 members.

That clean round number is impressive, although it's not the highest that the Society has ever attained, but I'm not complaining. As one of the 5,500, you receive several benefits for being a member of the SBE. Some of the benefits are tangible, some are not. Let's review some of the intangible benefits.

The professional networking opportu-

## Some say yes to no

**L**ast month, I wrote about working with other departments at the station by helping to find solutions — even unlikely or possibly impractical solutions — to problems. I received several comments from members who applauded the idea. Some added to the discussion by noting that some station engineers act like they completely run the station. While engineering obviously keeps the operation going, engineering is a support function for the business. It's important for engineering to be a part of the team that makes the business run.

When I worked with fellow broadcast engineer, Barry Thomas in Cleveland (who now is in Atlanta with Lincoln Financial), he likened the role of the station engineer to that of a stage manager in a theater. The actors are the stars and the producer and director run the show. The air studio is the stage, and it's engineering's job to provide the proper stage.

Still, it's our stage to manage.

nity is often cited as a major benefit of membership. It may be something that you take for granted, but it's a real benefit. Likewise, the interaction and educational opportunities that are found at local chapter meetings add to this benefit. I often hear that some people are too busy to attend meetings. I can appreciate this, but it can really help you to make the time and attend chapter meetings and seminars.

Taken further, your membership makes you a part of a recognized and trusted authority on technical matters. The SBE regularly files with the FCC and other government agencies on BAS, EAS, spectrum use and other matters. As a member, your voice is represented in these filings.

Don't forget the SBE JobsOnline, the SBE ResumeBank and the membership directory on the SBE website. Members also receive a copy of the printed Membership Directory and Buyers' Guide that was published in December.

As a member, you also receive The SBE Signal every other month, which is full of information about members, our industry and the Society.

While not a part of membership, Certification is a noted service of the SBE. The Program of Certification continues to grow in the number of people holding Certification and the breadth of knowledge that it covers. The two newest certifications, the AM Directional Specialist and 8-VSB Specialist, now have sample tests available within CertPreview.

There are some member benefits of a financial interest as well. SBE members receive a discount on SBE certification and recertification fees, a discount on the purchase of books in the SBE Bookstore, and a discount on the NAB convention registration. Other organizations offer reduced registration fees to SBE members as well for certain seminars and events. Be sure to ask next time.

The SBE also offers insurance options for life, health, auto, home owner and



professional liability for its members. You can even get a discount on car rentals through Hertz.

Why review all the benefits of membership? I have a few reasons. For one, membership renewals are due in April, and I think it's helpful to remember all the benefits that we receive as members of the Society. You should receive your renewal notice very soon. Take a moment and return it when you receive it so you can avoid losing your membership. It's not due immediately, but don't put it off and risk forgetting about it.

Another reason for the review is to help you prepare for the annual membership drive that begins on March 1. You can help build the Society by recruiting a new member. I'll bet that there are some engineers who attend your chapter meetings who are not members. Talk to them about the benefits of SBE membership. Also talk to the IT staff and the remote crew. They're media engineers too.

Ending the year with exactly 5,500 members is interesting, but like I said earlier, this has been the average for several years. As media engineers we see our industries changing, and we often wonder who the next generation of media engineers will be. Hopefully they will be members of the SBE, and you can be a part of the effort to make that happen. Let's not end 2007 with 5,500 members; let's shoot for at least 5,600 or more. ●

# Who is responsible for bad RF?

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

**M**y good friend Howard Fine (who I daresay most people who read this know, because he is everywhere at once and is very gregarious) is passionate about radio and personal responsibility. I like Howard like a brother, even though he is not a radio amateur. Howard and I have debated a lot of issues during countless telephone calls over a lot of years, and never once has Howard lost his temper with me on the rare occasions when we disagree. If I had to identify one issue about which we disagree most often, it would undoubtedly be the issue of who should be held responsible for unauthorized (typically meaning unlicensed, or licensed but uncoordinated) transmitter operation which results in interference (which I will call "bad RF"). Howard believes that there are several people who can and should be held responsible for unlicensed or unauthorized radio operation which results in interference, not just the transmitter operator.

It is understandable that he should feel this way, since he is the Southern California Frequency Coordination Committee's database administrator and coordinator for one of the largest and one of the most complex broadcast markets. Howard believes that the legal responsibility for unauthorized radio operation should include the manufacturer and retailer of the device that ultimately was operated by an unlicensed or unauthorized person. Now let me note right up front here that I represent several equipment manufacturers, including at least one Part 74 equipment manufacturer, so I am biased. Howard knows this, and now you do, too. But my view is that, given the structure of

FCC regulation of equipment and individual licensing (and the absence of any FCC requirement for point of sale control by manufacturers of radios or their dealers), it is unreasonable to hold an equipment manufacturer responsible for unauthorized operation of that equipment after the point of sale.

Yes, I am aware that court decisions have held firearms manufacturers civilly responsible for misuse of firearms that resulted in deaths. I am also aware, however, that the judiciary has been a laughingstock for years for the court decision that resulted in McDonald's being held liable for a customer who was burned after spilling coffee on herself, because the coffee was hot. My point is that administrative sanctions should not be visited on those who have no reasonable means of controlling a product, even one which has a significant potential for misuse, after it is sold. This is a comfortable argument for me because the FCC has never initiated point of sale control for radio transmitters. I can, if I want to, contact BE or whoever and buy a 5 kW AM transmitter and take it home with me, without the slightest hint of a rule violation by the seller or by me. It is only if I deploy the transmitter on a frequency for which I don't have program test authority that the violation occurs. The same is true with equipment that operates on BAS channels. I don't have to show a license before buying a radio transmitter. Howard argues that some manufacturers know that their products are being used by persons that are not eligible to obtain licenses to operate them, or are unlicensed. That may be true. But the FCC does not sanction such a manufacturer without evidence that the devices are actively marketed to persons who are

ineligible for licenses (and they don't sanction manufacturers or retailers who market their products to people who might be eligible for a license in a particular service but who are not in fact licensed in that service). Howard thinks that is terrible, and perhaps on moral grounds, he is right. Howard believes that manufacturers should at least have a duty to warn end users of their obligations.

Keep in mind that manufacturers of RF equipment typically utilize a system of dealers which are largely independent of the manufacturer, in order to distribute their products. A land mobile shop might act as a dealer for, as an example, Motorola products, but its only relationship with Motorola could be that it has bought a quantity of Motorola products for retail sale. Motorola cannot fairly be held responsible if, after retail sale of a Motorola portable, that radio is used by a person who has no direct connection with Motorola at all, on a frequency for which the operator is not licensed, or on a frequency allocated to a radio service for which the operator is not eligible. Or can they?

For years, the FCC has acted consistently with my view, and not with Howard's, at least in terms of enforcement actions. But that may be changing. On October 20, 2006, the District Director, New York District Office, Northeast Region, Enforcement Bureau (there's a long title for you) issued an Official Citation pursuant to Section 503(b)(5) of the Communications Act of 1934 to Techno Radio Communications, Inc. for violation of Section 90.427(b) of the Commission's Rules. Techno, in the





Bronx, New York, was investigated by the Enforcement Bureau's New York office, which found that Techno had programmed mobile transmitters with frequencies for which the licensee, City Line Car Service, Inc., was not authorized by its license. In the land mobile service (but not in the broadcast or BAS services), a little-known section of the rules, Section 90.427(b), states "[e]xcept for frequencies used in accordance with Section 90.417, no person shall program into a transmitter frequencies for which the licensee using the transmitter is not authorized." According to the FCC's Enforcement Bureau, Techno's programming of radios with frequencies for which City Line Car Service, Inc. was not authorized violates this section.

So the FCC does, at least in this one instance, hold a radio equipment dealer responsible for the improper operation of a radio transmitter by a customer. Is this a unique situation? Perhaps, because the land mobile rules also prohibit, with few exceptions, user-pro-

grammable radios. Also, in the PMRS, as a practical matter, it is the dealers who both program the radios and obtain licenses for, typically, non-technical business buyers. So perhaps in that situation, it makes sense to hold the radio dealer responsible for bad RF, since the dealer is in the best position to prevent it.

You be the judge. Is Howard right, or am I? Do the manufacturers, or the dealers, or both, have an obligation to see to the proper application of their product by the end user? Do they have a duty to warn the end user? Or is the obligation to avoid bad RF most fairly placed on the end user, who has the ultimate ability to not cause bad RF? Is the Techno Radio case akin to holding the gun manufacturer or dealer responsible for misuse of the firearm long after the point of sale? Maybe. All I know is, coffee is supposed to be hot, firearms are supposed to shoot bullets, and radio transmitters are intended to radiate RF, good or bad. ●

# Allen joins SBE staff

**S**BE Executive Director John Poray has announced the addition of a new member to the SBE National Office staff.



Whitney Allen

Whitney Allen joined the staff in December as the Communications Manager. Allen

attended Indiana University Purdue University Indianapolis where she studied journalism and business marketing. Allen has worked in the publishing and communications industry for several years; most recently she worked as a reporter and graphic designer at The Flyer Group, a division of Community Newspaper Holdings Inc. She currently resides in Plainfield, IN.

We welcome Whitney to the SBE National Office staff and wish her the best as she takes on her new responsibilities.

## SBE Membership and Certification Pins Order Form

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



Membership #: \_\_\_\_\_ Certification #: \_\_\_\_\_

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^ 3 digits in signature strip on back of card to the right of the (partial) card number (for Amex, it is 4 non-raised digits on the front).

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*Pins shown at 50% actual size.*



## SBE EXHIBIT BOOTH WILL BE IN THE SOUTH HALL

Members can connect with the SBE staff and board at the SBE exhibit booth. This year, plan to stop by the booth located on the second floor concourse of the South Hall. The booth will feature the very popular CertPreview exam preparation software programs that now include the AM Directional and 8-VSB Specialist exam sections. Also available will be our SBE published books including the SBE Television Operators Handbook, Handbook for Radio Operators and the SBE Radio Chief Operators Handbook. The booth will also have a selection of broadcast engineering-related technical books at SBE member-discount prices and many SBE logo items including pins, shirts and hats. Members of the SBE Board, Certification Committee and staff will be at the booth throughout the show.

### Booth Hours

Sunday — 2 p.m. to 4 p.m.

Monday through Wednesday — 9 a.m. to 6 p.m.

Thursday — 9 a.m. to 4 p.m.

### BOOTH LOCATION

Booth 28, located in the LVCC South Hall 2nd Floor Concourse near the entrance to the exhibit floor and the Broadcast Engineering Conference Rooms. See the SBE web site, [www.sbe.org](http://www.sbe.org) for a floor plan indicating the booth location.

### NAB BROADCAST ENGINEERING CONFERENCE

SBE is proud to be partnering again with NAB to produce the NAB Broadcast Engineering Conference (BEC). The Conference features a special Saturday in-depth Ennes Workshop plus more than 20 informative sessions covering the latest in broadcast technology from Sunday through Thursday. This year, the BEC is chaired by SBE member, Lew Zager of PBS.

Also serving on the committee are Talmadge Ball of Bonneville International, Dave Converse, of ABC/Disney Television Stations Group; Steve Fluker of Cox Radio in Orlando, Al Grossniklaus, of WTHR-TV, Indianapolis, Gary Kline, CBNT of Cumulus Media, Wayne



Kube of Belo Corporation, John Merrill of KPHO-TV, Phoenix, Paul Shulins, CBRE of Greater Media in Boston and Jeffrey Smith, CEA, CBT, CBNT.

### ENNES WORKSHOP

This year's Ennes Workshop is titled, *Everything Audio: Radio and TV* and is produced by Ennes Trustee and Education Director, Frederick Baumgartner, CPBE, Director of Broadcast Engineering at Qualcomm MediaFLO. Joining in the Ennes Workshop again this year will be those attending the final day of the PBS Engineering Conference as well as those attending the NPR Engineering Conference.

The Workshop will begin at 8 a.m. and conclude by 5:15 p.m. on April 14. It will be held in room S219/220 of the Las Vegas Convention Center. Attendees must be full NAB conference registrants to attend the Ennes Workshop.

The program begins at 8 a.m. with an early-bird, one-hour brush-up by Fred Baumgartner, CPBE on audio basics for beginners and those that do not regularly work with audio. The full program begins at 9 a.m. with opening remarks from John Poray, Executive Director of the Society of Broadcast Engineers. Then Steve Lampen of Belden Cable will cover one-hundred things you should know about wiring for audio; a broad tutorial on the physical construction of audio systems and the impacts on performance.

Next, the seminar covers the common audio encoding systems and how they fit together from production through distribution to transmission. Subsequently, an ever increasing option for construction of audio networks is the adaptation of off-the-shelf IP wire, switches, routers, and Linux engines for the facilities basic audio infrastructure. Steve Church will cover the shift from shielded twisted pair and analog amplifiers, to Cat-6 and an all IT based infrastructure. Tim Carroll covers Audio for HDTV, and Mike Babbitt will explain and demo the use of Dolby Metadata in the 5.1 world. Nvision's Birney Dayton and Jay Kuca cover the trials and tribulation of managing Multi-Channel

Audio in a DTV facility, and Roger Charlesworth closes the day with help on

finding clarity in planning for HD Multi-Channel Audio.

The day-long program is designed to be a broad tutorial of the practical issues facing the Broadcast Engineer, from beginner to seasoned pro. Watch for a more in depth break down of the Ennes Workshop in the next issue of The Signal.

### SBE MEETINGS

SBE will hold a number of meetings during the NAB convention that may be of interest to you. (Located at the Las Vegas Hilton Hotel unless otherwise indicated)

- Board of Directors Meeting, Sunday, 8:30 a.m. to noon; Conference Rooms 1-2
- SBE/NFL Game Day Coordinators Meeting, Monday, 9 a.m. to 11:30 a.m., Conference Room 1-3
- SBE Frequency Coordinators Meeting, Tuesday, 10 a.m. to noon, Conference Room 11-12
- EAS Meeting, Monday, 2 p.m. to 4 p.m., Conference Room 4-5
- Membership Meeting, Tuesday, 5 p.m. to 6 p.m., Room S226/227, Las Vegas Convention Center
- SBE Certification Exams will be conducted on Tuesday from 9 a.m. to noon for those who have pre-registered by the March 2nd deadline.

### REGISTRATION DISCOUNTS FOR SBE MEMBERS

Members of SBE can register for the NAB convention at a special partner rate, a savings of \$200 off the NAB non-member rate. To get the discount, SBE members register using the regular on-line registration form found at the NAB convention registration web site, [www.nab-show.com/registration.asp](http://www.nab-show.com/registration.asp). When you reach the Profile section, check the Partner box and select SBE from the drop-down box. The discount is only available using the on-line registration method.

If your plans include a trip to Las Vegas this year to attend NAB2007, we hope to see you there!



# Resources abound

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

**A**t some point, as a member of SBE, you may need an answer about your membership, information about SBE certification or seminar, or any number of other topics. There are plenty of resources available to you to find those answers and get the information you need.

A quick and always available source for information is the SBE website, [www.sbe.org](http://www.sbe.org). The SBE website, which was redesigned just over a year ago, provides an easily navigable structure for the member, non-member and volunteer chapter leader. Key topics are boldly illustrated across the top of the home page and down the left-hand side. From there, you will find copies of the latest SBE FCC filings, a list of chapters, their chairmen and when they meet and requirements and procedures for the SBE Program of Certification. Members, using their SBE member number can access the names of other members in the on-line membership directory.

Visitors to the website can also locate a frequency coordinator, complete and submit a membership application with dues payment, purchase a technical book or SBE logo item and look for or place a job on the SBE JobsOnline. You can also access the complete list of SBE Sustaining Members, companies that provide products and services to the broadcast engineering community, with live links to their websites and contact information.

When you have a specific question that

requires more explanation than the website can provide, there are plenty of sources for you. The SBE national Board of Directors is a good place to start. The 17 members who make up the Board are available by e-mail or telephone. You can find a list of the Board and their e-mail addresses at the SBE website and in each issue of the SBE Signal. Members of the Board also chair most of the national committees. There are nineteen national committees and all of the committee chairmen and their e-mail addresses can be found at the SBE website.

Each member of the Board is also assigned a number of chapters to which they serve as the official liaison between the Board and those chapters. Though members are free to contact any member of the Board, the official liaison exists to help insure that there is a communication link between chapters and the national organization.

Of course, the SBE National Office in Indianapolis is a ready source of information for members. The National Office has regular business hours of 8:30 am to 4:30 pm, Eastern Time, Monday through Friday. You may reach members of the staff by telephone at (317) 846-9000 or e-mail a specific staff member using the person's first initial and last name [@sbe.org](mailto:@sbe.org).

Do you have a change to your membership listing, want to submit a job posting for SBE JobsOnline or submit your resume to the SBE ResumeBank? Contact database manager, Scott (Kenneth) Jones at [kjones@sbe.org](mailto:kjones@sbe.org).

Your questions about certification and recertification can be directed to certification

director, Megan Clappe at [mclappe@sbe.org](mailto:mclappe@sbe.org). Megan is ably assisted by Carol Waite, who can help you with

book orders, seminar registrations and SBE Store purchases. Carol is also the cheerful voice who answers the SBE phones and greets our guests. You can reach her at [cwaite@sbe.org](mailto:cwaite@sbe.org).

Questions and submissions for SBE publications can be directed to communications manager, Whitney Allen at [wallen@sbe.org](mailto:wallen@sbe.org). Whitney, the newest member of the SBE staff, also handles our publication advertising sales, the SBE Sustaining Member program and much of the updating of the SBE website.

Accounting questions and Ennes Workshop registrations and speakers should be directed to executive assistant, Debbie Hennessey at [dhennessy@sbe.org](mailto:dhennessy@sbe.org). Debbie is also the person to talk to about SBE Bookstore orders.

If you have questions about chapter operation and program, the SBE National Meeting, member insurance, credit card and rental car programs, the SBE budget, member dues, frequency coordinator accreditation, or the NFL Game Day Coordinator program, please contact me at [jporay@sbe.org](mailto:jporay@sbe.org).

For a more complete list of SBE programs and services and who to contact at the National Office about them, see your 2006-07 SBE Membership Directory on page 11. ●



## Female Broadcast Engineer to be recognized by AWRT and SBE

**T**he American Woman in Radio & Television (AWRT) and the SBE will jointly present the, "Outstanding Female Broadcast Engineer" award for 2007. The award will be presented on Saturday, March 10, in Washington, D.C. during the AWRT Annual Leadership Summit & Business Conference.

This is the second year for the award and the first for Broadcasting and Cable magazine as sponsor. The award serves to recog-

nize the contributions of women in broadcast engineering and helps to promote the field in general to the broadcast industry and general public.

Nominations for the award closed on February 2nd. SBE contributed to the development of the award criteria and will also participate in the selection of the winner. The award is open to members of SBE and AWRT. SBE President, Chriss Scherer, CPBE CBNT will assist in the presentation.

A graphic with a dark background. At the top, it says "What's your Certification Quotient?" in a stylized font. Below this, there are two circular icons: one labeled "Certification" and one labeled "Quotient". A large white "X" is drawn over the "Quotient" icon. Below the icons, there is a text box with a question: "What signal level is defined as the blanketing contour of an FM broadcast station?" and four multiple-choice options: A) 115 dBu (562 mv/m), B) 70 dBu (3.16 mv/m), C) 60 dBu (1.0 mv/m), D) 80 dBu (10 mv/m). At the bottom, it says "Question taken from SBE CertPreview. Turn to page 22 for the answer."/>

**What's your Certification Quotient?**

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

What signal level is defined as the blanketing contour of an FM broadcast station?

A) 115 dBu (562 mv/m)  
B) 70 dBu (3.16 mv/m)  
C) 60 dBu (1.0 mv/m)  
D) 80 dBu (10 mv/m)

Question taken from SBE CertPreview. Turn to page 22 for the answer.

# BAS potpourri



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

*Chairman, SBE FCC Liaison Committee*

**P**otpourri (noun): A combination of incongruous things; a miscellaneous collection. This article addresses a potpourri of Broadcast Auxiliary Services (BAS) issues: Use of Telex headsets by nuclear power plant (NPP) operators, an update on DoD uplinks moving into the 2 GHz TV BAS band, and 2 GHz TV BAS band plan conversion problems for stations near the U.S.-Canada border.

## TELEX HEADSETS AND NPP OPERATORS

After a particularly difficult series of negotiations between SBE, NAB, MSTV and the Nuclear Energy Institute (NEI) and the United Telecom Council (UTC) regarding the use of Telex wireless headsets by approximately sixty NPP operators throughout the U.S., SBE has finally been able to concur with a proposed settlement agreement that would allow NPP operators to continue their use of Part 74 Low Power Auxiliary (LPA) Telex headsets on UHF TV channels, until such time as replacement communications equipment, for which NPP operators would be eligible to license, can be found. Or, alternatively, until Part 15 equipment, not requiring an FCC license, can be substituted.

Readers of this column will recall that NPP operators started using Telex headsets for their intra-plant communications several years ago, but without benefit of the required FCC license. The problem was further compounded because NPP operators were not even eligible for a Part 74, Subpart HA, LPA licenses. As a temporary measure, Telex obtained an experimental special temporary authority (STA), WB9XSY, to cover the unlicensed operation; and even this was a stretch, because there was hardly anything "experimental" on how the NPP operators were using their Telex headsets. When the FCC declined to keep renewing the WB9XSY STA, NEI then

applied for, and was granted, a virtually identical experimental STA, WC9XCR. However, the Commission also indicated that it would not continue to indefinitely renew this STA, either.

SBE objected to this use of Part 74 frequencies on two grounds: lack of eligibility and failure to frequency coordinate. Although much of the use occurred inside the heavily-shielded containment vessel, SBE's research revealed that NPP operators also used their Telex headsets during refueling operations, with the containment vessel's door open, and with operators using their headsets while moving fuel rods to and from outdoor storage ponds.

SBE's concerns were over the apparent lack of consequences for the unlicensed operation, the precedent of allowing non-Part 74 eligible entities to operate on Part 74 spectrum, and the failure of NPP operators to frequency coordinate their use of UHF TV channels with broadcasters using those same channels for their wireless microphones.

The Commission started a rulemaking proceeding, ET Docket 05-345, to address the NEI/UTC eligibility rule waiver request (Section 74.832(h) of the FCC Rules). SBE filed comments and reply comments to this rulemaking. Then, while waiting for a Report & Order (R&O), NEI approached MSTV/NAB/SBE, to see if a memorandum of understanding (MOU) agreement could be hammered out.

After more than six months of difficult negotiations, a version of the MOU that SBE could live with was finally agreed to. By the time you read this article, that MOU should have been filed with the FCC, which, presumably, will be only too pleased to incorporate the agreement in a R&O. The MOU places reporting requirements on NEI/UTC and the individual NPP operators (with copies to MSTV, NAB and SBE), of the progress being made to replacement communications system for which NPP operators are eligible to obtain a license, or which does not require licensing. The

MOU also requires NPP operators to frequency coordinate their use of UHF TV channels with local broadcasters, and makes that use secondary to any use by already licensed Part 74, Subpart H, LPA stations.

## NEXT SBE-DoD MEETING

As reported in the December 2006 issue, the first SBE-DoD meeting, on November 8, 2006, in El Segundo, California, had encouraging results. The second and final SBE-DoD "policy" meeting, again involving SBE President Chriss Scherer, SBE Immediate Past President Ray Benedict, SBE Director and Chairman of the SBE Frequency Coordinating Committee Ralph Beaver, SBE General Counsel Chris Imlay, SBE Executive Director John Poray, and myself, is now scheduled for January 11, 2007, in Las Vegas (the location of the SBE Executive Committee meeting). At this meeting it is expected that interference calculation methodologies for DoD uplinks being moved into the 2,025–2,110 MHz TV BAS band will be reviewed and finalized. Subsequent meetings will then be held in the vicinity of each uplink being converted (the Vandenberg AFB uplink near Lompoc, CA, will be the first), and will include invitations to all 2 GHz TV BAS/CARS/LTTS licensees within 100 miles, and to the local BAS frequency coordinator (LTTS, or Local Television Transmission Service, is a Part 101, Subpart J radio service that shares the 2 GHz TV BAS band). National-level SBE participation will probably continue to occur, especially for the first few venue-specific meetings. While the national-level SBE participation will have provided suggested guidelines as to what will constitute the successful frequency coordination required by the ET Docket 00-258 Fourth R&O and as affirmed in the ET Docket 00-258 Seventh Memorandum, Opinion & Order (MO&O), it will be the obligation of



DoD to successfully frequency coordinate with each TV BAS, CARS, and LTTS licensee operating in the area of each to-be-converted uplink.

## 2 GHz BAND CONVERSION PROBLEMS FOR STATIONS NEAR THE CANADIAN BORDER

It has come to SBE's attention that several TV Pickup applications filed by TV stations near the U.S.-Canada border, proposing to convert their 2 GHz TV BAS electronic news gathering (ENG) operations from the old, analog, 1,990-2,110 MHz band plan to the new, digital, 2,025-2,110 MHz band plan, have been returned due to Canadian objections.

According to Section 74.6 of the Part 74 Rules, Subpart D remote pickup stations, Subpart E aural BAS stations, Subpart F TV BAS stations and Subpart H LPA BAS stations are all subject to the wireless telecommunications services rules contained in Part 1 of the FCC Rules. Section 1.928(f)(1) of the WTS Rules in turn states that any WTS station capable of transmitting within a 200° "sector" of the Canadian border has a coordination distance of 35 miles; that is, if the operational area of the TV Pickup (or CARS or LTTS station) falls within 35 miles of the

U.S.-Canada border, then the FCC is required to submit the application (via the International Bureau, or IB) to Industry Canada, for its concurrence. The Section 1.928(f)(1) language originates from a June 1965 U.S.-Canada agreement, "Coordination and Use of Radio Frequencies Above 30 MHz." Note that this coordination distance is different from Lines A and C defined in Section 90.7 of the FCC Rules; these lines define frequency coordination distances for below-470 MHz uses (Line A applies to the contiguous U.S.-Canada border; Line C applies to the Alaska-Canada border).

SBE is investigating how to best resolve such 2 GHz TV BAS international coordination problems. Apparently Industry Canada is taking the position that, for example, a TV Pickup station moving from old TV BAS Channel A4, 2,042-2,059 MHz, to new TV BAS Channel A4d, 2,061.5-2,073.5 MHz, constitutes a new use. However, SBE believes that this should only be the case if there is no existing U.S. TV Pickup station operation on old TV BAS Channel A5, 2,059-2,076 MHz in the same border area; that is, pre-existing TV BAS operations in the U.S.-Canada coordination zone should have fungible interference rights. ●

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# From the mail bag

BY **James T. Bernier, CPBE, CBNT**

*Chairman, SBE Certification Committee*

From time to time, I'd like to share with the membership at large some of the comments and observations which are offered by our members regarding the certification program that I receive via email.

In the last issue of the Signal, the "What's Your CQ?" question was: "In a typical receive-only Earth station, the signal-to-noise ratio may be improved by the following".

The possible answers were: A) Increase the size of the antenna; B) Reducing the LNA (low-noise amplifier) noise temperature; C) Reducing the length of the coaxial cable length; or D) All of the above.

The correct answer was listed as "D – All of the above".

Long time member, Henry Ruhwiedel, CPBE, wrote to point out that while choice A & B would improve the signal-to-noise ratio, choice "C" would have no effect on it. Henry wrote: "The coax is of little, if any, significance. Since the LNB/LNA typically has 60 dB gain and the C/N ratio is typically 15db more or less, coax loss is unimportant provided the receiver noise floor is exceeded by the LNA/LNB output noise floor. Thus the C/N ratio does not change with the signal level (coax loss) until there is a considerable amount of loss sufficient to place the output noise floor of the LNA/LNB at or below the noise floor of the receiver. This would only occur in extremely long coax runs."

Henry added, "While the absolute signal level will change with coax length, the C/N ratio remains constant since it is determined by the first RF active device and to a much less extent, the second RF active device. With a 60 dB gain LNB/LNA, the C/N ratio has been established and the coax would have to be mighty long to have any effect. It could actually improve receiver C/N ratio by making the coax longer (or insert a pad) if the noise floor from the LNB/LNA is so high that it triggers the receiver AGC, reducing the gain of the receiver and introducing the possibility of cross modulation effects."

The "What's Your CQ" questions, as well as the CertPreview questions, are all rewritten from the actual question database. We do not use the same wording for actual exams. In rewriting questions, occasionally subtleties of the original question are sometimes lost. We believe this was the case with this particular question.

Another email comes from a member who had purchased CertPreview in preparation for sitting for his CBTE exam. He was dissatisfied and wrote "the exam I took yesterday in no way shape or form resembled the type of information that the CertPreview had prepared me for. I feel that the exam was much more oriented to obscure details relating to a very, VERY, wide gamut of broadcasting functions".

The purpose of CertPreview is not that of a "study guide". It is intended to be a preview into the manner and subject content to be covered within the various certification level exams. The Certification Committee has listed

a number of published works and reference material which should be included within any effort to study for an exam. Further, almost all exams are open book, which permits candidates to bring with them any published book they wish into the exam room for the multiple choice exam. Those taking senior exams are not permitted to use books or reference material during the essay portion of the exam.

Like the "CQ" questions, questions and answers in CertPreview are not the actual questions and answers used in the certification exam question pool. A random set of questions are selected and reworked for CertPreview. This is intended to give candidates the "look and feel" of a certification exam. It is not intended to fully present every possible question that might be asked during an exam, which is what a study guide might be expected to do.

In the past we have offered both a paper version and a computer program which was referred to as a "study guide". It was because that phrase implied so much more that we changed the name of the product to more accurately reflect its purpose – to provide a preview as to how questions are presented and distribution across the various subjects tested within an exam.

Thanks for the feedback and I look forward to more in the future. ●



jim.bernier@sbe.org

## New SBE Certification Achievements

### LIFE CERTIFICATION

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

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Bernard Nobles, Farmville, NC

## **RECERTIFICATION**

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

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Dominic Mitchum, Slidell, LA - Chapter 72

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Dominic Mitchum, Slidell, LA - Chapter 72

Lawrence Paulausky, Havertown, PA - Chapter 18

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Frank Felker, Glassboro, NJ - Chapter 18

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Eric Hartzell, Columbus, OH - Chapter 52

Anthony Leyba, Van Nuys, CA - Chapter 131

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**Reaching from page 1**

Maybe there is someone on your staff who is somewhat new to broadcast engineering. Perhaps you know a student who has an interest in the profession. What better way to help someone reach new heights than to introduce him or her to SBE?

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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. S-06 • Pub. 2005 • 68pp

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**LAN Technologies Explained**

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This book answers all your questions about meeting the FCC RF exposure regulations. Simple step-by-step worksheets help you determine if your station complies with the rules, and if not, how to correct it. Included are tables needed for almost any station. Understand the rules and basic electromagnetic theory through plain-English explanations. Learn how to operate your station safely and legally. R-06 • Pub. 1998 • 320pp

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**Certification Handbook for Radio Operators**

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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. S-09 • Pub. 2003 • 72pp

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**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. S-08 • Pub. 2005 • 71pp

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

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Sam Brown – Columbia, MD  
Carlos Coca – Herndon, VA  
Dave Cooper - Fort Mohave, AZ  
Robert E. Cummings - Coral Springs, FL  
Victor M. Davila - Vega Baja, PR  
Angela R. Dixon – Lawrenceville, GA  
William C. Dobbs – Millersville, MD  
Kevin H. Doerle - Seven Hills, OH  
Bob Ehlers - San Luis Obispo, CA  
Robert T. Fehr - Saint Paul, MN  
Joel A. Gascot – Columbia, MD  
Michael Halla – Springfield, VA  
Scott Hempstead – Springfield, VA  
Steve Johnson - North Versailles, PA  
Matthew Jones – APO, NY  
William N. Kersey – Lakeside, CA  
Craig C. Koster – Boise, ID  
Ryan M. Krupa - Meridian, CT  
John R. Lee – N. Syracuse, NY  
Steve C. Longenecker – Anderson, IN  
Robert B. Longshore – Kokomo, IN  
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Cheryl Lustenberger - Mansfield, MA  
Ken F. Mahoney – Minneapolis, MN  
Dennis J. McSorley Jr. - Onalaska, WI  
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Geoffrey Parker - Stamford, CT  
Paul Paterson - Nevada City, CA  
Nestor L. Perez - Vega Baja, PR  
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David Powers – Cresson, PA  
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John N. Ramsey - West Hartford, CT  
Marshall A. Rice – Troy, IL  
William R. Robinson – Meridian, MS  
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Aaron C. Savage – Hilo, HI  
Charles R. Schell – Raleigh, NC

Bryan A. Shaw – Easton, MD  
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Robert E. Sink - Valrico, FL  
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## NEW STUDENT MEMBERS

John J. Hamm – Cambridge, MA  
Rosanna L. Jones - Boise, ID  
Brad M. Jurrens - Forest City, IA  
Yamil Little - Atlanta, GA  
Adam R. Long - Sunnyvale, CA  
Terrence A. Thomas - New York, NY  
Kyria E. Timmons - Greencastle, PA  
Donna L. Trapp - Kissimmee, FL

## NEW YOUTH MEMBERS

August P. Paule – Piscataway, NJ  
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## REINSTATED MEMBERS

David R. Bird – Draper, UT  
Paul R. Brenner – Hartford, CT  
David H. Carr – Puyallup, WA  
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Marcus Q. Potier - San Antonio, TX

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Gary H. Walston - Mishawaka, IN  
Timothy J. White – Garner, NC  
Kevin G. Wright - Cortland, NY

## REINSTATED ASSOCIATE MEMBERS

Daniel F. Oswald - Arlington Heights, IL



**William (Bill) Greep, CSTE**, has been promoted by Hearst Argyle Television to Director of Engineering at WMTW TV in Portland, Maine. Greep was most recently the Assistant Chief of Engineering at WISN TV, the Hearst Argyle station in Milwaukee, Wis. Prior to joining Hearst, Greep was the Outside Engineering Manager at KXTV in Sacramento, Calif. He is a 2005 graduate of California State University in Sacramento.

**Eva Hern, CBNT, CTO**, was awarded the InDyne, Inc. 2006 Employee of the Year Award at the NASA/Johnson Space Center.

**Jim Lotspeich, CBRE**, has retired as Chief Engineer from Entravision Communications' five radio stations, KINT-FM, KOFX-FM, KYSE-FM, KHRO-AM, and KSVE-AM, in El Paso, Texas. Lotspeich and his wife have moved from El Paso to Lago Vista, Texas. While in El Paso, Lotspeich was part of SBE Chapter 38 and had served as Secretary/Treasurer and Chairman.

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



# New organization for ATSC Digital Television Standard

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

*Vice President of Standards Development, ATSC*

The Advanced Television Systems Committee (ATSC) has published a new version of document A/53, "The ATSC Digital Television Standard." A/53 is the core document for digital television (DTV). It describes the key system characteristics, including the following:

- Video encoder input scanning formats, and the pre-processing and compression parameters of the video encoder
- Audio encoder input signal format, and the pre-processing and compression parameters of the audio encoder
- Service multiplex and transport layer characteristics
- VSB RF/transmission subsystem

A/53 was modular in concept, with the specifications for each of the modules contained separate annexes. However, it became evident that the introduction of system enhancements presented a document management challenge, in that to modify one aspect of the DTV system required "revising" the entire standard. Following considerable discussion, it was decided that a different structure, where each technical module was contained in a stand-alone "Part" and then combined into an overall document, would be preferable. This would permit a modification in one Part to be made without impacting the entire standard.

The ATSC Technology and Standards Group

(TSG) began work on a "partitioned" A/53 more than a year ago. No substantive changes were proposed; it was strictly an editorial restructuring of A/53E (the current version of the standard) into six parts:

- Part 1 – System (formerly the body, plus the former Annex F)
- Part 2 – RF/Transmission System Characteristics (formerly Annex D)
- Part 3 – Service Multiplex and Transport Subsystem Characteristics (formerly Annex C)
- Part 4 – MPEG-2 Video System Characteristics (formerly Annex A)
- Part 5 – AC-3 Audio System Characteristics (formerly Annex B)
- Part 6 – High Efficiency Audio System Characteristics (formerly Annex G)

Work on developing the individual Parts was carried out in various ATSC Specialist Groups and subsequently approved by TSG and, finally in early January, by the ATSC membership.

## A CLOSER LOOK

A/53E Part 1, "System," serves as an overview of the DTV system, including the following elements:

- Normative references, which include all subsequent Parts
- Definitions, treatment of syntactic elements, and terms employed
- Specifications and constraints
- System overview
- Historical background (annex)

A/53E Part 2, "RF/Transmission System

Characteristics," describes the characteristics of the RF/transmission subsystem. The VSB subsystem offers two major modulation methods: a terrestrial broadcast method (8-VSB), and a high data rate method (16-VSB). These are described in separate sections of the document. The 8-VSB modulation method is further defined by a set of required elements and various combinations of optional elements.

A/53E Part 3, "Service Multiplex and Transport Subsystem Characteristics," constitutes the normative specification for the transport subsystem. The syntax and semantics conform to MPEG-2, with additional constraints and conditions. Within this context, other ATSC Standards may further constrain and/or supplement the transport subsystem specification.

A/53E Part 4, "MPEG-2 Video System Characteristics," describes the characteristics of the video subsystem, including input formats and bit stream characteristics.

A/53E Part 5, "AC-3 Audio System Characteristics," describes the audio system characteristics and normative specifications.

A/53E Part 6, "Enhanced AC-3 Audio System Characteristics," describes the robust mode audio system characteristics and normative specifications.

Additional Parts may be added in the future to define new enhancements to the DTV system. A/53E and all other ATSC Standards can be downloaded at no charge from the ATSC Web site. See: <http://www.atsc.org>. ●



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

**HOLBROOK ENTERPRISES, INC. • 2006**

Heywood Bleyel  
(206) 468-8797  
WireCAD Serious design tools

**IMAGE VIDEO • 1997**

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

**JAY S. GERBER, CBT • 1999**

Manager, NFL Frequency  
Organization Group

**JOSEPH ELECTRONICS INC. • 2003**

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

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

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

**KPFF CONSULTING ENGINEERS • 2004**

Madison Barr  
(206) 926-0508  
Tower Engineering, Inspections Design

**L-3 COMMUNICATIONS ELECTRON DEVICES • 2003**

Steve Blich  
(570) 326-3561, ext. 239  
Tubes, Power

**LBA TECHNOLOGY, INC. • 2002**

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

**LEA INTERNATIONAL • 2004**

Caro Rastier  
(208) 762-6121  
Power Quality Products & Services

**LEADER INSTRUMENTS CORP. • 2002**

George Gomis  
(813) 600-1783  
Electronic Test & Measuring Equipment

**LP TECHNOLOGIES, INC. • 2006**

Samuel Lee  
(800) 816-9696  
Spectrum Analyzers

**MACKAY COMMUNICATION • 2002**

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

**MARKETER VIDEO SUPPLY • 2002**

Tom Moretti  
(845) 266-3036  
Audio, Video, Audio Visual Broadcast  
Supply

**MAXEL CORPORATION OF AMERICA • 1991**

Patricia Byrne  
(201) 794-5900  
Broadcast Video Products

**MICRO COMMUNICATIONS, INC. • 1998**

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

**MICROMET COMMUNICATIONS, INC. • 2005**

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

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

Siery Bell  
(315) 438-4700  
Passive Electronic Filters

**MICROWAVE RADIO COMMUNICATIONS • 1991**

Nadine Frechette  
(978) 671-5700  
Video Microwave Systems

**MICROWAVE SERVICE CORPORATION • 1997**

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

**MIDDLE ATLANTIC PRODUCTS • 2005**

David Amosato  
(973) 839-1011, ext. 1197  
Enclosures, Power, Accessories,  
Furniture

**MINKIN DESIGN INC. • 2005**

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

**MONARK • 1995**

Jamie Silva  
(800) 422-9961  
Wire and Cable

**MORROW TECHNOLOGIES, INC. • 2002**

Tish Boyles  
(727) 531-4000  
Spectrum Analyzers

**MOSLEY ASSOCIATES, INC. • 1977**

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

**NATIONAL ASSOCIATION OF BROADCASTERS • 1981**

(202) 429-5340  
Industry Trade Association

**NATIONAL FOOTBALL LEAGUE • 1999**

Jay Gerber  
Game Day Coordination Operations

**NAUTEL, INC. • 2002**

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

**NEURAL AUDIO • 2006**

Mark Seigle  
Surround Sound Technologies

**NORTHWEST TOWER ENGINEERING, PLLC • 2003**

Steven Diamond, P.E.  
(425) 258-4348  
Tower Engineering, Structural Analysis

**NOTT LTD. • 2002**

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

**NUCOMM, INC. • 1996**

John Dulany  
(908) 852-3700  
Digital Microwave Transmission  
Equipment

**NVISION, INC. • 1997**

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

**OLDCASTLE PRECAST, INC. • 2006**

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

**OMT TECHNOLOGIES INC. • 2001**

Ron Paley  
(888) 665-0501  
Automation, Skimming/Logging  
Software

**ORBAN • 1996**

Steve Gordon  
(805) 497-4685  
Broadcast Audio Products

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

Tom Moore  
(201) 392-6176  
Professional Broadcast Equipment

**PASTERNAK ENTERPRISES • 2001**

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

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

Robert McAlpine  
(800) 328-1008  
Routing Switcher Manufacturer

**PIRE & FISCHER • 1991**

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

**PRIME IMAGE, INC. • 1997**

Rodney Hampton  
(408) 467-4615  
Digital Audio/Video Equipment

**PRO-BEL • 2002**

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

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

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

**PROPHET SYSTEMS INNOVATIONS • 2003**

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

**PROVIDEO SYSTEMS, INC. • 2000**

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

**PULSCOM • 2003**

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

**QUINTEC ELECTRONICS AND COMMUNICATIONS INC. • 2002**

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

**RADIAN COMMUNICATION SERVICES INC. • 1986**

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

**RDL • 2004**

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

**RF CENTRAL, LLC • 2005**

Jeff Wirmiller  
(717) 349-





# Annual Awards Nomination Form for 2006

**INSTRUCTIONS:** Use one form per nomination. Photocopy this form for additional nominations. Please include all pertinent information about your nomination, as well as yourself. Supply as much information as possible, as this will assist the Awards Committee in its selection process. Nomination materials will be photocopied for each judge; if you wish each judge to have an original of any of your support materials (such as newsletters, CDs or anything printed in full-color), please send five sets. Nominations may be disqualified if requested support material is not provided.

**SUBMISSIONS:** Mail completed entries to: The Society of Broadcast Engineers, Inc., Attn: Awards Committee, 9102 North Meridian St., Suite 150, Indianapolis, IN 46260. For questions concerning nominations, contact Whitney Allen, Communications Manager, at wallen@sbe.org or (317) 846-9000 or Larry Wilkins, Awards Committee Chair, at larry.wilkins@cumulus.com or (334) 303-2525.

**DEADLINE:** Materials must be received by the National SBE Office by May 31, 2007. Winners will be announced in July and awards presented at the 2007 Awards Dinner

during the SBE National Meeting in Pittsburgh.

**OFFICIAL RULES:** Nominations valid only for achievements/data occurring from Jan. 1, 2006 through Dec. 31, 2006. Only active SBE Members and Chapters in good standing (having reported at least five [5] chapter meetings for 2006) are eligible for awards. Class awards are determined using the median chapter size as of Dec. 31, 2006, as the dividing line between Class A (less than the median) and Class B (greater than the median). The decision of the judges is final.

## CHAPTER AWARDS

### BEST REGIONAL CONVENTION OR CONFERENCE:

Recognizes the effort of the local chapter that sponsored, organized and held a regional technical conference and/or convention that best furthered the goals and objectives of the Society. **INCLUDE:** A) Conference Location/Dates; B) Conference Coordinator(s); C) Conference brochure or brief written description.

**BEST CHAPTER NEWSLETTER\*:** Recognizes two local chapters that produced the best locally published newsletter in its Class, providing up-to-date and relevant information about the chapter in a graphically pleasing and editorially sound manner. Chapters must exercise full control over its content, mailing and size. **INCLUDE:** A) Newsletter Name; B) Newsletter Editor; C) Description of how it is produced, including list of contributors; D) Three (3) samples of 2005-published issues.

**MOST INTERACTIVE CHAPTER:** Recognizes the local chapter that most actively attempted inter-association with organizations in industries related to the Broadcast Engineering profession (example: SCTE, ITVA, SMPTE, et. al.). **INCLUDE:** A) Interacting Organizations; B) Dates/descriptions of common events; C) Program announcements, attendance sheets or other evidence of common meetings/events between your chapter and associated groups.

**BEST CHAPTER FREQUENCY COORDINATION EFFORT\*:** Recognizes two local chapters that expended the greatest and most effective effort toward frequency coordination in its market, service area and Class. **INCLUDE:** A) Frequency Coordinator(s); B) Database URL link or printouts; C) Written description.

**BEST CHAPTER WEBSITE:** Recognizes the local chapter with a website providing up-to-date information about the chapter, including officers and meetings; making effective and creative use of graphics; providing links to the SBE National website; and effectively representing the chapter and SBE. **INCLUDE:** A) Website address; B) Webmaster.

## INDIVIDUAL AWARDS

**BROADCAST ENGINEER OF THE YEAR:** Recognizes the SBE Member who has made the greatest contribution to the broadcasting industry and to furthering the goals and objectives of the Society. **INCLUDE:** A) City and state; B) Current employer; C) Detailed written description of contributions; D) His/her portfolio (if possible).

**EDUCATOR OF THE YEAR:** Recognizes the SBE Member who is dedicated to the education of broadcast engineers through personal writings, teachings, programs and employment and who furthers the goals and objectives of the Society. **INCLUDE:** A) City and state; B) Current employer; C) Detailed written description of contributions; D) His/her portfolio (if possible).

**TECHNOLOGY AWARD:** Recognizes the SBE Individual or Sustaining Member who has provided the industry with the best new or innovative technical item or idea to further the science of broadcast engineering and to assist the broadcast engineer to be more productive in the craft. Only ideas that have been shared with others in the industry are eligible. **INCLUDE:** A) Technology Item/Idea; B) City and state; C) Written description.

**BEST TECHNICAL ARTICLE, BOOK OR PROGRAM BY AN SBE MEMBER:** Recognizes the author of the best technical article, book or paper in its contribution towards the increase of scientific, operational, artistic or technical knowledge in the broadcast engineering industry. **INCLUDE:** A) Title of book/article/program; B) City and state; C) Copy of article, book outline or program paper.

**BEST ARTICLE, PAPER OR PROGRAM BY A STUDENT MEMBER:** Recognizes the SBE Student Member who has shown excellence in the presentation of a technical, operational or scientific paper published in an SBE local, national or industry-related publication; or program presented at a local chapter meeting, national/regional convention or broadcast engineering-related class. **INCLUDE:** A) Title of article/paper/program; B) School attending, city and state; C) Copy of article, book outline or program paper.

**MOST CERTIFIED CHAPTER\*, HIGHEST MEMBER ATTENDANCE\*, AND GREATEST GROWTH IN NEW MEMBERS\*:** These three awards are determined with statistical information based on Dec. 31, 2006, figures on file at the SBE National Office. Chapters established in 2006 are not eligible for the Greatest Growth in New Members award.

\*DENOTES CATEGORIES WITH TWO CLASS AWARDS

**SBE LIFETIME ACHIEVEMENT AWARD:** Recognizes and pays tribute to individuals for their dedication, lifelong achievement and outstanding contribution to the broadcast industry. Nominees must be SBE members in good standing and have been active for 40 years or more in the broadcast engineering industry or a closely allied field that benefits broadcast engineering. Nominations must come from SBE members in good standing, and will include the endorsement of three other SBE members in good standing. **INCLUDE:** A) City and state; B) Current employer (if applicable); C) Career biography; D) Detailed written description of contributions.

**OFFICIAL RULES FOR LIFETIME ACHIEVEMENT AWARD:** Nominations for this award can be made at any time, but no more than one recipient will be named in a given year. Awards are determined by a 3/4 majority vote of the SBE Board of Directors, based upon recommendations made by the SBE Awards Committee.

## COMPLETE THE FOLLOWING INFORMATION

**AWARD:** \_\_\_\_\_

**NOMINATION (CHAPTER OR INDIVIDUAL NAME):** \_\_\_\_\_

**SUPPORT ITEM A:** \_\_\_\_\_

**ITEM B:** \_\_\_\_\_

**ITEMS C & D:** Please submit descriptions on a separate sheet; other items requested may be originals or photocopies.

I, \_\_\_\_\_, respectfully submit the above nomination for consideration by the National SBE Awards Committee.

Daytime Phone: \_\_\_\_\_ E-mail: \_\_\_\_\_ Chapter Name and No. \_\_\_\_\_

Address: \_\_\_\_\_ City/State/Zip: \_\_\_\_\_ Date Submitted: \_\_\_\_\_



# 2007 Leader-Skills Registration

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

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

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

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

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

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

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

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

- COURSE SELECTION:**
- Course I: Leadership – The Framework of People Skills, June 5-7, 2007** (Registration deadline: May 2, 2007)
  - Course II: Leadership – Expanding Your People Skills, August 7-9, 2007** (Registration deadline: July 3, 2007)
- Prerequisite: Course I, please list location and year : \_\_\_\_\_
- Course I and Course II** (Registration deadline: May 2, 2007)

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

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

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

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

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

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

Request Housing – Course I:  No  Yes, please reserve (circle one) single / double Date Arriving: \_\_\_\_\_ Date Departing: \_\_\_\_\_

– Course II:  No  Yes, please reserve (circle one) single / double Date Arriving: \_\_\_\_\_ Date Departing: \_\_\_\_\_

Room guarantee required (check one):  Visa  MasterCard  American Express

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

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

If you have special needs, please specify: \_\_\_\_\_

**MAIL TO:** SBE Leader-Skills Series, Society of Broadcast Engineers, 9102 North Meridian Street, Suite 150, Indianapolis, IN 46260

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

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

|                                |                      |
|--------------------------------|----------------------|
| <b>OFFICE USE ONLY:</b>        | Date Received: _____ |
| Registrant Confirmation: _____ |                      |
| Hotel Confirmation: _____      |                      |





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

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

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

**"(It was) an eye-opening experience,"** said Brian Gallagher, who attended the 2006 Leader-Skills Seminar in Indianapolis. **"Cupka is obviously one of the best at what he does."**

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

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

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

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

This year, Course I, "Leadership – The Framework of People Skills" will be held

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

*~ Abraham Lincoln*

June 5-7, 2007, at the Holiday Inn Select in Indianapolis. It covers the function and nature of your leadership role; how to build stronger teams and effective internal cooperativeness; the complex differences of people; and discovery of your "natural" style of leading and how to nurture a "developed" style to help you adjust to different people in differing situations.

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

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

Registering early is a good idea – each course is limited to a minimum of 10 and a maximum of 18 participants. Deadline to register for Course I is May 2. The cost of registration is \$545, which includes three days of instruction, all course materials, a certificate of completion and classroom refreshments. All transportation, housing and meals are the responsibility of the participant. However, a single or double room can be reserved through SBE at the Holiday Inn Select (Airport) – where the course will be held – at a rate of \$105 per night, plus tax.

Course II, "Leadership – Expanding Your People Skills" picks up where Course I leaves off and will be offered from August 7-9, 2007.

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

**"The 'secret' to success is... getting ready!"**

*~ Henry Ford*

## In the Circle...

*a snapshot of an SBE Member*

### Eva Hern, CBNT, CTO

Broadcast Maintenance Technician employed by InDyne, Inc. working under the Video Contract at NASA/JSC.

Houston, Texas

SBE Chapter 105, Houston, Texas

**Best known for:** I am a Broadcast Maintenance Technician employed by InDyne, Inc., working under the Video Contract at NASA/JSC. Though I work on all aspects of the video system at JSC, my prime responsibility is keeping the CCTV system at the large underwater facility, known as the Neutral Buoyancy Laboratory or NBL, operational.

**Picture here:** This is me with a pretty good view of the pool. It looks like there is a good view of the ISS mockups visible under the water, and there are some people on the pool deck. The pool is 102 feet by 202 feet by 40 feet deep and has something like 6.2 million gallons of water in it.

**Focal Point:** The training available through SBE definitely fills a need. The CBNT boot camp I attended attracted members from three states. The new and old versions of the CERTpreview software is also a great training tool.

**Sphere of Influence:** My first manager, Roland Bigley, gave me so much guidance and encouragement when I was starting out. I still have the training materials he gave me. I remember having RS-170A memorized because of his constant pop quizzes. Today I am very lucky to work with Fred Lewis, CSTE, and Jesse Bowman, both of whom readily share their wealth of experience and knowledge.

**When I'm not working...** Most of my free time is spent working on the house or yard. Since the remodeling is well into the third year with no end in sight, I guess it should be considered a hobby. I also like hiking in the local state parks or national forest. There's nothing like the quiet of the woods, especially when you spend most of your time in a noisy urban environment.

**Favorite Gadget:** My HD Radio.



## MARK YOUR CALENDAR

### February 24

**Sacramento Ennes Workshop**  
Hawthorn Suites,  
Sacramento, Calif.

**Hosted by:** Sacramento Chapter 43

**Location:** 321 Bercut, Dr.,  
Sacramento, CA

**Workshop fees:** \$25 for SBE and SMPTE members, \$30 for non-members. Lunch is included. Rooms are available at an additional rate.

**Check-in:** Begins at 8 a.m. The workshop will go from 9 a.m. to 5 p.m.

**Registration:** Visit the SBE website at [www.sbe.org](http://www.sbe.org), or call the SBE National Office at (317) 846-9000

### March 13-14

**Great Lakes Broadcasting Conference & EXPO**

The Lansing Center,  
Lansing, Mich.

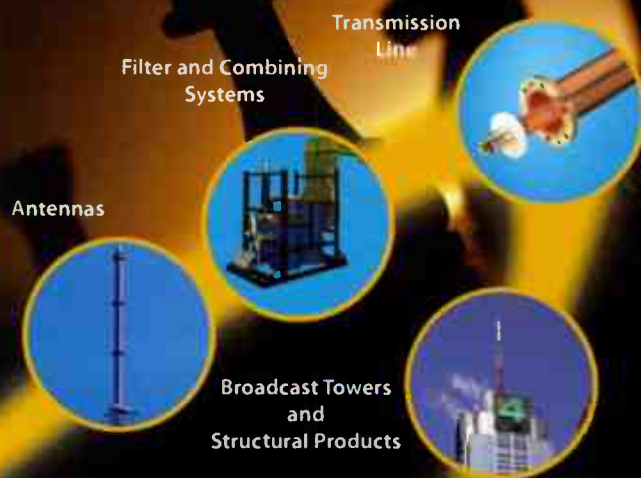
**Hosted by:** Michigan Association of Broadcasters, in cooperation with SBE Chapter 91 and the Michigan Association of Public Broadcasters **Contact for conference:** Call (800) 968-7622, e-mail

[mab@michmab.com](mailto:mab@michmab.com) or visit [www.michmab.com/conferences/glb\\_main.html](http://www.michmab.com/conferences/glb主_main.html) **Contact for trade show:** Call Robin

Smith at (800) 878-5131 or e-mail [mab@michmab.com](mailto:mab@michmab.com)

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**ANSWER**  
from  
page 8:

A. 115 dBu (562 mv/m) as specified Section 73.318 of the FCC Rules. 70 dBu or 3.16 mv/m is the minimum field strength level that a commercial FM station must provide over the entire principal community (Sec. 73.315(a) of the FCC Rules). 60 dBu or 1.0 mv/v refers to minimum field strength level that an NCE FM transmitter must provide over at least 50% of its community of license or to reach 50% of the population within the community (Sec. 73.515 of the FCC Rules). 80 dBu or 10 mv/m is the minimum field strength that a UHF TV station must provide over the entire principal community to be served.



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