



the SIGNAL

BIMONTHLY PUBLICATION OF THE SOCIETY OF BROADCAST ENGINEERS

**AUGUST
2006**

Volume 19, Number 4

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Find Out if You're a Winner in the 2006 Membership Drive

Have you visited us on the web yet?

www.sbe.org

2005 National Awards Announced

The Society of Broadcast Engineers has announced the winners of its 2005 National Awards. Winners will be recognized at the Society's National Awards Dinner on September 27, 2006, in Verona, N.Y. The event is part of the annual SBE National Meeting which is being held in conjunction with the Broadcast Technology Expo, sponsored by Chapter 22 of Central



"Broadcast Engineer of the Year" Larry J. Wilkins, CPBE, AMD, CBNT



"Educator of the Year" Gary Sgrignoli

Verona, N.Y. The event is part of the annual SBE National Meeting which is being held in conjunction with the Broadcast Technology Expo, sponsored by Chapter 22 of Central

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See **AWARDS** on page 5

Participate in Your SBE.VOTE!

In any local, state or national election, you have a right to vote as a citizen. As a member of SBE, you have the right and responsibility to vote each year for members to serve on the national Board of Directors. The direction and policies are determined by the Board, who are members just like you.

The Board consists of 17 members, including 12 directors and the president, vice president, secretary, treasurer and immediate past president.

Our Nominations Committee, chaired this year by Ted Hand, CPBE, of Portsmouth, Va., has assembled a slate of officers and a list of director candidates who

have committed their time and resources to serve if elected.

The ballot package will be sent via First Class mail on July 24 to all voting members of SBE. That includes, Regular, Senior and Fellow members and the voting representative of Sustaining Members. When the ballot reaches your mail box, please take the time to review the descriptions of all the candidates, make your selections and return the ballot to the SBE National Office no later than August 24.

See **VOTE** on page 12

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Networks, TBS, Inc. • Alpharetta, Ga. • jim.bernier@sbe.org**

Andrea B. Cummis, CBT, CTO, American Desi TV
Roseland, N.J. • acvideo2@comcast.net

**Dane E. Eriksen, P.E., CSRTE, 8-VSB, CBNT Hammett &
Edison, Inc. • San Francisco, Calif. • dericksen@h-e.com**

Ted Hand, CPBE, WGNT-TV
Portsmouth, Va. • tlhand@wgnttv.com

Hal H. Hostetler, CPBE, KVOA Television
Tucson, Ariz. • hhh@kvoa.com

**Keith M. Kintner, CPBE, CBNT, University of Wisconsin
Oshkosh, Wis. • kintner@uwosh.edu**

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Robert "RJ" Russell, CSTE, CBNT, Sprint Nextel
Phoenix, Ariz. • robert.russell@sprint.com

Conrad H. Trautmann, CPBE, Westwood One, Inc.
New York, N.Y. • ctrautmann@westwoodone.com

**Larry J. Wilkins, CPBE, AMD, CBNT, Cumulus
Broadcasting • Prattville, Ala. • larry.wilkins@cumulus.com**

Raymond Benedict, CPBE

Immediate Past President • CBS Communication
Services Inc. • Washington, D.C. • rbenedict@sbe.org

NATIONAL STAFF

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

Pollyanna Bayman, Membership Services Director
pbayman@sbe.org

Megan Clappe, Certification Director
mclappe@sbe.org

Debbie Hennessey, Executive Assistant
dhennessey@sbe.org

Scott Jones, Database Manager
kjones@sbe.org

Carol Waite, Certification Assistant
cwaite@sbe.org

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SBE National Meeting Heads to Turning Stone

The 2006
National
Meeting of
the Society of
Broadcast Engi-
neers will be
hosted by Chapter
22 of Central New
York on Septem-
ber 26-27. Chap-



The 2006 SBE National Meeting and the 34th Broadcast & Technology Expo presented by Chapter 22 of Central New York will be held at the Turning Stone Resort and Casino in Verona, N.Y.

ter 22 will be in its 34th consecutive year of presenting the Broadcast & Technology Expo and the event will serve as the host of the National Meeting. The Expo is a two-day event that features IT and Radio Workshops on the 26th and technical papers and the largest SBE chapter-sponsored broadcast equipment and services exhibition in the country on the 27th.

The SBE National Meeting and Chapter 22 Broadcast & Technology Expo will be held at the Turning Stone Casino and Resort, located in Verona, New York, 30 miles east of Syracuse, just off the New York State Thruway (I-90) at exit 33.

The schedule for the National Meeting includes the fall meeting of the Board of Directors from 6:00 pm to 10:00 pm on Tuesday, September 26. On Wednesday, September 27, the day will begin with the annual Fellows Breakfast (by invitation) from 8:00 am to 9:00 am. The Annual Membership Meeting will be held from 4:00 pm to 5:00 pm followed by the Chapter 22 Reception with live entertainment from 5:00 pm to 6:30 pm. The National Awards Dinner will highlight the evening, beginning at 6:30 pm. The National Awards Dinner requires a ticket for the very low price of just \$12 per person. A special guest speaker will be featured and, of course,

the National Awards will be presented, including Broadcast Engineer of the Year, Educator of the Year, Chapter Awards and three new SBE Fellows.

The Expo regional convention schedule includes a day-long seminar on IT and Radio on Tuesday, September 26 from 9:00 am to 5:00 pm. There is also a special golf outing on Tuesday with golf from 9:00 am to 4:00 pm and dinner beginning at 6:00 pm., at the beautiful Shenandoah Golf Course at Turning Stone.

On Wednesday, the exhibit floor will open from 8:30 am to 4:30 pm and will feature more than 100 exhibitors displaying equipment and services for broadcasters and those in related fields. Technical Workshops will also be presented on Wednesday from 9:00 am to 4:00 pm. Everyone is invited to attend the National Membership Meeting at 4:00 pm and the reception and National Awards Dinner which follow.

For more information or to pre-register, visit the Chapter 22 website, www.sbe22expo.org. To make your reservations for the National Awards Dinner, contact Debbie Hennessey at the SBE National Office at (317) 846-9000 or dhennessey@sbe.org. Provide your name, address, the number of tickets you would like and credit card information. VISA, MasterCard and American Express are accepted. ●

Where can I find a good job in broadcasting?

WHO CAN WE HIRE FOR THAT TECHNICAL POSITION?

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What makes a chapter healthy?

BY **Chriss Schorer, CPBE, CBNT**
SBE President

When I talk to SBE members about the SBE, one common point of discussion is that member's chapter activities. We talk about chapter leadership, programs, meeting times and locations and other items that relate to the chapter operation. Sometimes the status of the chapter is healthy. Sometimes the chapter struggles to stay active. Sometimes the chapter hasn't met for months. What makes a chapter healthy? There's no single answer to this question, but there are several ideas that can be implemented to establish a healthy, active chapter.

The chapter leadership is probably the easiest point with which to start. While a strong leader can make or break a chapter, the leadership goes beyond the chairman alone. You have probably heard someone say, "If I don't do it, it won't get done." This may be true on the surface, but at the same time if you don't ask someone else to do it, you'll have to do it by default. Delegation not only reduces the workload of the leader, it also gets other people involved. As people become involved, they will take ownership of the task or project, and in time consider themselves a vital part of the chapter. When this happens, the problem phrase above, when considered by the chapter volunteer, will likely become, "If I don't do it, I will let others down."

Any effort requires a champion to lead the project. While it sometimes seems that chapter leaders get stuck in their roles because no one else wants to do it, part of leading a group is planning for the ongoing succession. By sharing the responsibility and bringing in a new leader, the chapter will benefit from the diversity, and the individual leaders won't

suffer from burn-out.

In short, assign tasks if you're the chairman, volunteer for tasks if you're a member.

A successful chapter does not rely solely on the leaders. There are many tools that can aid a chapter's success. One tool is relevant and current information.

Most chapters have a website. If yours doesn't, start working on one. The chapter website is a fantastic resource for the members. The site doesn't have to be located on its own exclusive server. There are several organizations that offer free site hosting services. Start the website with a free service, then look into exclusive hosting and registering a URL.

One of the projects that was established at the strategic planning meeting in July was to provide a generic website template that chapters can use to create their own websites or update an existing one. This template will be modeled on the SBE national site and allow chapters to customize it for their own use.

The most important part of having a chapter website is to maintain it. Seeing a headline meeting notice for a meeting that took place six months ago is sure to discourage chapter participation.

A chapter website is one outlet for chapter communication. Another easy one to establish is a chapter e-mail list server. Like a website, hosting your own is one option, but there are lots of free group e-mail and forum resources available.

The chapter newsletter is a direct conduit from the chapter to its members. Many chapters have moved to an electronic newsletter that is distributed via e-mail. While this is a good way to distribute the information, I still believe that a printed form sends a stronger message. It also provides something tangible



that puts the information into the members' hands. There is a cost involved in creating a paper newsletter, but most chapters have overcome this by selling sponsorships.

What's most important is that information is shared between the chapter leaders and the members.

I'll offer one idea for all chapters to use at all meetings. While it is common for the group to make a round of self-introductions, an extra step can help make new attendees feel more welcome. During the time before the meeting starts, when everyone is talking in small groups, the chapter leaders and members can go around and introduce themselves to the people they don't know. Welcome everyone individually. If time allows, take a few minutes to introduce the new attendee at the beginning of the meeting.

Everyone plays a part in a chapter's success, whether it's the chairman or the newest member. If you have success stories from your chapter, let me know. Likewise, if your chapter is having trouble, let's find a way to overcome the obstacles. ●

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EXCELSIOR COLLEGE

What's
on your
mind?

SBE Roundtable – SBE's member e-mail discussion group created to facilitate discussions about the Society.

EAS Exchange – An SBE-sponsored e-mail discussion group about the Emergency Alert System

Sign up for both on the SBE website at
www.sbe.org

AWARDS from page 1

be members of the Society and are nominated by their peers.

The 2005 SBE Educator of the Year Award will be presented to Gary Sgrignoli of Mt. Prospect, Ill. Sgrignoli is a partner in Meintel, Sgrignoli and Wallace, a broadcast consulting firm. Since 1998, he has presented more than 60 seminars about 8-VSB to broadcasters. Fourteen of those came during 2005.

Sgrignoli's experience with 8-VSB technology extends back to 1991, when his work with Zenith resulted in the VSB transmission system design, its prototype implementation and lab and field tests. He has demonstrated DTV in the United States and other parts of the world with the Grand Alliance and the ATSC. Sgrignoli also holds 35 U.S. patents and has authored many articles.

Sgrignoli is a graduate of the University of Illinois and, following graduation, went on to a 27 year career in the research and development department of Zenith Electronics Corporation. In 2004, he created Sgrignoli Consulting and in 2005, merged his practice with Bill Meintel and Dennis Wallace to form Meintel, Sgrignoli and Wallace (MSW).

During 2005, Sgrignoli's 8-VSB expertise was tapped to help create the SBE 8-VSB Specialist certification. He worked with a Certification subcommittee to establish the baseline knowledge benchmark and then to create a question pool to evaluate an individual's knowledge of 8-VSB concepts. At the end of 2005, SBE began working with Sgrignoli on a joint effort to offer the SBE 8-VSB Specialist exam in conjunction with his seminars. Sgrignoli is a member of SBE Chapter 26 in Chicago.

The award for Best Technical Article, Book or Program by an SBE Member goes to John Battison, P.E., CPBE. Battison's article, which appeared in the September 2005 issue of *Radio* magazine, was titled, "The Details of EIA/TIA 222 Revision G." The topic deals with a newly revised standard for tower structures, which has since gone into affect on January 1, 2006.

Local chapters have also earned awards based on their own achievements. Some categories recognize two chapters, based on their size. Class A represents those chapters whose membership is less than the national median while Class B are those chapters that have membership greater than the national median.

Best Regional Convention or Conference:
Chapter 22, Central New York – 2005 Broadcast & Technology Expo - Conference
Chairman: Tom C. McNicholl, CBTE

Best Chapter Newsletter (Class B):

Chapter 24, Madison, Wis. - Newsletter Editor, Michael J. Norton, CSTE, CBNT

Best Frequency Coordination Effort (Class B):

Chapter 24, Madison, Wis. - Frequency Coordinator, Thomas Smith, CPBE

Best Chapter Website:

Chapter 54, Hampton Roads, Va. - Webmaster: Ted Hand, CPBE

Most Certified Chapter (Class A):

Chapter 117, Palouse - Clearwater, Idaho - Certification Chairman: Ralph Hogan, CPBE, CBNT
Chapter Chairman: Steve Franko, CBNT

Most Certified Chapter (Class B):

Chapter 131, Inland Empire, Calif. - Certification Chairman: Paul E. Claxton, CPBE, CBNT
Chapter Chairman: Robert G. Dawson, CBNT, CTO

Greatest Growth Percentage (Class A):

Chapter 85, Central Western Oklahoma - Chapter Chairman: Robert B. Erickson

Greatest Growth Percentage (Class B):

Chapter 5, Atlanta, Ga. - Chapter Chairman: William P. Magliocco, CSTE, CBNT

Highest Member Attendance (Class A):

Chapter 81, Grand Junction, Colo. - Chapter Chairman: William Frost

Highest Member Attendance (Class B):

Chapter 103, Nashville, Tenn. - Chapter Chairman: Ted K. Randall, CBNT

Our thanks to the SBE National Awards Committee, chaired by Director Larry J. Wilkins, CPBE, AMD, CBNT of Chapter 118, Montgomery, Ala. Members of the 2006 committee are: Mark D. Humphrey, CPBE, CBNT; Keith M. Kintner, CPBE, CBNT; Troy D. Pennington, CSRE, CBNT; and Robert "RJ" Russell, CSTE, CBNT.

The selection of Mr. Wilkins as Engineer of the Year was done by the committee without his knowledge. ●

SBE's Chapter of the Air

who? SBE Hams

what? Meeting of Chapter 73

when? Second Sunday of every month at 0000 GMT

where? 14.205 MHz

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HAMnet

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August 10-11

8-VSB Fundamentals & Measurement Seminar

Georgia Public Broadcasting Studios
Atlanta, Ga. / SBE Chapter 5
Info: Gary Sgrignoli (847)259-3352 or gary.sgrignoli@IEEE.org or visit www.sbe.org

September 12-13

BOS-CON 2006 Boston SBE Regional Convention

Best Western Royal Plaza Hotel & Trade Center, Marlborough, Mass.
Info: Robert Yankowitz (781) 444-5837 or visit www.bos-con.com

September 26-27

34th Annual SBE22 Broadcast & Technology Expo & SBE National Meeting

Event Center at Turning Stone Casino-Resort, Verona, N.Y.
Info: Tom McNicholl (315) 793-3477, ext. 250 or tmcnicholl@wktv.com or visit www.sbe22expo.org
SBE National Meeting Information:
SBE National Office (317) 846-9000 or visit www.sbe.org or page 3 of this issue

October 12

SBE Chapter 20 – Pittsburgh Regional Broadcast Expo

Expomart, Monroeville, Pa.
Info: Joann Garvin (724) 843-750 or joanngarvin@earthlink.net or visit www.broadcast.net/~sbe20

October 24-26

2006 Broadcasters Clinic

Marriott-Madison West Hotel, Madison, Wis.
Info: Torrie Kennedy (800) 236-1922 or torrie@wi-broadcasters.org or visit www.wi-broadcasters.org

RF Safety Training: What You Don't Know Can Hurt You

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

My friend Ray Benedict is a person who worries about things. I remember a conversation we had in some airport somewhere in October of 1999, when Ray was sure that the United States was not ready for Y2K, and was suggesting that our bank accounts would be frozen, that we would all be in Big Trouble on January 1, 2000, and that the situation was dire. That didn't happen. So when Ray and I were talking about a long-awaited and overdue RF exposure docket proceeding that FCC has been considering for far too long, I wasn't surprised when Ray told me that broadcast engineers aren't generally doing what they need to do in the way of RF safety training. He took the position that RF exposure training is now and has been mandatory, and that the failure to have it, for people who access transmitter sites, turns what otherwise would be a "controlled" RF environment into an "uncontrolled" environment. I didn't share Ray's worry, because I hadn't seen any FCC order that makes RF safety training mandatory, and thought that it would be proposed in the unreleased FCC docket proceeding. I was wrong, and Ray was right. RF safety training is mandatory, right now. Here's why:

FCC regulations, at Section 1.1310, provide for two sets of Maximum Permitted Exposure (MPE) limits. You probably know that the MPE limits are determined in relation to the human resonance region, which is of most concern in the 30 to 300 MHz range. The first MPE limit is for occupational exposure levels, in so-called "controlled" environments. The MPE levels are higher in these environments, because members of the "general public" (i.e. people who are unaware of the safety issues) are not allowed access to them. The other environment is the "uncontrolled" environment, which includes (but is not limited to) areas that are accessible by the general public. The MPE in an uncontrolled environment is 20 percent of the MPE for a controlled environment.

But the general description of the two environments above does not adequately define what constitutes each one. I thought it did; Ray knew better. A controlled environment is, in effect, an area in which those who access it are covered by an RF safety program. In such an environment, all of the persons accessing the area are "qualified workers."

A qualified worker is a person who has completed RF safety training. If people enter a controlled environment who have not had RF safety training, the environment becomes an uncontrolled environment, and is subject to the much lower MPE levels. It is as simple as that, and it makes perfect sense when you think about it.

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

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

What, however, of the HVAC professional who comes to fix the air conditioning at a transmitter site? The window washer near a rooftop antenna farm? The electrician, construction worker or plumber who works at a transmitter site occasionally? Unless those persons are trained, they cannot be considered to be "fully aware" or able to "exercise control" and therefore can't be considered qualified workers. Does their entry into a controlled environment convert that environment (temporarily) into an uncontrolled environment? Yes, it does.

SBE is interested not only in the education and professional competence of broadcast and

telecommunications engineers, but as well in their safety. We are in the process of establishing a

working relationship between SBE and one of the several preeminent firms specializing in RF safety training. Though the nature of the relationship between SBE and the firm we select is not yet determined, what we want to accomplish is a means for SBE members (and as well those who are only peripherally connected with the broadcasting industry, but who are professionally required to enter controlled RF environments) to easily, cheaply and confidently comply with the obligations which already exist to have, and to make available to employees, RF safety training.

Because a "controlled" RF environment is an area covered by an RF safety program, and because only qualified workers are allowed to enter controlled areas, we will make available to SBE members a convenient means by which they can obtain RF safety training (to the extent that they have not done so already) so that they can be said to be "fully aware" and able to "exercise control" of their RF environment.

Nor is SBE's concern limited to telecommunications professionals. We envision a situation in which a lesser degree of training is useful for workers in various trades, such as roofers, electricians, plumbers, carpenters, window washers, and maintenance people who may be required to work near or at broadcast antenna locations on rooftops or antenna farms, but who may not have a regular need for in-depth training in RF environments. This concern may not be easy to address.

Ray, probably because I did not take his warnings seriously at the beginning, recently invited me to a seminar on RF safety by Robert Cleveland, Ph.D, who is FCC's (and probably the United States') leading expert on RF safety. It was very well-presented. Bob suggested as a "must-read" the IEEE C95.7-2005 Recommended Practices document. It is available for download for a reasonable fee from IEEE and is quite a good source of information on this topic. Until SBE's RF safety training program is set up, you will want to read the Recommended Practices document for yourself.

Thanks, Ray. I won't doubt you again soon. ●



BOS-CON Regional Convention to Include ENNES Workshop

The Ennes Educational Foundation Trust and the Society of Broadcast Engineers will present an Ennes Workshop from 9:00 am to 5:45 pm on September 12 in Marlborough, Mass. in conjunction with the Bos-Con SBE Regional Convention presented by SBE Chapter 11. Broadcast engineers, technicians, and those in related fields such as cable, post-production, government broadcast, manufacturers, universities and college staff and students will find this event of great interest.

The Workshop will be a full-day event and will include both television/video and radio/audio presentations. The full-day format allows presenters to go into more depth with their subjects than the typical conference paper. Presentations are non-commercial and focus on technology. Presenters and topics were being finalized as of this writing. A complete program lineup will be available by August 1.

Ennes Trustee, Fred Baumgartner, CPBE, CBNT, is organizing the workshops and will handle moderator duties. Fred is director of broadcast engineering with Media Flo USA.

The Ennes Workshop will be held at the Best Western Royal Plaza Hotel & Trade Center in the Boston suburb of Marlborough, Mass., located 45 miles west of downtown Boston and north of Providence, R.I.. The registration fee for the Workshop is just \$25 and includes lunch AND dinner. The exhibit floor will be open to the Ennes Workshop attendees on Tuesday evening.

The Bos-Con exhibit floor will be open on Wednesday, September 13 from 9:00 am to 4:00 pm and includes a free lunch. More than 100 exhibitors are expected. The exhibits are free but pre-registration is recommended. To register for the Bos-Con Ennes Workshop and/or the exhibits, visit the Bos-Con website, www.bos-con.com. ●

Going to IBC? Stop by and Visit the SBE

The Society of Broadcast Engineers will be exhibiting at the International Broadcasting Convention (IBC), held at the RAI Convention Center in Amsterdam, The Netherlands from September 8 through 12. SBE Executive Director John Poray, CAE, will attend on SBE's behalf. He will staff SBE's booth, number 8.511 (located in Hall 8) for the five-day show.

There were more than 1,000 exhibitors at IBC in 2005 and more than 40,000 people attended from many countries in Europe and other continents. IBC is the second largest broadcasting exposition event in the world, after the NAB spring show. SBE has members in more than 20 other countries outside the United States and has affiliation agreements with eight professional broadcast engineering organizations in seven different countries.

If you are a member or prospective member of SBE and will be attending the IBC, we hope you will include a stop at the SBE "stand." ●

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Why Do I Need To Recertify?

BY **Joe L. Snelson, Jr., CPBE, 8-VSB**

SBE Certification Committee

Why is recertification necessary when I have been in broadcasting for many years? I'm sure this is a question many have asked, especially by those who have been employed many years in the broadcast or audio/video industry and who have held certification in the Society of Broadcast Engineers for a majority of those years. The answer is fairly simple; it's continuing education. Remember, education and dissemination of knowledge is one of the major goals of the SBE.

As I reflect over the 36 years I have been in the broadcast industry, I have seen many technological changes. The knowledge base I had when I started in this industry serves as a good foundation that I continue to build upon. If, however, I do not continue to build on that knowledge base, I will become stale, outdated and unable to contribute effectively in today's broadcast technical environment. A requirement for continuing education is not something unique to the SBE's recertification program. Even state professional licensing agencies require continuing education credits for individuals to maintain their license to practice in the state. Examples would include those licensed in fields of electrical and structural engineering. Educational institutions also require continuing education credits for their educators. When you think about it, ask yourself if you would want to undergo surgery from a surgeon that had not continued their education for twenty years and is unfamiliar with cur-

rent surgical techniques. Likewise, communication technology continually advances and is the reason continuing education is important. You need to stay current and SBE recertification helps to demonstrate your level of commitment to the continuing education process. Let's now look at the SBE recertification process and how you can ensure you maintain you level of certification by using professional credits in lieu of re-testing.

Recertifying using professional credits requires collecting points in a minimum of four out of ten available categories. In most all cases an individual should easily be able to achieve a majority of their points in three categories. For instance, being employed in the broadcast industry or a related field, holding membership in SBE or other similar professional organizations and attendance at SBE chapter meetings or industry related conventions would easily meet three of the four required categories. Gaining that forth category from the remaining seven might require a little more of a "reach" on the part of the certification holder. Nevertheless, this should not be difficult for an individual that is actively employed in the broadcast or audio/video industry. As I review recertification applications I have found that most applicants meet more than the minimum of four categories.

After meeting the minimum number of categories the next step is to meet the point requirements. The total number of points required for recertification depends upon the level of certification held. While there are a maximum number of points that can be counted in certain categories there is no minimum number required for any one category. For example, if an individual needs 25 points to recertify, 24 of those points may come from three categories and only one from another category thus meeting both point and category requirements.

Don't sell yourself short on the number of categories and points you may have. Many that feel they just fall short of meeting the minimum category or points requirement may discover that they can meet them if they just think about all they have done over the current term of their certification. To avoid having to recall all you have done over a number of years I will

offer some tips you may find helpful.

1. Keep accurate records. You may participate in a number of activities eligible for use as recertification

credits over your span of certification and unless you keep a record of those you may forget about them by the time you apply for recertification. This is especially true for local SBE meetings or industry conventions as they can easily be forgotten about over a span of several years.

2. At minimum, review your records annually to ensure you have recorded all eligible activities.

3. Try to exceed the minimum number of categories and points required for recertification. This serves as a buffer especially for those that may be requesting credit for discretionary activities requiring review by the National Certification Committee.

4. Submit reasonable documentation (e.g. certificates) supporting Continuing Education Units (CEU's) or factory training classes as verification of attendance. This saves time and effort on the part of the chapter certification chairman and the National Committee in verifying these credits.

5. Include supporting detail for discretionary activities, such as a copy of the presentations and other activities that require review of the National Certification Committee.

An individual employed full time in the broadcast or audio/video industry that actively participates in SBE meetings and other industry related events should find it easy to meet the recertification requirements. Keeping accurate records and regularly reviewing them will help you ensure that you meet recertification requirements along the way. Don't take the value of maintaining your certification lightly as it demonstrates your willingness to stay current in a fast changing industry. ●



joe.snelson@meredith.com

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

FCC rules dealing with broadcast towers are located in CFR Title 47 Part ____?

A) 74	C) 19
B) 73	D) 17

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

2006 Exam Dates

DATES

November 10-20, 2006
February 9-19, 2007
April 17, 2007
June 1-11, 2007
August 10-20, 2007
November 9-19, 2007

LOCATION

Local Chapters
Local Chapters
NAB - Las Vegas
Local Chapters
Local Chapters
Local Chapters

APPLICATION DEADLINE

September 22, 2006
December 29, 2006
March 2, 2007
April 20, 2007
June 8, 2007
September 21, 2007

New SBE Certification Achievements

LIFE CERTIFICATION

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

CERTIFIED PROFESSIONAL BROADCAST ENGINEER® (CPBE®)

Joseph Kamenick, Weston, WI - Chapter 80
James O Neal, Alexandria, VA - Chapter 37

CERTIFIED BROADCAST NETWORKING TECHNOLOGIST® (CBNT®)

Russell Harbaugh, Southfield, MI - Chapter 82
Joseph Kamenick, Weston, WI - Chapter 80

CERTIFIED BROADCAST TECHNOLOGIST® (CBT)

Larry Odham, Gray, TN - Chapter 113

NEWLY CERTIFIED CPBE®

Applicant must have had 30 years of professional broadcast engineering or related technologies experience in radio and/or television. The candidate must be currently certified on the Certified Senior Broadcast Engineer® level.

CERTIFIED PROFESSIONAL BROADCAST ENGINEER® (CPBE®)

Jaime Ananko, Rochester, NY - Chapter 2
Robert Army Jr., Moreno Valley, CA - Chapter 131

John Bachelor, Prior Lake, MN - Chapter 17
Scott Chestnut, Los Angeles, CA - Chapter 47
Dave Grant, Rockford, MI - Chapter 102
Rick Hartford, Shreveport, LA - Chapter 44
Slade Kennedy, Ithaca, NY - Chapter 140

SBE CERTIFIED SCHOOL COURSE COMPLETION

CERTIFIED BROADCAST TECHNOLOGIST® (CBT)

Cayuga Community College
Jason Hillis, Camillus, NY
Leon Matyewicz, Red Creek, NY

Defense Information School

Jose Bonillas, San Antonio, TX
Hezekiah James, Miami, FL
Donna Porter, Virginia Beach, VA

JUNE EXAMS

"Thank You" CHAIRMAN CERTIFICATION CHAIRS FOR YOUR ASSISTANCE

CERTIFIED SENIOR TELEVISION ENGINEER® (CSTE®)

Joseph Conlon, Inner Grove Heights, MN - Chapter 17
Romualdo Lintag, Little Rock, AR - Chapter 0
Michael Smith, Concord, NC - Chapter 45
Russell Taylor, Norfolk, VA - Chapter 54

CERTIFIED SENIOR RADIO ENGINEER® (CSRE®)

Harry Hardisty, Tyler, TX - Chapter 67
Brian Heise, Decatur, TX - Chapter 67

CERTIFIED BROADCAST RADIO ENGINEER® (CBRE®)

Andrew Disterhaft, Oshkosh, WI - Chapter 80
Daniel Ferreira Jr., Easthampton, MA - Chapter 14

CERTIFIED BROADCAST TELEVISION ENGINEER® (CBTE®)

Michael Aguilar, Grand Forks, ND - Chapter 74
David Barth, Bloomfield, NJ - Chapter 15
Leslie Sorenson, Douglasville, GA - Chapter 5

CERTIFIED AUDIO ENGINEER® (CEA®)

Paul Muskoff, Strongsville, OH - Chapter 70
Dennis Thibodeaux, Nashville, TN - Chapter 103

CERTIFIED VIDEO ENGINEER® (CEV®)

David Lyon, El Cerrito, CA - Chapter 40
Paul Muskoff, Strongsville, OH - Chapter 70

CERTIFIED AM DIRECTIONAL SPECIALIST® (AMD)

Alan Lane, Huntersville, NC - Chapter 45

CERTIFIED 8-VSB SPECIALIST® (8-VSB)

Jose Punsalan, Homeland, CA - Chapter 131
Steven Scott, Las Vegas, NV - Chapter 128
William Stack, East Windsor, NJ - Chapter 18
Ansis Straupe, Lakewood, CA - Chapter 131
James Totten, Livonia, MI - Chapter 82

CERTIFIED BROADCAST NETWORKING TECHNOLOGIST® (CBNT®)

David Boyd, Dallas, TX - Chapter 67
Benjamin Claussen, Streetsboro, OH - Chapter 70
Michael Frist, Clovis, CA - Chapter 66
Marshall Nute, Virginia Beach, VA - Chapter 54
Ian Owens, West Palm Beach, FL - Chapter 88
Robert Ratchford, Patchogue, NY - Chapter 15
George Seifert, Cuyahoga Falls, OH - Chapter 70

CERTIFIED BROADCAST TECHNOLOGIST® (CBT)

Stephen Brown, Virginia Beach, VA - Chapter 54
Thomas Haynie, Virginia Beach, VA - Chapter 54
Philbert Modeste, Lewisville, TX - Chapter 67
Robert Riden, Virginia Beach, VA - Chapter 54
George Seifert, Cuyahoga Falls, OH - Chapter 70

CERTIFIED RADIO OPERATOR® (CRO)

Mike Boyle, Costa Mesa, CA - Chapter 47
Norman North Jr., Springdale, AR - Chapter 74

CERTIFIED TELEVISION OPERATOR® (CTO®)

Cindy Boyden, Kams City, PA - Chapter 122

CERTIFIED BY LICENSE

CERTIFIED BROADCAST TECHNOLOGIST® (CBT)

Leon Caleo, Plainwell, MI
Terry Deuds, Lancaster, OH
William Hamilton II, New Glarus, WI

CERTIFIED RADIO OPERATOR® (CRO)

CERTIFIED RADIO OPERATOR® (CRO)

KTNV
Bennett Johnson, Mentore, NM

Pasadena City College

David Aguirre, Temple City, CA
Jhovany Argueta, Los Angeles, CA
Teresa Baxter, Pasadena, CA
Greg Donoghue, Pasadena, CA
Ricardo Esparza, South Gate, CA
Henry Garci, El Monte, CA
Hector Lara, Los Angeles, CA
Tim Malczynski, Temple City, CA
Francisco Ramirez, Montebello, CA
Bryce Rosen, San Dimas, CA
Julio Sanchez, San Gabriel, CA
Ricardo Sanchez, Los Angeles, CA
Jesus Sandoval, Covina, CA
Adrian Sauri, Pasadena, CA
Dean Yulfo, Alhambra, CA
Nikolai Zurnaran, Pasadena, CA

University Of Tennessee Martin

John Summers, Bradford, TN

WJCT

Carlos Semidei, Jacksonville, FL

CERTIFIED TELEVISION OPERATOR® (CTO®)

CERTIFIED TELEVISION OPERATOR® (CTO®)

Cindy Bulder, Salt Lake City, UT

Colorado Satellite Broadcasting

Jesse Mettler, Westminster, CO
Kevin Reuse, Arvada, CO

Daystar Television Network

Jimmie Martinez, Bedford, TX

Kent State University

Jonathan Dangle, Kent, OH
Matthew Eck, Parma, OH
Jeffrey Howard, Springboro, OH
Paul Jaceway, Akron, OH
Mike Paquin, Ravenna, OH
Allison Pritchard, No. Olmstead, OH
Cameron Smith, Columbus, OH
Evan West, Kent, OH

WJCT

Rocco Lovero III, Jacksonville, FL

WFMZ

James Fogarty, Allentown, PA
Thomas Houston, Allentown, PA
Daniel Meyers, Allentown, PA

RECERTIFICATION

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

CERTIFIED PROFESSIONAL BROADCAST ENGINEER® (CPBE®)

Stephen Brown, Appleton, WI - Chapter 80
David Gooding, Elkhart, IN - Chapter 30
Mark Humphrey, Exton, PA - Chapter 18
John Huntley, Concord, NH - Chapter 110
Dale Scherbring, Gretna, NE - Chapter 74
Arthur Smith III, Austin, TX - Chapter 79
Drew Stewart, Morton, PA - Chapter 18
Steven Whitesell, Noblesville, IN - Chapter 25

CERTIFIED PROFESSIONAL BROADCAST ENGINEER® (CPBE®) 8-VSB SPECIALIST

Jerry Whitaker, Morgan Hill, CA - Chapter 40

CERTIFIED SENIOR RADIO ENGINEER® (CSRE®)

Michael Brown, Portland, OR - Chapter 124
Samuel Cox, Escondido, CA - Chapter 36
Gerald Meloon, DuBois, PA - Chapter 20
Timothy Portzline, Harrisburg, PA - Chapter 41

CERTIFIED SENIOR TELEVISION ENGINEER® (CSTE®)

William Bobich, Columbus, OH - Chapter 52

CERTIFIED BROADCAST RADIO ENGINEER® (CBRE®)

Jack Conners, Interlochen, MI - Chapter 91
Richard Hardy, Tulsa, OK - Chapter 56
Robert Kruppenbacher, Doylestown, OH - Chapter 70
Floyd Turner, Haubstadt, IN - Chapter 121

CERTIFIED BROADCAST TELEVISION ENGINEER® (CBTE®)

Gerald Agresti, Leawood, KS - Chapter 59
John Arthur Jr., Brandon, MS - Chapter 125
Jose Boveda, Miami, FL - Chapter 53
James Cox, Springfield, TN - Chapter 103
Richard Klein, Albany, NY - Chapter 58
Omar Pineda, El Paso, TX - Chapter 38
Joseph Sipos, Centerville, VA - Chapter 37
Glen Wright, Knoxville, TN - Chapter 113

AM DIRECTIONAL SPECIALIST® (AMD)

John Collinson, New Port Richey, FL - Chapter 39

CERTIFIED TELEVISION OPERATOR® (CTO®)

Christopher Downey, Durham, NC
Brian Johnson, Durham, NC
Douglas Stephens, Roxboro, NC



The Society of Broadcast Engineers' Program of Certification is recognized by the National Skill Standards Board. NSSB Certification Recognition promotes quality assurance in the certification marketplace and provides national recognition for certifications that meet the quality benchmarks.

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www.sbe.org

Select the "Join SBE" tab to access our online application

SBE Comments: How and Why

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

Chairman, SBE FCC Liaison Committee

One of the issues raised at the July 8 SBE Strategic Planning Meeting in Kansas City was how and why SBE comments filed with the FCC get prepared. This was addressed in my April 2000 Signal article; however, enough changes have occurred to the operating protocols for the SBE FCC Liaison Committee to warrant an update of that article, so here it is.

The goal is to file comments on issues of interest to SBE members. So how does SBE decide which issues to comment on, and what those comments should be? This work is done by the SBE FCC Liaison Committee, one of several standing committees at the national level. These committees are authorized by Article VI of the SBE By-laws. At one time the SBE By-laws required that a Committee Chairperson be an elected SBE officer or director. The criteria was changed in 1994 to a current or former SBE officer or director, and changed again, in 2001 to allow any SBE regular or Senior member in good standing to serve as a Committee chairperson. Committee chairpersons are selected by the SBE President. This writer has had the privilege of chairing the SBE FCC Liaison Committee since 1988. The committee currently consists of ten persons; these are, in addition to myself, SBE members Ken Brown of White Plains, NY, now retired from ABC, Inc.; Paul Christensen, Esq., in private practice and based out of Jacksonville, Fla.; Gerry Dalton, CBRE, CBNT, of Consolidated Communications Inc. in Dallas, Texas; Howard Fine of Pacific Television Center in Los Angeles, Calif.; Clay Freinwald, CPBE, of Entercom Communications in Seattle, Wash., and also a current Board member; Gerald (Jerry) LeBow of TMC, Inc. in Valhalla, N.Y.; Michael McCarthy, CSRE, of Newsweb Radio Group in Chicago, Ill.; Richard Rudman of Remote Possibilities Tech Consulting in Los Angeles; and Karl Voss of TV Station KNPX, Phoenix, Ariz. Additionally, SBE general counsel Christopher Imlay, Esq. of Booth, Freret, Imlay and Tepper in Silver Spring, Md., and SBE Executive Director John Poray, CAE, have permanent status on the SBE FCC Liaison Committee. At least two members of the Committee must be current SBE Directors, one with a "radio" background and one with a "TV" background. Presently, Clay Freinwald serves as the "radio" Director, and I serve as the "TV" Director.

The current policy is for SBE to file on any rule-making affecting Broadcast Auxiliary Service

(BAS) spectrum or Emergency Alert System (EAS) issues. Further, absent instructions to the contrary from the SBE President, SBE Executive Committee, or SBE Board, comments are to be limited to "technical issues." SBE is the only organization dedicated to defending BAS spectrum, which is the lifeblood of modern-day broadcast operations. Without BAS spectrum, many of the broadcasting jobs held by SBE members might well disappear.

Membership on the FCC Liaison Committee is open to any SBE member interested and willing to serve; SBE members requesting to be added to the Committee should direct their request to SBE President Chriss Scherer. However, prospective Committee members must understand that the position is not just honorary: Committee members are expected to actively participate in a majority of the rule makings selected for SBE comment, and so must be in a position to devote the necessary time to this volunteer activity. Also, the Committee size will generally be limited to no more than ten SBE members (plus the SBE's general counsel and executive director), for practical reasons: namely, a bigger Committee becomes too unwieldy. So, at the present time, the Committee is at full strength, although the Committee roster changes from time to time as a result of changed situations for individual Committee members (e.g., retirement or, regrettably, sometimes ill health).

Any member of the Committee can submit a request to me, as the Committee Chair, to prepare and file SBE comments, or I can initiate that process myself. Any SBE Officer or Director can also request that comments be drafted on a particular FCC issue. Once it has been tentatively determined that SBE comments should be filed, that decision is then discussed with the Society's General Counsel (or, in his absence, with the SBE President), who must concur with the decision. The next step is to then send an e-mail notification to all SBE Officers and Directors. Any SBE Officer or Board member can request more information, or even object to having SBE file comments. In that event, an effort is made to resolve the concern; if this is not successful, then the question of whether to file must be referred to the SBE Executive Committee for a decision.

Because of FCC filing deadlines, SBE comments are not first submitted to the SBE Board for their formal approval prior to filing; the SBE FCC Liaison Committee written protocols, the most recent version being approved by the SBE Board on October 19, 2005, instead presume that the notification and consultation protocols with the Society's General Counsel, and the pres-

ence of at least two Board members on the Committee, will ensure that SBE comments reflect the Society's position. Another reasonableness check is the requirement that all Committee members concur with the finalized comments; given the extensive experience and differing backgrounds of the current Committee makeup, this also ensures that SBE comments are technically correct, reasonable, and reflect the interests of SBE members.

Draft comments are now distributed by e-mail to all Committee members, plus to any SBE Officers or Directors who have requested to be copied on a particular effort. Typically, these comments go through a half-dozen or so iterations before they are ready for filing. As-filed copies of SBE comments are routinely posted to the SBE web site. Prior to e-mail and Adobe Acrobat portable document format (PDF) files this meant sending multiple facsimiles and/or hard copies, sometimes by overnight delivery. For this reason the SBE FCC Liaison Committee has an allocation in each year's SBE budget (albeit a small one). However, it has not been necessary to use this budget for printing or mailing expenses for several years, thanks to modern-day electronic communications (including the ability to now file SBE comments electronically, using the Commission's Electronic Comment Filing System, of ECFS). So, in effect, the cost of SBE FCC filings is zero, since the salaries of the SBE General Counsel and Executive Director are an operating expense of the Society regardless of whether any SBE comments get filed in a particular year.

Since 1988 SBE has filed almost two-hundred comments; most are rulemaking (docket) comments, but some filings have been letters to senior FCC people or to the House Subcommittee on Telecommunications and the Internet (the subcommittee that has oversight on the FCC). For a complete list of all SBE comments filed since 1988, please visit the SBE web page at www.sbe.org. The most recent version of the SBE FCC Liaison Committee operating protocols is also available from the SBE web site. The Chairman of the SBE FCC Liaison Committee can be contacted by e-mailing to dericksen@h-e.com, or by calling (707) 996-5200. ●



Leader-Skills Instructor Named Honorary Member

BY **Pollyanna D. Bayman**
SBE Membership Services Director

Since 1965, the Leader-Skills Seminar has helped train 1,342 broadcast engineers to better understand the framework of their people skills and to expand their people skills in work and in every day life. Richard D. Cupka, Sr. has an enthusiastic approach to getting the participants out of their shells and into the face of reality.

Dick Cupka, who for more than 40 years has instructed broadcast engineers in the art of leadership skills, was surprised when Tom Weber, former National Board member of Chapter 25, Indianapolis, and John Poray, SBE Executive Director, presented him with a plaque naming Cupka an Honorary Member of SBE.



Richard D. Cupka, Sr., received an SBE Honorary Membership plaque on June 8, 2006. Pictured (left to right): RJ Russell (Board), John Poray (Executive Director), Dick Cupka, Tom Weber (past Chairman Ch. 25), Angel Fischer (former Membership Services Director).

Leader-Skills Course II "Expanding your People Skills" will be led by Dick Cupka and held at the Radisson Hotel Indianapolis International Airport August 8-10. The class is full, but the waitlist is not very long. Due to the overwhelming interest in this course, SBE is planning to hold both Course I and II in 2007. For more information, contact Pollyanna Bayman at (317) 846-9000 or pbayman@sbe.org. ●

SBE Lifetime Achievement Award

Nominations are still open for the SBE Lifetime Achievement Award. This award recognizes and pays tribute to individuals for their dedication, lifelong achievement and outstanding contribution to the broadcast industry. Nominees must be age 55 or older, or have been active in the field for 25 years or more; preferably SBE members in good standing and have retired from active service to the broadcast 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.

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. Nominations should include the nominee's city and state, career biography and a detailed written description of the nominee's contributions.

Nominations to be considered by the SBE Board of Director's at their next meeting, Sept. 26, 2006, should be submitted to the SBE National Office by September 1. For additional information, please contact Larry Wilkins, CPBE, AMD, CBNT, Awards Committee Chair, at (334)240-9274, larry.wilkins@cumulus.com or Pollyanna Bayman at (317) 846-9000 or pbayman@sbe.org.

In the Circle...

a snapshot of an SBE Member

Victoria "Vicki" Way Kipp, CSTE, CBNT

Electronic Technician: Media
– Senior
Wisconsin Public Broadcasting, Madison, Wis.
SBE Chapter 24, Madison, Wis.
Joined SBE in 1994



Best known for: I'm best known for writing articles about broadcast towers.

Pictured here: Vicki enjoys the Endless Summer Hydrangea flowers planted by her husband.

Focal Point: Engineers working together toward common goals (DEAS, PSIP, protection from interference) that ultimately benefit our audiences. My strongest interests are DTV datacasting, media accessibility (captions, SAP), and the continued importance of over-the-air (OTA) broadcasting. Broadcasting lives!

Getting Started: The summer before high school, I took a summer school class called "TV in the Making." My family got a Sony Handicam-1000 that I could play with, and there was also an opening at my town's Cable Access station. It all came together.

Sphere of Influence: My electronics and telecom instructors and University of Wisconsin - Platteville, Dr. Joe Thomas and Dr. Jack O'Neill. My first broadcasting manager, Dennis Behr.

When I'm not working... I'm busy being a mom to my new baby. He loves to look at the shiny RadioShack UHF double-bow tie antenna I use for OTA DTV reception. It won't be long before I teach him how to operate a remote control. When my husband and I go on vacation, I check if we'll be near a broadcast facility, tower, or museum that we can visit. Now that's a good time! I'm a big fan of quirky sit-coms. In my spare time, I'm a voracious reader. I love non-fiction, but also fit in serious fiction for my women's book group. I wonder if anyone has ever tried to set up a **Broadcast Engineering Technical Book Group**. Wouldn't that be a nice alternative to Oprah's book club with all of her sad, tragic novel choices?

You may not know... I'm a Ham—literally! When I research an article, I love to hear the story of how something came about. I've yet to see a facility, transmitter, tower, or piece of equipment that didn't have an interesting story associated with it at some point.

Favorite Gadget: DVR



VOTE *from page 1*

Use the special election return envelope provided. Allow at least five days for your ballot to reach the National office. Allow two weeks if you are outside the U.S.

This year, the Nominations Committee is forwarding 13 candidates vying for six available seats on the Board. There is also one candidate for each of the officer positions.

A group of SBE members from Chapter 25 in Indianapolis will tabulate the votes on the evening of August 24. Candidates will be notified the following day of the results. Those elected will take office following an induction ceremony held during the SBE National Meeting on September 27 in Verona, N.Y.

The list of candidates follows. More information about each candidate and their responses to questions about SBE will be found in the ballot material. If you don't receive a ballot by July 31, please contact Pollyanna Bayman at the National Office at (317) 846-9000 or pbayman@sbe.org.

Candidates for officer positions are:



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



Vice President
Clay Freinwald, CPBE
Entercom
Corporate Engineer
Auburn, Wash.



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



Treasurer
Barry Thomas, CPBE, CBNT
Thomas Media
President
Bloomfield, N.J.



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



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



Steve G. Davis, CSRE
Clear Channel Radio
Sr. Vice President of
Engineering
Tulsa, Okla.



Sam E. Garfield, CPBE, CBNT
Dilicast Broadcast Services
Manager / Owner
Raleigh, N.C.



Keith M. Kintner, CPBE, CBNT
University of Wisconsin
Oshkosh
Radio-TV-Film Engineer
Oshkosh, Wis.



John M. Lyons, CPBE
The Durst Organization
Assistant Vice President and
Director of Broadcast
Communications
New York, N.Y.



George F. Maier, CSTE
Orion Broadcast Solutions
President
Sudbury, Mass.



Thomas R. Ray III, CPBE
Buckley Broadcasting /
WOR Radio
Corporate Director of
Engineering
New York, N.Y.



Henry B. Ruhweidel, CPBE
Qualcomm
Senior Field Engineer
Crown Point, Ind.



Robert "RJ" Russell, CSTE, CBNT
Sprint Nextel
Senior Broadcast
Engineering Manager
Phoenix, Ariz.



Jeffrey R. Smith, CEA, CBT, CBNT
Nassau Broadcasting
Partners LP
Director of Broadcast
Systems
Princeton, N.J.



Christopher D. Tarr, CBRE, CBT, CBNT
Entercom
Milwaukee/Madison
Director of Engineering
Delafield, Wis.



Larry J. Wilkins, CPBE, AMD, CBNT
Cumulus Broadcasting
Assistant Director of
Engineering
Prattville, Ala.

Your Vote Counts!
Return your ballot to the
SBE National office by
August 24th.

SPOTLIGHT:

Video Demystified 4th Ed.

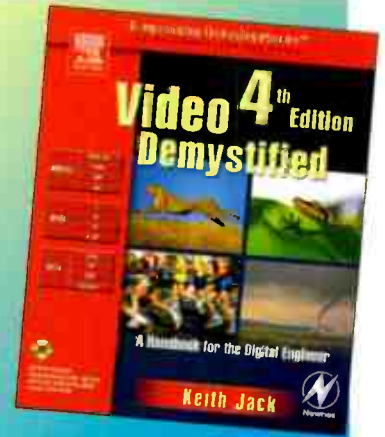
KEITH JACK

This book is a "one stop" reference guide for the various digital video technologies, and it covers analog as well. This edition has chapters on MPEG-4, H.264, SDTV/HDTV, ATSC/DVB and streaming video (video over DSL, Ethernet, etc.), as well as discussions of the latest standards. The accompanying CD includes a unique set of video test files in the newest formats. Pub. 2004 960 pages

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AMS8 1 Front

Contract/ Consulting Engineer Resources

If you are an SBE member who offers contract and/or consulting engineering services, SBE can help you with your business. visit www.sbe.org/res_eng.php to learn more about the following resources:

- Contract & Consulting Engineer Listing
 - Sample Contract
 - Commercial and Professional Liability Insurance
- If you are looking for temporary broadcast engineering assistance, view our list at www.sbe.org/CCE_List.php

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 - Equipment Integration
 - Continuing Services
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Special Report: SBE Strategic Planning Meeting

BY **Barry Thomas, CPBE, CBNT**
SBE Treasurer, Strategic Planning Committee Chair

The Society of Broadcast Engineers convened a meeting to establish strategic plans for the Society on July 8 in conjunction with a scheduled gathering of its executive committee in Kansas City, Mo. The last meeting was five years ago and resulted in many services we now enjoy as a part of Society membership. Thirty-four members attended the meeting and represented 24 different chapters and included 11 of the 17 SBE Board Members, all national officers and three members of the national office staff. The attendees represented the wide scope of opinions, geographic origins and backgrounds that comprise the SBE membership. Many chapters sponsored the travel for their representative and held their own discussions to prepare for the meeting. The time commitment for the attendees was significant since the session was scheduled from 9:00 am to 5:00 pm, including a short break for a shared lunch. The result was a lively and productive discourse and a strong consensus on the focus of SBE in the coming years.

SBE hired an experienced meeting facilitator, Kristine Rahavy to manage the meeting. Her skill was extremely effective in engendering discourse, articulating shared priorities and distilling the concerns of the attendees to salient thoughts and actionable steps. The meeting concentrated on a two to five year view in order to make the most realistic projections about the industry. Attendees were seated using a creative method of random placement that allowed the entire room to communicate productively. The gathering was composed of small discussions and large group activities which allowed independent debate to occur and emphasized the emerging and obvious priorities shared by the members. The result of the meeting was strong consensus and action items to improve industry involvement and service, and grow membership.

Rahavy will be providing a written report of

the meeting outlining all aspects of the discussions and the results of the group's deliberations. The Strategic Planning Committee will meet after receiving that report and recommend further actions to the full SBE Board of Directors at the SBE National Meeting, September 26, 2006 in Verona, N.Y. In anticipation of that report the Executive Committee was able to identify at least seven immediate action items that will immediately result in improved service and activity.



One group came up with the idea of promoting more often everything good that the Broadcast Engineers do.

The most widely understood issue is that broadcast engineers and the Society specifically can do a better job in marketing themselves. To that end, SBE is expanding press release distribution to include major wire services and

working to increase the frequency of notices to publicize Society activities. SBE will also better publicize and explain the work of its important FCC and regulatory actions. SBE will work hard to explain and publicize the important work done to improve or protect the activities of the working engineer.

Most attendees related that SBE should be more involved in local and state associations. This is an area best managed by the individual chapters, but SBE National understands there are things that can be done at the national level to encourage interactivity. SBE will be contacting the National Alliance of State Broadcasting Associations (NASBA) with the intention of discussing how SBE can serve and interface with the associations on an



At the end of the day, the group was all smiles after brainstorming more than 280 strategic ideas for the improvement of the Society displayed on the walls.

ongoing basis. Part of that discussion will be a reminder of the extensive education and certification services SBE provides.

SBE is preparing a "web toolkit" that will help chapters construct their own web sites that will support and improve the SBE brand throughout the industry. It is hoped that the result will be better and more recognizable chapter presences on the Internet.

Attendees also recognized the need to attract new and young talent to the industry. The Executive Committee identified a few immediate actions to encourage participation by researching related Internet discussion groups on sites such as Yahoo and Myspace. SBE is also beginning to draft an independent study course outline for schools to use for a broadcast engineering curriculum.

SBE considers the meeting an exceptional success and has taken immediate steps to increase the forward momentum. You will see the results of these activities in Society services in the near term and ongoing. ●



The engineers pitched some "off the wall" ideas for SBE's three year plan, but no idea was too crazy for Rahavy not to write down.

Basic TV Technology, Digital and Analog, 4th Ed.

ROBERT L. HARTWIG

This basic guide to the fundamentals underlying all television and video systems is written for students and nontechnical professionals. Learn how the principal pieces of equipment work, what their functions are and how they are integrated to form a complex video system. This edition has been updated to reflect the industry shift to digital video and includes new information on compression, television standards, LCD displays, HD and equipment. Pub. 2005

208 pages
Item #F-26

Member Price: \$26.96
Non-Member Price: \$29.95

SBE Guide to Writing Broadcast Station Operations Manuals

BY FRED BAUMGARTNER, CPBE

This manual is a rather complete collection of operator's manuals, technical guides, employee handbooks, job descriptions, evaluations, contracts and letters. The entire collection of examples is available on disk so you can edit the generic text and put in your station-specific information. The source material that the SBE "Guide" is taken from includes both radio and television stations, small and large markets. It also often contains alternate text when there are options for dealing with a specific policy. Pub. 1998

105 pages
Item #S-04

Member Price: \$49
Non-Member Price: \$69

A Broadcast Engineering Tutorial for Non-Engineers, 3rd Ed.

GRAHAM JONES

This book offers the broadcast basics for those who are starting from scratch. Learn about current TV and radio studio operations. It covers PSIP, data broadcasting, ATSC digital television standards and implementation, IBOC digital HD radio and implementation, station and network arrangements, centralcasting, multicasting and more. Pub. 2005

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RON GILSTER

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528 pages
Item #JW-18

Member Price: \$31.49
Non-Member Price: \$34.99

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:
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Audio/Video Cable Installer's Pocket Guide

STEPHEN H. LAMPEN, CBRE

This compact guide details how to cable any kind of audio-visual installation – from the million dollar studio to your living room theatre. It provides performance specifications for digital and audio, covers high-definition video cabling and has more than 200 illustrations. Pub. 2002

412 pages
Item #M-64

Member Price: \$23.96
Non-Member Price: \$29.95

Standard Handbook of Video Television Engineering, 4th Ed.

JERRY WHITAKER, CPBE, AND BLAIR K. BENSON

This comprehensive reference covers a broad range of video and television technology – with an emphasis on practical applications. With dozens of new and updated chapters, it covers DTV systems, standards and implementation; DSP systems and applications; video signal switching, routing and processing and more. It also includes a CD-ROM full of standards, in-depth technical material and high-resolution test images. Pub. 2003

1,300 pages
Item #M-42

Member Price: \$120
Non-Member Price: \$150

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
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ATSC Developing Transport Stream Verification Document

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

Vice President of Standards Development, ATSC

The Advanced Television Systems Committee (ATSC) is working to finalize a Recommended Practice (RP) on digital television (DTV) transport stream verification. An ATSC RP is a document that states specifications or criteria within advanced television systems that are not strictly necessary for effective implementation and interoperability, but that are thought to be advisable and may improve the efficiency of implementation or reduce the probability of implementation errors. An ATSC Recommended Practice may also specify a preferred methodology for implementation and operation, and may recommend a choice from among alternatives.

Document PS-697, "Proposed ATSC Recommended Practice: Transport Stream Verification," outlines a common methodology for describing transport stream conformance criteria for digital television. This document explicitly describes the elements and parameters of ATSC Standards A/53 and A/65 that should be verified in a transport stream for it to be considered a proper emission. This document does not cover RF, captioning, or elementary streams.

PS-697 has been approved by a letter ballot of the ATSC Technology and Standards Group and will go before the ATSC membership for final approval shortly. If all goes as expected, PS-697 could be approved and finalized by late fall.

ABOUT THE DOCUMENT

While ATSC standards strictly define the contents and characteristics of the DTV emission transport stream, there may be a number of interactions and interrelationships amongst various components. Successful tuning and display of programs can be ensured if the transport stream adheres to the applicable specifications.

The Proposed Recommended Practice identifies transport stream issues by type, dividing errors into the general following categories:

PSI errors. An ATSC conformant transport stream is also required to be MPEG-2 conformant. Therefore, an ATSC transport stream must include the two mandatory Program Specific Information (PSI) tables. These two tables are known as the Program Association Table (PAT)

and the Program Map Table (PMT).

PSIP errors. The Program and System Information Protocol (PSIP) is the glue that holds the DTV signal together. Although PSIP is a voluntary standard of the ATSC (document A/65), it is—in fact—a requirement in terms of actual real-world operation. The purpose of PSIP is to describe the information at the system and event levels, and to enable an abstract of the collection of programs (a virtual channel).

Timing Model and Buffering errors.

Timing is the key to the MPEG-2 encoding and decoding processes. MPEG-2 defines a model for the system timing, adherence to which allows independent design of encoders and decoders that can interoperate. An MPEG-2 decoder's 27 MHz reference clock needs to be synchronized with the equipment that is creating the encoded stream.

Consistency errors. Before a receiver can decode a transport stream, it must identify the relationship between components in the stream. Some components contain audio and video (elementary streams), and other components contain information describing the relationship between them (metadata). The receiver uses metadata to identify each component, determine its function and select an appropriate set of components when the user selects a virtual channel for decoding. Conflicts and problems within the structure of metadata are called 'consistency errors.' Consistency errors can result in broken decoding, missing system components (such as closed captioning), and/or missing program guide information.

General errors. These errors cover a variety of types of problems, typically transport-related.

Each error type is provided with a defined "error severity", as detailed below:

Transport Stream Off-Air: The station is effectively off-air as the transport stream errors are severe enough that transport level logical constructs are damaged beyond utility. Receivers will not be able to tune and decode anything within the broadcast. The complete or repeated absence of sync bytes would be an example of this level of error.

Program Off-Air: A main service (virtual channel) is flawed to the point that that service

is effectively off-air for conformant/reasonable receiver designs. This could involve all of the program elements being improperly constructed or incorrect/missing signaling about elements. The absence of an entry in the Virtual Channel Table (VCT) for a service would be an example of this type of error.

Component Missing: One or the program components that is signaled by PSIP or the Program Map Table (PMT) as present is either not present or cannot be found and decoded. One example would be a mismatch between the video Program ID (PID) signaled in the Service Location Descriptor (SLD) and the actual PID used for the video elementary stream.

Quality of Service: Parameters are out of specification by such a margin that a significant fraction of the receivers can be expected to produce flawed outputs. In many cases, the broadcast is viewable, but may exhibit some form of degradation to the viewer. An example might be the Master Guide Table (MGT) cycle time being somewhat larger than the specification, which would cause slower than normal channel-change tuning.

Technically Non-Conformant: Violates the letter of the standard, but in practice will have little effect on the viewing experience. Errors of this type should be corrected, but do not have the urgency of higher severity errors. An example might be a single instance of a 152 ms MGT cycle time (with the remainder of the MGTs coming at less than 150 ms intervals).

The distinctions between these error classifications are important and drove work on the draft Proposed RP. After some study it became clear that a layered approach that indicated the severity of the error would be beneficial within the confines of real-world television station operation. For example, if the threshold for an error was set at strict adherence to the applicable rules—regardless of the ultimate impact at the consumer's receiver—could lead to such a high false alarm rate that the monitoring equipment would, after a time, tend to be ignored.

Work on the Proposed Recommended Practice on Transport Stream Verification was led by Richard Chernock of Triveni Digital. Dr. Chernock is a frequent presenter at SBE Ennes conferences around the country. ●

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

NEW MEMBERS

Brian K. Adams - Elmira, NY
James D. Agostinelli - Rochester, NY
Michael S. Baker - Panama City, FL
Richard F. Banks - New Bern, NC
Brewster L. Bayles - Seldon, NY
Joseph P. Berardi - Walnut Creek, CA
Daniel P. Bissett - Northridge, CA
Jose L. Bonillas - San Antonio, TX
James M. Boothby - Pullman, WA
Stanton Briggs - Wantagh, NY
Matt Butcher - Arlington, VA
Timothy Canary - Watchung, NJ
Peter Claffey - Lansdale, PA
Kevin Clayborn - Glendale, AZ
Benjamin B. Cornejo - Highlands Ranch, CO
Christopher W. Cullen - Aurora, OR
James S. Davis - Wyandotte, MI
Jeff DePolo - Malvern, PA
Terry L. Douds - Lancaster, OH
Tyler Fobes - Trumbull, CT
Franketa K. Frank - Baton Rouge, LA
Dale Fultz - Yelm, WA
John Gebuhr - Omaha, NE
Brian Gieryk - Apple Valley, CA
Alexandre B. Gonsalves - Ras al Khaimah, UAE
David H. Greenlee - Lexington, KY
Greg Gutierrez - Arlington, VA
Robert J. Gutowski - Florence, MA
David R. Haroldsen - West Valley, UT
Thomas R. Haugen - Portland, OR
Douglas M. Heatherly - St. Louis, MO
Robert W. Hedges - Westerville, OH
Joshua J. Heymig - Indianapolis, IN
Daniel J. Hills - Palm Springs, CA
John B. Holladay - West Lafayette, IN
Elvir H'Selimovich - Taylorsville, UT
Hezekiah James - Miami, FL
Adam Johnson - Asheville, NC
Chris B. Jones - Aurora, CO
William Keeshan - Poughquag, NY
Terry Kegley - Milwaukee, WI
William J. Kerkhof - Oshkosh, WI
Keith Kinney - Utica, NY
Greggory J. LaFever - Wayne, PA
Larry Lamoray - Winter Garden, FL
Sean M. Laxton - West Lafayette, IN
Andrew P. Lesisko - Jim Thorpe, PA
Wilber R. Mahoney - North Las Vegas, NV
Gary Makowsky - Cypress, TX
James A. McGlon - Tampa, FL
Henry A. McKelvey - Capitol Heights, MD
Juan Mendez - Toa Baja, PR
Michael J. Miranda - Charlotte, NC
Ronald F. Moore - Las Vegas, NV
George B. Newman - Winston-Salem, NC
Scott L. Nielson - Kaysville, UT
Chris Oradat - Dallas, TX
Donna M. Porter - Virginia Beach, VA

Cynthia J. Quitmeyer - Atlanta, GA
Shahid S. Rathod - Karachi, Sindh, Pakistan
Mark E. Riegel - Reading, PA
Mark J. Ruddy - Simpson, PA
Karl L. Schoning - Norcross, GA
Paul D. Shirk - Niles, MI
Jeff S. Shorsher - Brush Prairie, WA
Randy Sylvester - Wayne, PA
Mark Taylor - Denver, CO
Thomas G. Tcimpidis - Granada Hills, CA
Jon T. Wenger - Harrisonburg, VA
Brian R. Williams - Ranchos de Taos, NM
John S. Worthy - Burbank, CA

NEW ASSOCIATE MEMBERS

Lyle B. Garrison - Lakeway, TX
Robert E. Griffin - San Luis Obispo, CA
Baudillio Liriano - Reno, NV
John G. Opalko - Yamhill, OR
Aubry L. Stone - Rancho Cordova, CA
Stephanie Weil - New York, NY

NEW STUDENT MEMBERS

Peter Allen - Bloomfield, NJ
Matthew C. Billy - Yorktown Heights, NY
Daniel Burton - Greenbelt, MD
Leon J. Caleo - Plainwell, MI
Dennis G. Dennis - Plainwell, MI
Jonathon C. Elgin - Shelby, OH
David J. Ford - Ashcroft, British Columbia, Canada
Darrell A. Gauchier - Calgary, Alberta, Canada
Phil Girard - Qualicum Beach, British Columbia, Canada
Jason D. Hillis - Camillus, NY
Anthony E. Holbrook - Plainwell, MI
Loren G. Hummell - Middleville, MI
Lohen C. Kinsman-Kersting - Olympia, WA
Leon Matyewicz - Red Creek, NY
Robert J. McDonald - San Rafael, CA
Mark B. Sveinbjornson - Sunde, Alberta, Canada
John E. Monroe - Tacoma, WA
Steven E. Peterson - Tacoma, WA
Letisha D. Vandervart - Tacoma, WA
Jeffrey S. Ware - Northbrook, IL
Lisa J. Williams - Newport News, VA
Samuel R. Williams - Dublin, VA

NEW YOUTH MEMBERS

Carter E. Kees - Acworth, GA

REINSTATED MEMBERS

Jesse T. Aceron - San Diego, CA
Antonio J. Bautista - Chicago, IL
Roger K. Bennett - Sioux City, IA
Russell L. Brown - Broadmoor Village, CA
G. Michael Brown - Las Vegas, NV
Scott A. Burgett - Franklin, IN
Christopher S. Emge - Antioch, TN

James T. Grasty - Elgin, SC
Thomas H. Gray - Jonesboro, LA
Eric S. Hartzell - Columbus, OH
S. L. Johnson - Houston, TX
Terry Jordan - Fayetteville, NC (SENIOR)
Mark A. Kennedy - Yakima, WA
Kimberly L. Kintner - Shadow Hills, CA
John E. Lincoln - Tacoma, WA
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Thomas A. Mauro - Tonawanda, NY
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Don M. Roberts - Rochester, NY
Dale H. Rochon - Columbia, MD
Jeremy A. Scott - Beckley, WV
Taras J. Stokes - Tallahassee, FL
Steve W. Vinke - Cedar Hill, TX
Brian D. Walsh - Sacramento, CA
Friend S. Weller - Logan, UT
Michael C. Wellings - Seattle, WA



Larry Bornacelli recently accepted the staff engineer position with WOCL, WOMX, WJHM Orlando, Fla., a CBS Radio station group. He most recently worked in Orlando as a staff engineer with Q Broadcasting.

Ross du Clair, Ph.D., CSRE, joins the Educational Media Foundation, K-LOVE radio network, as a senior engineer. He was previously Director of Engineering, and chief engineer for legendary KFBK-AM 1530 in Sacramento, Calif.

Bill (Willie) Smith, CBTE, CBNT, recently accepted the chief engineer position with KQTV in St. Joseph, Mo., a NEXSTAR station. He most recently worked as a field engineer with BAE Systems at Ft. Bragg, N.C., supporting the U.S. Army.

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 pbayman@sbe.org or to Attn: Pollyanna Bayman, 9102 N. Meridian St., Suite 150, Indianapolis, IN 46260.

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Those interested in becoming an SBE Accredited Frequency Coordinator may go to www.sbe.org/accreditation.pdf for more information and an accreditation application.

Accredited May 11, 2006 through July 21, 2006

Coordinator	Location	Affiliation
Jerry Dowd	Matthews, NC	Panthers Back-up GDC
Jeffrey Forsha	Huntington, PA	
Mark Kennedy	Yakima, WA	Chapter 51, Yakima
Dewey Newton	Canton, GA	Chapter 5, < 1 GHz



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Want a Chapter Educational Event? Try an Ennes Workshop

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

The Ennes Educational Foundation Trust and the SBE have been jointly presenting Ennes Workshops since 1991. The programs have changed some in those 15 years as technology has changed but the premise has stayed the same. Offer an affordable one-day quality educational opportunity for broadcast engineers within a few hours drive from home.

Ennes Workshops have been held in many locales over the years. Never had one in your town you say? Well, many chapters are capable of hosting one and there are openings on the Ennes calendar for 2007 waiting to be filled.

What does it take to host an Ennes Workshop? Get others in your chapter interested in the idea by discussing it at an upcoming chapter meeting. If you can reasonably expect to draw 25 to 30 people from your immediate area, you can probably attract enough to make a go of it. About 50% of the typical Ennes Workshop attendance comes

from the local host area and the other 50% from within a couple of hundred miles. Ennes and SBE present these programs on a break-even basis. There are expenses of course, but they are usually covered by a combination of registration fees, corporate and chapter sponsorships. Some are held in conjunction with state broadcast organizations, which also may help with sponsorship. Most of the time registration fees are kept below \$50 for the day and some recently have been as low as \$25; and that usually includes lunch and breaks!

That's an educational value that's hard to beat.

A typical Ennes Workshop includes both radio and television tracks and sometimes a joint session or two for a topic common to everyone. The volunteer Ennes Workshop organizer/moderator develops the program from many presentation abstracts submitted by those interested in making a presentation, or by seeking out a presenter for a specific desired topic. Input is also received from the local host chapter. Taken together, these sources generate a program that provides interesting and needed

information for radio and television engineers and others working in the technical side of broadcasting. Presenters typically come from the manufacturing ranks, other broadcast engineers, regulatory officials and sometimes communications attorneys.

Since 1991, we have been fortunate to have several well-known SBE members serve as organizers and moderators for the Ennes Workshops, including, Jim Williams, CPBE, Richard Farquhar, CPBE, Jerry Whitaker, CPBE and now, Fred Baumgartner, CPBE, CBNT. Fred has been organizing the Workshops for almost five years and brings a wide range of experience to them. He's been a radio chief, television chief, worked at a major cable satellite installation and now is director of broadcast engineering with Media Flo USA. He combines a keen knowledge of cutting-edge technology with a love of bringing continuing education opportunities to fellow broadcast engineers.

If your chapter is interested in bringing an Ennes Workshop to town, ask your chapter chairman or designee to contact me at the SBE National Office at (317) 846-9000 or jporay@sbe.org to discuss the details and get a program scheduled for your area. ●



jporay@sbe.org



Attendees at this workshop in Alabama this past May enjoyed a full day of helpful presentations.



Engineers attending the Ennes Workshop in Nashville, Tenn. last January listen intently to the presenter.

Clappe Named Certification Director, Waite Joins SBE as Certification Assistant

John Poray, CAE, SBE Executive Director, announced that **Megan Clappe** has been appointed to the position of Certification Director at the SBE National Office, which took affect on July 1. Clappe fills the vacancy created when previous Certification Director, Linda Baun, left SBE to join the staff of the Wisconsin Broadcasters Association at the end



Megan Clappe

of June. Clappe previously served in the position of Certification Assistant for two and half years, joining the SBE staff in September of 2003. She is originally from Ft. Wayne, Ind. and, prior to joining SBE, worked for the Embassy Centre in that city.

Poray also announced the addition of **Carol Waite** to the National Office staff, affective July 11. She serves as Certification Assistant and Receptionist.

Prior to her employment with SBE, Waite worked for several companies in the Indianapolis area in executive support and management roles.

We welcome both Clappe and Waite to their new positions with SBE and wish them the best. ●



Carol Waite

Best Member Drive in SBE History!

GRAND PRIZE: TRIP & SOFTWARE

Neal Sittler and the new member he sponsored, **David E. Rodriguez** – Chapter 105, Houston, Texas
Trip to Verona, N.Y., for the SBE National Meeting and Broadcast Engineering Expo (includes roundtrip airfare for each and up to two nights' accommodations plus free SBE events) from the *Society of Broadcast Engineers, Broadcasters General Store and Telos Systems / Omnia / Axia*. **Neal Sittler** – Chapter 105, Houston, Texas also wins Profler Automated Logging Software from *Telos Systems/Omnia/Axia*

1ST PRIZE: MAP PACKAGE
George Parson – Chapter 14, Connecticut Valley
Magellan handheld GPS from *Thales Broadcast & Multimedia*, and a Laminated Longley-Rice Coverage Map Poster (winner's location choice, 38" x 33" max. unmounted) from *V-Soft Communications*

2ND PRIZE: RESOURCE PACKAGE
Stephen Brown – Chapter 80, Fox Valley, Wis.
Standard Handbook of Broadcast Engineering from McGraw-Hill, One year Subscription to *Broadcast Regulations Web Edition* from *Pike & Fischer, Inc.*, and *Philo T. Farnsworth: The Father of Television* from *University of Utah Press*

NEW MEMBER PRIZE
Terry Douds (sponsored by *Richard Farquar*) – Chapter 52, Central Ohio
\$100 L.L. Bean gift certificate from *Shively Labs* and a Stabiline Uninterruptible Power Supply from *Superior Electric*

Wendell Alexander - Chapter 48, Denver, Colo.
Comrex Gift Package from *Comrex Corporation*
Scott Barella - Chapter 48, Denver, Colo.
Comrex Gift Package from *Comrex Corporation*
John Barnett - Chapter 21, Spokane, Wash.
Powerstat Variable Transformer from *Superior Electric*
John Batson - Chapter 68, Birmingham, Ala.
Standard Handbook of Audio and Radio Engineering, 2nd Ed. from *McGraw-Hill*
Jeffrey Batten - Chapter 103, Nashville, Tenn.
Moseley Starlink SL9003Q Band Pass Cavity from *Moseley Associates, Inc.*
Fred Baumgartner - Chapter 48, Denver, Colo.
Standard Handbook of Video Television Engineering, 4th Ed. from *McGraw-Hill*
Larry Bloomfield - Chapter 76, Eugene, Ore.
\$100 gift certificate to Amazon.com from *Dielectric Communications*
Todd Boettcher - Chapter 28, Milwaukee, Wis.
16MB USB Flash Disk from *Richardson Electronics*
Charles Bullett - Chapter 42 - Central Florida
Adapter Kit from *Switchcraft, Inc.*
Van Clough Chapter - 093 - Raleigh-Durham, N.C.
Polo Shirt from *Kathrein Inc., Scala Division*
William Elliott - Chapter 39, Tampa Bay Area, Fla.
Adapter Kit from *Switchcraft, Inc.*
Richard Farquar - Chapter 52, Central Ohio
Polo Shirt from *Frontline Communications Corp.*
Jeff Gallin - Chapter 14, Connecticut Valley
Engraved Desk Clock from *Mackay Communication*
Sam Garfield - Chapter 93, Raleigh-Durham, N.C.
E2V Gift Package from *E2V Technologies Inc.*
Joseph Glynn - Chapter 2, Northeastern Pennsylvania
E2V Gift Package from *E2V Technologies Inc.*
Matthew Grossman - Chapter 15, New York City, N.Y.
Mackay Knit Shirt from *Mackay Communication*
Michael Guerrero - Chapter 69, South Texas
Mackay Knit Shirt from *Mackay Communication*

The 2006 New Member Campaign has come to a successful close, making it our biggest Member Drive ever. The SBE National Office would like to thank the 72 members who recruited 88 new members. All participants are winners, earning \$5 off their 2007 dues for each new member they recruited (up to \$25).

These sponsors hail from 48 local SBE chapters, two of which have been declared winners of this year's Golden Recruiter Awards. This award is given to the chapters that had the highest percentage of current SBE Members participating in the Drive. Chapters are divided into two groups based on chapter size as of Dec. 31, 2005 – Class A is made up of chapters that have membership below the median; Class B is made up of

Robert Hardie - Chapter 39, Tampa Bay Area, Fla.
DMT Logo Merchandise from *DMT USA, Inc.*
Allan Harwood (LIFE) - Chapter 16, Seattle, Wash.
16MB USB Flash Disk from *Richardson Electronics*
Chris Heck - Chapter 76, Eugene, Ore.
The Design of Modern Microwave Oscillators for Wireless Applications: Theory and Optimization from *John Wiley & Sons, Inc.*
Ralph Hogan (SENIOR) - Chapter 117, Palouse Clearwater, Idaho
DMT Logo Merchandise from *DMT USA, Inc.*
Eric Hyypa - Chapter 137, Montana
Tech Tips from Radio Guide from Practical Radio Communications
David Johnson - Chapter 67, North Texas
Communications Facility Design Handbook from *CRC Press*
Michael Keller - Chapter 11, Boston, Mass.
Mackay Knit Shirt from *Mackay Communication*
Rashid Khawaja - Chapter 37, District of Columbia
Polo Shirt from *Frontline Communications Corp.*
Keith Kintner - Chapter 80, Fox Valley, Wis.
Polo Shirt from *Frontline Communications Corp.*
Gary Krohe - Chapter 3, Kansas
E2V Gift Package from *E2V Technologies Inc.*
Stephen Lampen - Chapter 40, San Francisco, Calif.
Adapter Kit from *Switchcraft, Inc.*
Vincent Lopez - Chapter 22, Central New York
Adapter Kit from *Switchcraft, Inc.*
Thomas Lawther - Chapter 115, Southern Idaho
Adapter Kit from *Switchcraft, Inc.*
William Magliocco - Chapter 5, Atlanta, Ga.
Directional Antennas Made Simple by *Jack Layton* from *Layton Technical Services*
George Marshall - Chapter 15, New York City, N.Y.
DMT Logo Merchandise from *DMT USA, Inc.*
Jerry Massey - Chapter 86, Greenville Area, N.C.
Active Power Gift Package from *Active Power*
John Merrill - Chapter 133, Buffalo, N.Y.
NAB Engineering Handbook, 10th Ed. from *Elsevier Science*
Richard Miska - Chapter 14, Connecticut Valley
2006 ARRL Handbook for Radio Communications from *ARRL*
Marcus Monas - Chapter 124 North Oregon
Adapter Kit from *Switchcraft, Inc.*
Brad Newberry - Chapter 9, Phoenix, Ariz.
Adapter Kit from *Switchcraft, Inc.*
Jesse Pangelinan - Chapter 132, Fort Meade, Md.
Electronic Systems Maintenance Handbook, 2nd Ed. from *CRC Press*

GOLDEN RECRUITER AWARDS

Class A: Chapter 117, Palouse-Clearwater, Idaho
Panasonic Lumix Digital Camera from *Panasonic Broadcast & Digital Systems Company*
Class B: Chapter 80, Fox Valley, Wis.
Canon Image Stabilizer 10x30 Binoculars from *Canon USA, Inc.*
Both Chapters receive a Library of SBE-Published Books from the *Society of Broadcast Engineers*

chapters with membership above the median. Following is a complete list of winners drawn July 9 at the SBE Executive Committee Meeting held in Kansas City, Mo. For the first time, the new member that the Grand prize winner sponsored also receives a trip to the SBE 2006 National Meeting, One newly-recruited member was also randomly drawn to receive a prize. ●

James Quinn - Chapter 18, Philadelphia, Pa.
20th Ed. ARRL Antenna Book with CD-ROM from *ARRL*
Thomas Ray - Chapter 15, New York City, N.Y.
E2V Gift Package from *E2V Technologies Inc.*
Arthur Reis - Chapter 26, Chicago
DMT Logo Merchandise from *DMT USA, Inc.*
Noel Richardson - Chapter 116, Mountain State, W.V.
\$100.00 Gift Certificate to *Lands End* from *AI*
George Sanders - Chapter 29, Corpus Christi, Texas
Adapter Kit from *Switchcraft, Inc.*
George Schank - Chapter 105, Houston, Texas
Network Manager's Handbook, 3rd Ed. from *CRC Press*
James Schoedler - Chapter 48, Denver
Tech Tips from Radio Guide from Practical Radio Communications
Michael Scott - Chapter 16, Seattle, Wash.
Tech Tips from Radio Guide from Practical Radio Communications
Robert Sharkey - Chapter 20, Pittsburgh, Pa.
Clock/Compass from *Tbales Broadcast & Multimedia*
Dale Sisler - Chapter 122, Youngstown, Ohio
Comrex Gift Package from *Comrex Corporation*
Timothy Sloan - Chapter 5, Atlanta, Ga.
Polo Shirt from *Frontline Communications Corp.*
Bradley Smith - Chapter 43, Sacramento, Calif.
Comrex Gift Package from *Comrex Corporation*
Dan Stoe - Chapter 76, Eugene, Ore.
E2V Gift Package from *E2V Technologies Inc.*
Ronald Sweatte - Chapter 21, Spokane, Wash.
Comrex Gift Package from *Comrex Corporation*
Ted Szypulski - Chapter 14, Connecticut Valley
Polo Shirt from *Kathrein Inc., Scala Division*
Christopher Tarr - Chapter 28, Milwaukee, Wis.
Adapter Kit from *Switchcraft, Inc.*
Mark Thorsell - Chapter 40, San Francisco, Calif.
DMT Logo Merchandise from *DMT USA, Inc.*
Jon Thorwaldson - Chapter 9, Phoenix, Ariz.
Comrex Gift Package from *Comrex Corporation*
Conrad Trautmann - Chapter 15, New York City, N.Y.
Adapter Kit from *Switchcraft, Inc.*
Doug Vernier - Chapter 65, Quad Cities, Iowa/Ill.
Mackay Knit Shirt from *Mackay Communication*

Special thanks to our prize sponsors for their generosity and continued support of the Society

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

ACTIVE POWER • 2003

Srinam Sivaram
(512) 744-9472
Battery-Free Backup Power Systems

ADC TELECOMMUNICATIONS INC. • 1998

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

AI • 1995

Mark Polovick
(410) 568-2105
UHF TV Broadcast Transmitters

AMERICAN TOWER CORPORATION • 2000

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

ANIXTER • 2005

Tina Ricker
(224) 511-8425
Audio/Video Cable & Interconnect
Products

ANTON/BAUER INC. • 2004

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

AUDEMAT-AZTEC INC. • 2000

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

AUTODESK • 1998

Christina Shackleton
(212) 338-3888
Digital Content Creation Software

**AVOCET CONNECTIVITY AND CONTROL
DIVISION • 2005**

Matt Nelson
(256) 430-4000
Engineered for Broadcast

AXCERA • 1983

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

BELDEN ELECTRONIC DIVISION • 1991

Kip Coates
(765) 983-5200
Wire and Cable

BROADCAST ELECTRONICS, INC. • 1978

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

**BROADCAST ENGINEERING MAGAZINE •
1984**

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

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

Russell Murphy - East
or Jim Kubit - West
(540) 932-3660 or (805) 581-4566
or (800) 669-9667
Manufacturer, Transmitters,
Receivers, Antenna Systems

BROADCAST STORE (BCS) • 1997

David Neff
(818) 551-5858
New & Used ProVideo Gear

BROADCAST SUPPLY WORLDWIDE • 1986

Tom Roalovram
(800) 426-8434
Audio Broadcast Equipment Supplier

BROADCASTERS GENERAL STORE • 2004

Buck Walters
(352) 622-7700
One Stop Broadcast Store

CANARA • 1991

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

CANON USA, INC. • 1985

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

CAHNON CORP. • 1992

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

CLARK WIRE & CABLE • 1991

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

CMBE, INC. • 1999

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

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

Mike Jackson
(971) 933-9504
Broadcast Tower & Antenna Specialist

COMET NORTH AMERICA • 2005

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

COMREL CORPORATION • 1997

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

CONSEARCH • 2004

Tim Hardy
(703) 726-5651
Frequency Coordination Services

**CONTINENTAL ELECTRONICS
CORPORATION • 1976**

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

CRISPIN CORPORATION • 2006

Brian Gleason
(919) 845-7744
Broadcast Automation Solutions

DATAWORLD • 1998

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

DIALIGHT CORPORATION • 2006

Doug Woehler
(732) 991-2837
Construction Lighting, L.E.D. Bused

DIELECTRIC COMMUNICATIONS • 1995

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

DIGITAL ALERT SYSTEMS, LLC • 2005

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

DISSTREAM INCORPORATED • 2006

Ian Russell
(519) 579-8166, ext. 26
Capsa Broadcast Archive System

DMARC BROADCASTING, INC. • 2005

Scott Bolgan
(949) 791-1200
S332, Maestro, ASP Solutions

DMT USA, INC. • 2003

Tim Newman
(856) 423-0010
Television Transmitters and
Translators

DSC LABORATORIES • 2002

Michael Wiegand or Susan Corley
(905) 673-3211
Test Charts & Illuminators

**DU TREIL, LUNDIN & RACKLEY, INC. •
1985**

Jeff Reynolds
(941) 329-6000
Consulting Engineers

DYRKO CORPORATION • 2006

Mink Pradaia
(800) 670-1624
RhinoPro Professional Labeling
Products

EZY TECHNOLOGIES INC. • 1997

Rick Bossert
Direct - (800) 433-8269
or Main - (800) 342-5338
Klystrons, MSDC, IOTs, IOTs, Satcom
Amps, TWTs

ECONCO • 1980

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

ENCO SYSTEMS INC. • 2003

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

**ENVIRONMENTAL TECHNOLOGY INC. •
1997**

John Cabill
(800) 234-4239, ext. 229
Dehydrators, Deicing Sensor &
Controls for Broadcast/FM and
Satellite Antennas

ERI - ELECTRONICS RESEARCH • 1990

David White
(819) 925-6000
Antennas, Towers, Filters, Combiners

**ETS-LINDGREN / HOLIDAY EMF
MEASUREMENT • 2003**

Dave Baron
(512) 531-6408
RF Safety Instrumentation

FREELAND PRODUCTS • 1997

Joel Freeland
(800) 624-7626
Rebuilt Power Tubes

**FRONTLINE COMMUNICATIONS CORP. •
2000**

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

FUJINON, INC. • 1986

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

GEPCO INTERNATIONAL, INC. • 1995

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

GLOBALSTOR DATA CORPORATION • 2000

Bob Jones
(818) 701-7771, ext. 31
Data Storage Solutions Providers

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

Joe Mack (TV) or Roland Eid
(Radio) or Bob Duncan (Software)
(513) 459-3406 or (513) 459-3597
or (719) 439-0130
Broadcast Equipment & Services

HD WORLD • 2006

Michael Driscoll
(203) 371-6322
HD World Conference & Expo
(Nov. 29-30, 2006, New York)

HOLBROOK ENTERPRISES, INC. • 2006

Heywood Bagley
(208) 468-8797
WireCAD - Serious Design Tools

IMAGE VIDEO • 1997

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

JAY S. GREER, CBT • 1999

Manager, NFL Frequency
Organization Group

JOSEPH ELECTRONICS INC. • 2003

Yohay Hahamy
(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

Madsen Batt
(206) 926-0508
Tower Engineering, Inspections
Design

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

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

LBA TECHNOLOGY, INC. • 2002

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

LEA INTERNATIONAL • 2004

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

LEADER INSTRUMENTS CORP. • 2002

John Pierce
(800) 645-5104
Electronic Test & Measuring
Equipment

MACRAY COMMUNICATION • 2002

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

MARKETER VIDEO SUPPLY • 2002

Tim Mihrett
(845) 246-3036
Audio, Video, Audio Visual Broadcast
Supply

**MAELL 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

**MICROMEN COMMUNICATIONS, INC. •
2005**

Brad Youngblood
(973) 422-7200
Coordination Services / Frequency
Planning

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

Sherry 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 Amoscato
(973) 839-1011, ext. 1197
Enclosures, Power, Accessories,
Furniture

MINIKIN DESIGN INC. • 2005

Jay Minkin
(208) 250-7481
System Integration / Design /
Documentation

MOHAWK • 1995

Jamie Silva
(800) 422-9961
Wire and Cable

MORROW TECHNOLOGIES, INC. • 2002

Tish Boyles
(727) 531-4000
Spectrum Analyzers

MOSELEY ASSOCIATES, INC. • 1977

Dave Chaney
(805) 968-9611
RF & TV STLs

**NATIONAL ASSOCIATION
OF BROADCASTERS • 1981**

(202) 429-5340
Industry Trade Association

NATIONAL FOOTBALL LEAGUE • 1999

Jay Gerber
Game Day Coordination Operations

NAUTEL MAINE, INC. • 2002

Gary Manieuffel
(207) 947-8200
Radio Broadcast Transmitter
Manufacturer

NEAL ELECTRONICS • 2004

Madeline Torres
(800) 522-2253
Cable, Connectors, Cable Assemblies

NEURAL AUDIO • 2006

Mark Seigle
Your Content, Everywhere, Now

**NORTHWEST TOWER ENGINEERING,
PLLC • 2003**

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

NOTI LTD. • 2002

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

NUCOMM, INC. • 1996

John Dulany
(908) 852-5700
Digital Microwave Transmission
Equipment

NVISION, INC. • 1997

Doug Butlerhugh
(500) 265-1000
Routers, Master Control & Terminal
Equipment

OMT TECHNOLOGIES INC. • 2001

Ron Paley
(888) 652-5001
Automation, Skimming/Logging,
Software

ORBAN • 1996

Steve Gordon
(800) 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

PIKE & FISCHER • 1991

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

PRIME IMAGE, INC. • 1997

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

PRO-BEL • 2002

Terry Barnham
(611) 549-5159
Automation, Routing & Infrastructure

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

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

**PROPHET SYSTEMS INNOVATIONS •
2003**

Jeff Zigler
(308) 284-3007
Audio and Video Content Management

PROVIDEO SYSTEMS, INC. • 2000

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

PULSECOM • 2003

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

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

Richard E. Bush
(734) 349-1412
RF Signal Management

**RADIAN COMMUNICATION SERVICES INC. •
1986**

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

RDL • 2004

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

RF CENTRAL, LLC • 2005

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

RICHARDSON ELECTRONICS • 1987

Chris Chinchilla
(800) 348-5500
Power Grid Tubes

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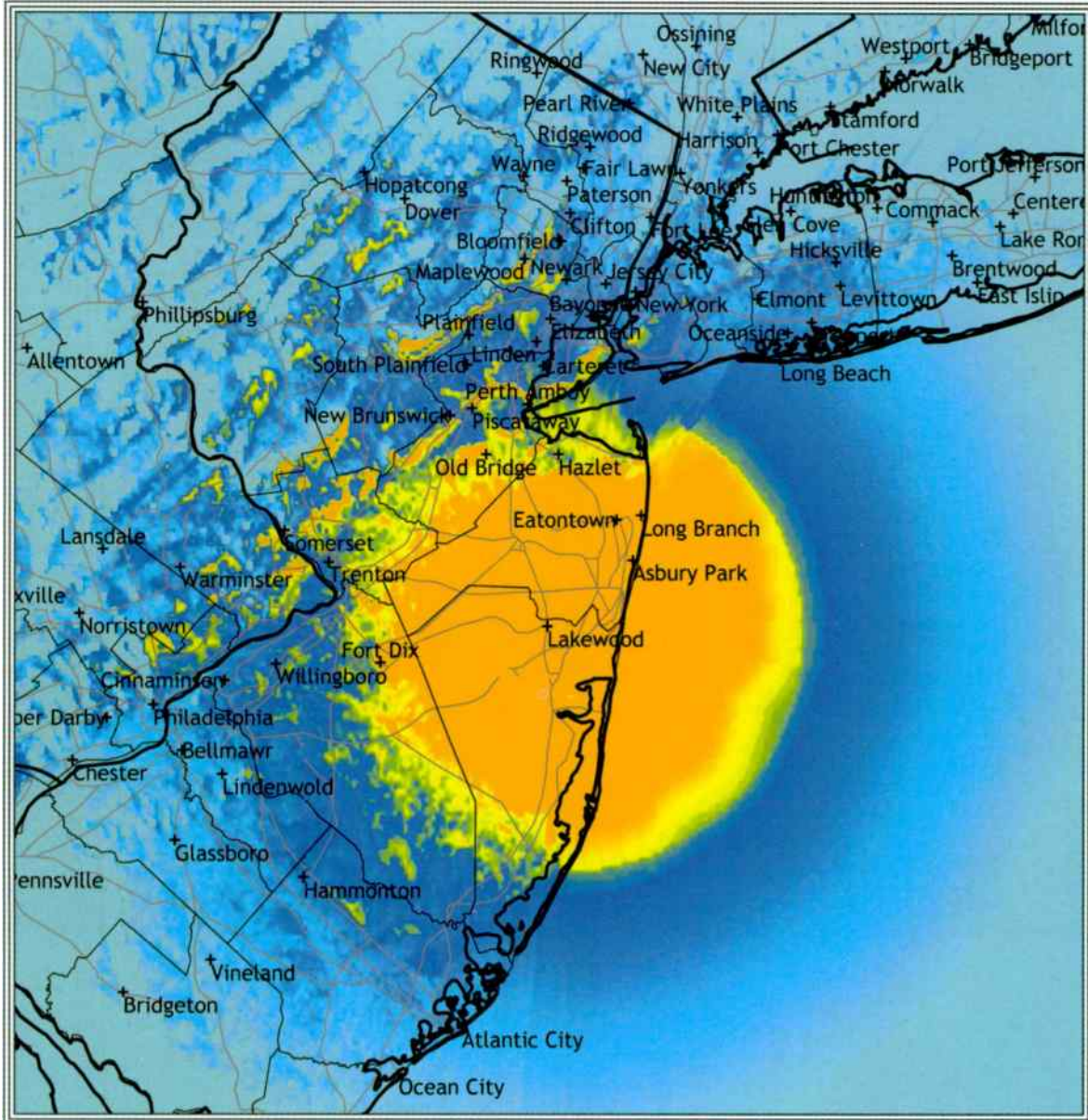


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