



the SIGNAL

BIMONTHLY PUBLICATION OF THE SOCIETY OF BROADCAST ENGINEERS

OCTOBER
2006

Volume 19, Number 5

3

What's Our Strategy?

8

Recertification Made Easy

10

What Makes A Good Chapter?

12

Web Tools You Can Use

21

Who's on the Move?

Have you visited us on the web yet?

www.sbe.org

Scherer Elected to Second Term as SBE President

■ Officers, Six Directors Also Elected



President, Christopher H. Scherer, CPBE, CBNT



Vice President, Clay Freinwald, CPBE



Secretary, Vincent A. Lopez, CEV, CBNT



Treasurer, Barry Thomas, CPBE, CBNT

Christopher H. Scherer, CPBE, CBNT, of Overland Park, Kansas, was elected to a second term as president of the Society of Broadcast Engineers on August 24.

Scherer, editor of *Radio* magazine, will begin his second term September 27, following his induction during the SBE Annual Membership Meeting in Verona, N.Y. Scherer is a Senior member of SBE. Previous to serving as president, Scherer served as national vice president and chairman of chapters 59 in Kansas City and 70 in Cleveland. He is also a past chairman of the SBE National Certification Committee and continues to serve on that committee. Scherer has been a member of the Society since 1989. Commenting on his election to a second one-year term, Scherer said, "I look forward to serving the Society for another year, and in particular working with the current, reelected and newly elected board members. We have established the groundwork of several plans and projects that I expect

will see significant progress in the coming months."

Also elected to a second term was Vice President, **Clay Freinwald, CPBE**. Freinwald, of Auburn, Wash., is a corporate engineer with Entercom. He is a member of Chapter 16 in Seattle and has been a member of the national SBE board of directors since 1999 and a member of the Society since 1968. He was elected an SBE Fellow in 2004. Elected to a second term as secretary was **Vincent A. Lopez, CEV, CBNT**, director of engineering at WSYT / WNYS TV in Syracuse, N.Y. Lopez has been a member of the national board since 2000 and is chairman of the SBE Regional Convention Strategies Committee. He previously served as chairman of the SBE Membership Committee for four years. Lopez is also a past chairman of Chapter 22 in Central New York and

See **ELECTION** on page 5

Members' Achievements Highlight National Meeting

The 2006 National Meeting of the Society of Broadcast Engineers, held in Verona, N.Y., September 26-27, ended on a high note with the presentation of awards during the SBE National Awards Dinner. The dinner was emceed by SBE President, Chris Scherer, CPBE, CBNT. Scherer was beginning his second one-year term as president that day and took the opportunity to talk about his vision for SBE in the coming year and beyond.

Three members were elevated to the membership grade of SBE Fellow during the Awards Dinner: Ray-

mond C. Benedict, CPBE, Gary S. Hartman, CPBE, and Troy D. Pennington, CSRE, CBNT, received their awards before an appreciative crowd. All other previously named Fellows in attendance joined them on stage to welcome them.

Another highlight was the presentation of the SBE Broadcast Engineer of the Year Award to Larry J. Wilkins, CPBE, AMD, CBNT. Wilkins is Assistant Director of Engineering for Cumulus Media and also handles

See **NATIONAL** on page 15

EXTREME SPEED!
Realtime Uncompressed 2k



ExtremeStor-DI

Digital Intermediate Server

OVER 1000 MB/SEC SUSTAINED

Dual 10/100/1000 Copper Gigabit Ethernet



- *Extreme Performance*
- *Extreme Reliability*
- *Extreme Scalability*

The ExtremeStor-DI Server incorporates as many as 24 hot-swappable SATA Hard drives for up to 12TB of local storage. The ExtremeStor-DI is a low-cost, high-performance fault-tolerant Digital Intermediate server that is conveniently packaged in a single, 5U Rack Mounted Enclosure. Supporting RAID levels 0, 1, 5, 10 and 50, the ExtremeStor-DI is ideal for today's throughput-intensive enterprises.

Globalstor[®]
data corporation

call us at: 818-701-7771 or visit
www.globalstor.com

Society of Broadcast Engineers
BOARD OF DIRECTORS

OFFICERS

Chris Scherer, CPBE, CBNT, President
Radio magazine • Overland Park, Kan. • cscherer@sbe.org

Clay Freinwald, CPBE, Vice President
Entercom • Auburn, Wash. • k7cr@blarg.net

Vincent A. Lopez, CEV, CBNT, Secretary
WSYT/WNYS TV • Syracuse, N.Y. • vlopez@wsyt.sbgnet.com

Barry Thomas, CPBE, CBNT, Treasurer
Lincoln Financial Media • Atlanta, Ga. • barryt@broadcast.net

DIRECTORS

Ralph Beaver, CBT, Media Alert, Inc.
Tampa, Fla. • bevo@media-alert.com

Jon A. Bennett, CPBE, CBNT, COX Radio Inc.
Richmond, Va. • jon.bennett@mindspring.com

James T. Bernier, Jr., CPBE, CBNT, Turner Entertainment 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. Ericksen, P.E., CSRTE, 8-VSB, CBNT Hammett & Edison, Inc. • San Francisco, Calif. • dericksen@h-e.com

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

Thomas R. Ray III, CPBE, Buckley Broadcasting/WOR Radio • New York, N.Y. • tomray@wor710.com

Christopher D. Tarr, CBRE, CBT CBNT, Entercom
Delafield, Wis. • chris@broadcastdoc.net

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 D. Bayman, Membership Services Director
pbayman@sbe.org

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

Debbie Hennessey, Executive Assistant
dhennessey@sbe.org

Scott Jones, Database Manager
kjones@sbe.org

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

the SIGNAL is published bimonthly by the Society of Broadcast Engineers, Inc., 9102 North Meridian Street, Suite 150, Indianapolis, IN 46260. Questions/comments regarding editorial content, design or advertising should be referred to Pollyanna Bayman at (317) 846-9000 or pbayman@sbe.org. SBE is a registered trademark of the Society of Broadcast Engineers.

Strategic Planning Actions

BY **Barry Thomas, CPBE, CBNT**

SBE Strategic Planning Committee Chairman

The Strategic Planning Committee has received research results from the July 8 meeting in Kansas City, Mo. Facilitator Kristine Rahavy's report has been distributed to members of the Strategic Planning Committee who have drafted recommendations for the SBE Board of Directors to consider during their meeting at Turning Stone, N.Y. In anticipation of the committee recommendations, the Executive Committee authorized several initiatives immediately after the July meeting in order to get a "jump start" on obvious and effective improvement areas. Progress has been made on those efforts and there's much more ahead.

To improve the marketing efforts of SBE, the SBE Executive Committee recommended increasing the frequency and distribution of press releases. The objective in this effort is to increase awareness of SBE within and outside of broadcasting, and improve the Society's role as a reliable information source for broadcast technology and technical personnel. SBE President Chriss Scherer has worked with John Poray to identify more industry and consumer news sources that will become regular recipients of news releases. The SBE National office has also increased the number of releases highlighting the regular and important work done on behalf of the working broadcast engineer.

The Executive Committee agreed that SBE National needed to take steps to facilitate a closer involvement of chapters with their states' Broadcast Associations. President Chriss Scherer has started a dialog with the National Alliance of State Broadcasting Associations (NASBA) with the intention of discussing how SBE can serve and interface with the associations on an ongoing basis. He will be meeting with representatives of the organization at the NAB Radio show in Dallas during late September. Part of that discussion will be a reminder of the extensive education and certification services SBE provides.

One important issue discussed during the Kansas City meetings was a need to explain the efforts of our FCC Liaison committee: "Why does the SBE file on certain issues?" and "How does the work of the committee benefit the working engineer?" Dane Ericksen, Chairman of the SBE FCC Liaison Committee, has begun publishing articles in *The Signal* that explain his committee's work

and how its efforts are focused on protecting and supporting the real-world broadcast engineering environment. And including, how the Society has, at times, been a leading voice reminding the industry that great business ideas still must work within the laws of physics. These articles are exceptionally informative and outline the ways SBE protects and supports its members through FCC actions.

SBE is preparing a "Web Toolkit" that will help chapters construct their own web sites in a way that will support and improve the SBE brand identity throughout the industry. It is hoped that the result will be a more recognizable presence of chapters on the Internet.

The Executive Committee discussed specific efforts to begin attracting new and young talent to Broadcast Engineering. Research is being done on applicable Internet discussion groups on sites such as Yahoo and Myspace. The intention is to target youth and teens who are already interested in areas like broadcasting, music, or IT, and expose them to SBE as a means to explore broadcast engineering as a career. That research will be presented to the Board as part of the Strategic Planning portion of the SBE Board of Directors meeting.

In an effort to offer services that are of the most benefit to members, a survey is being developed to allow members to rate SBE services and recommend others. The details of this survey are pending. SBE Board members are also beginning to draft an independent study course outline for use as a broadcast engineering curriculum in schools.

In order to help simplify and improve chapter organization, SBE Board Members are evaluating sample chapter by-laws with the intent of offering a "By-Laws Template" for new and existing chapters.

The complete report has been distributed to the Strategic Planning Committee and is available to members upon request. Further actions will be proposed by the Strategic Planning Committee based on this report and member suggestions. We encourage chapters to schedule a meeting to discuss this report and get involved in the process of guiding the Society! ●



At Full Stride

BY **Chris Scherer, CPBE,
CBNT**

SBE President

When I first considered running for a national officer position with the SBE, several people told me that the real work as the president of the Society would begin in the second term. They all said that it would be in the second year that I would really have my stride. It sounded like an experienced voice, but now that I am beginning my second term, I know exactly what they meant. This is not to say that the first year has been for naught, but rather it has been a good time to better comprehend the duties of the position and better understand all the people that I work with in the leadership of the Society. As I look ahead to the next 12 months, I thought that it would be good to revisit some of the ideas I planned to enact when I was sworn in for my first term.

The main focus of all my plans centered on communication throughout the Society. The society functions at many different levels, and I believe that it is through communication across and through all these levels that we can be the most effective in what we do.

National to Member

This is one area of communication that I felt needed immediate attention. Last year, the SBE Roundtable was launched (sbe@sbe.org), which allows members a way to communicate with National directly. It also provides another member-to-member channel, which has also been helpful. The SBE website was redesigned and launched last year as well. The National staff deserves the credit for making this happen, but I believe that the site is able to provide more information in an easier-to-find fashion. The SBE also held a strategic planning meeting in July to identify specific ideas and set goals for the future of the Society. Strategic Planning Committee Chairman Barry Thomas will present several ideas to the board at the board of directors meeting in Verona. (This newsletter is being printed during the National Meeting. More details will be in the next issue of the Signal.) The national efforts have always been communicated to members through the Signal and the website, but we have also expanded this work to provide greater details of what is being done. This is to show that not only is

there activity on the national level, but that activity is for the benefit of the engineer first. National work may also benefit the industry and broadcast groups, but it is the engineer's interests that come first.

Chapter to Chapter

The remainder for chapter chairman was also restarted to allow a direct path for all chapter chairmen to communicate with each other and with National. Some interesting ideas have been presented, and some coordination of chapter efforts has been made. I hope to see more use of this resource in the coming months. The Regional Conventions Strategies Committee has been active in coordinating between the various conventions. Most members are probably not aware of this effort, but committee Chairman Vinny Lopez has been working behind the scenes to make the chapter efforts more valuable to all members.

SBE to the Industry

In the past year, there is not much to report on this idea. The topic was discussed during the Strategic Planning meeting, and there are some plans being set to launch these efforts. As part of this, I will address the meeting of the National Alliance of State Broadcast Associations during the NAB Radio Show at the end of September. Other efforts will involve working with college broadcast associations and other associations with similar or complementary interests. In addition, more information is being distributed to the press and trade publications so that we can reach non-members and non-technical broadcasters.

Looking Ahead

All in all, the past 12 months have been rewarding. There have been a few struggles, but there have been some successes as well. I thank the national board, officers and national staff for all they have done for the society and their help to me. I especially want to thank Immediate Past President Ray Benedict for his insight and voice of experience during the past 12 months.

Finally, the recent election put a talented list of candidates forward. The officers were all re-elected, and 14 people ran for six open board seats. Five of those seats went to incumbent directors. The one change is that Chris Tarr joins the board and RJ Russell leaves the



cscherer@sbe.org

board. I want to thank RJ for his work over the last year. It is through the SBE on a national level that I got to know him. He's a good engineer and a good friend. I won't let him stray too far from national involvement. Likewise, I appreciate the willingness of all the candidates to run. I hope to see them all continue their interest in national involvement by serving on national committee and other projects.

Here's to the coming year. ●

MARK YOUR CALENDAR

October 3, 4, & 5
Regional Broadcast Expo
2006 Iowa DTV Symposium
Hotel Fort Des Moines, Des Moines, Iowa
Info: Karen Schaeffer (515) 242-4139 or
William T. Hayes (515) 242-3116 or
visit www.iptv.org/dtv/2006

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

ELECTION *from page 1*

was elected an SBE Fellow in 2004.

Elected to a second term as treasurer was **Barry Thomas, CPBE, CBNT**, Vice President of Lincoln Financial Media. Thomas is a Senior member of SBE and a member of Chapter 15 in New York. He previously served as national secretary and also two terms as a director. He has also served as chairman of the SBE Finance Committee.

Six members were elected to seats on the Board of Directors. They include:

- **Ralph Beaver, CBT**, President and CEO, Media Alert, Inc., Tampa, Fla.
- **James T. Bernier, Jr., CPBE, CBNT**, Director, Maintenance, Design and Engineering, Turner Entertainment Networks, TBS, Inc., Alpharetta, Ga.
- **Keith M. Kintner, CPBE, CBNT**, Radio-TV-Film Engineer, University of Wisconsin Oshkosh, Oshkosh, Wis.
- **Thomas R. Ray III, CPBE**, Vice Presi-



Ralph Beaver, CBT



James T. Bernier, Jr., CPBE, CBNT



Keith M. Kintner, CPBE, CBNT



Thomas R. Ray III, CPBE



Christopher D. Tarr, CBRE, CBT, CBNT



Larry J. Wilkins, CPBE, AMD, CBNT

Broadcasting, Prattville, Ala.

They will be joined by six returning members of the Board and Raymond Benedict, CPBE, who will continue his service to the Board as Immediate Past President. The six returning directors include:

- **Jon A. Bennett, CPBE, CBNT**, Director of Engineering – Richmond, Cox Radio, Richmond, Va.
- **Andrea B. Cummis, CBT, CTO**, Sr. Vice President, Engineering and Technology, American Desi TV, Roseland, N.J.
- **Dane E. Ericksen, P.E., CSRTE, 8-VSB, CBNT**, Senior Engineer, Hammett & Edison, Inc., San Francisco, Calif.
- **Ted Hand, CPBE, 8-VSB**, Assistant Chief Engineer / RF Engineer, WGNT-TV, Portsmouth, Va.
- **Hal H. Hostetler, CPBE**, Senior Engineer / I.T.

Director, KVOA Television, Tucson, Ariz.

- **Conrad H. Trautmann, CPBE**, Senior Vice President of Engineering and Technology, Westwood One, Inc., New York, N.Y.

Installation of officers and directors will be held at the SBE Annual Membership Meeting, Wednesday, September 27, in Verona, N.Y.,



The 2006 Board of Tellers from Chapter 25, Indianapolis included: (L-R) Phil Alexander, CSRE; Dave Fort, CPBE; Charlie Sears, CPBE; Dale Smiley, CPBE; Don Hemenover, CBT; and Tom Weber, CPBE, CBNT.

dent, Corporate Director of Engineering, Buckley Broadcasting/WOR Radio, New York, N.Y.

- **Christopher D. Tarr, CBRE, CBT, CBNT**, Director of Engineering, Entercom Milwaukee/Madison, Delafield, Wis.
- **Larry J. Wilkins, CPBE, AMD, CBNT**, Assistant Director of Engineering, Cumulus

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.

Subscribe on the SBE website at www.sbe.org

as part of the 2006 SBE National Meeting, which is held in conjunction with the SBE22 Broadcast & Technology Expo. ●

SBE Participates in IBC2006

For a third year, SBE exhibited at IBC (International Broadcasting Convention) in Amsterdam, Netherlands, September 8-12. An announced crowd of over 40,000 attended the show with more than 1,000 companies exhibiting their products and services.

The vast majority of SBE members reside in the United States but the Society has had members from other countries for many years. The IBC participation marked SBE's continuing initiative to invite participation by broadcast engi-

neers and manufacturers from outside the U.S.

SBE Executive Director John Poray represented SBE at its "stand" in Hall 8 of the RAI Convention Center. Poray welcomed prospective members from many countries; not only from Europe but all over the world. Poray also attended a conference session on educating the engineer in the digital age. Contact was also made with many current and prospective Sustaining Member companies who were exhibiting at the show. ●



SBE Executive Director, John Poray, represented the Society at the annual International Broadcasting Convention (IBC) held in Amsterdam last month.

How Many Federal Agencies Does it Take To Regulate the Airwaves?

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

The answer to the above question, once upon a time, was none at all. But it all started with transportation, really, and specifically, railroad transportation. In 1887, Congress passed the Interstate Commerce Act, which was a compendium of legal principles from court decisions and the common law dealing with stage coaches, canal boats, wharves and warehouses, and other activities viewed as being "affected with a public interest." The Act was needed to help regulate the railroads, and because the telegraph service used railroad rights-of-way and publicly financed roads, telegraph was regulated under the same provisions as were railroads. The Interstate Commerce Commission was implemented. But the ICC was far too transportation oriented to deal with an entirely new communications industry, and besides, communications was considered local rather than national in the late 1800s. By the time the FCC was created in 1934, the Interstate Commerce Act provisions, being well-tested in the transportation area, were simply restated and reapplied in the Communications Act of 1934. The Communications Act clearly vested exclusive jurisdiction over technical matters in the new FCC. The States had to keep "hands off", just as they did the transportation industry.

The above is a misleadingly shortened version of the creation of the FCC, but the point is that transportation regulation formed the initial roots of telecommunications regulation in the United States, and ultimately, we ended up with but one agency with exclusive jurisdiction over at least the technical aspects of radiocommunications domestically. But we really don't just have one agency regulating the airwaves. After a time, there were two. The FCC regulates non-government communications, and the NTIA, part of the Commerce Department, regulates government telecommunications. NTIA also acts as the Administration's Telecommunications advocate (and sometimes those dual NTIA roles collide). NTIA has its own rules about frequency assignments to Federal agencies, and its own technical rules governing the equipment used by a Federal government communications facility. (They have a lot of engineers,

too, which means that it operates a lot more efficiently than does the FCC. But I digress).

Then, in what would seem to be the closing of a huge circle, in 1987, Congress enacted the Airport and Airway Safety and Capacity Expansion Act of 1987, Public Law 100-223. It contained a number of provisions dealing with airport safety and created some new obligations on air transportation and the Federal Aviation Administration. That legislation, however, in a very short reference that was created for the first time when the House and Senate versions of the same bill were compared and the differences resolved in a Committee of Conference, actually gave the FAA jurisdiction over Electromagnetic Interference (EMI) as it pertained to obstruction of the navigable airspace or interference with air navigation by a proposed construction or alteration of a structure on the Earth's surface. After this legislation, there were three agencies that regulate telecommunications in the United States domestically. United States airspace should include, as part of that jurisdiction, a competent and professional technical evaluation of the EMI effects of telecommunications facilities that are geographically proximate to airport facilities or air navigation facilities. The problem, however, is that historically, EMI issues pertaining to telecommunications facilities have been the exclusive province of, and well within the clear and superior expertise of, the FCC. The FCC licenses the telecommunications facilities (and in that process regulates the EMI potential of those licensed facilities) under Section 301 of the Communications Act. It also comprehensively regulates the emissions of Radio Frequency (RF) devices pursuant to Section 302A of the Communications Act.

There are only two practical means of addressing EMI issues involving air transportation: (1) FAA must either coordinate its procedures and its substantive rules with FCC so that the FCC and FAA regulations are harmonious; or else (2) it will have to defer to the FCC's expertise in EMI issues and rely on the FCC to adopt rules which prevent interference in advance; and to investigate and resolve any instances of interference that occur notwithstanding. Actually, there is a third option. It could rely on NTIA to coordinate on its behalf (as NTIA does with respect to all other Federal

agencies) with FCC.

Some of you will remember that FAA adopted in the early 1990s an Airspace Analysis Model (AAM) for predicting potential interference to aeronautical communications. FAA employed it as a method of determining what structures would or would not be approved. The AAM was flawed, badly so, and caused, for a long time, extreme difficulty for broadcasters (especially FM broadcasters) who wished to construct new stations because the interference predictions were far too conservative. FAA has not exhibited any real expertise in the science of electromagnetic compatibility up until now.

FAA now has proposed to require that notice be given to FAA before any construction of a new communications facility or modified existing facility, including a building, antenna structure, or any other man-made structure, which supports a radiating element for the purpose of radio frequency transmission operating in certain (extensive) frequency bands. FAA indicates that it should evaluate, separately from the evaluation of the physical impacts of antenna structures themselves, what the EMI effects are of any building or structure that supports an antenna (regardless of height) in a long list of frequencies. The proposal is overbroad; broader, SBE contends, than FAA's limited statutory jurisdiction will support. Based on the FAA Notice of Proposed Rule Making, a small weekend retreat on a lake with a marine band antenna three feet tall, or a Part 15 antenna for an 802.11 unlicensed device operating in the 5 GHz unlicensed segment. Of most concern to SBE, this would also require that any changes or modifications (defined loosely as changes in frequency, addition of new frequencies, or increases in Effective Radiated Power equal to or greater than 3 decibels) in broadcast facilities be approved by FAA. None of these notifications is predicated on a structure which has the slightest potential for obstructing navigable airspace. It is, purely and simply, a wholesale intrusion by FAA into the area of EMI regulation generally, and a vast expansion of FAA's historical (and statutory) jurisdiction. As a practical matter, this will require that FAA review (with no indication at all what criteria will be used to



evaluate the notices given) essentially all facilities changes for, among other things, VHF television and FM broadcast radio stations, regardless of proximity to aviation facilities. The sole justification for the inclusion of all television stations operating on channels 2 to 13 and all of the FM stations in the United States in the notice requirement is that market beacons operate at 75 MHz, government mobile facilities operate at 162-174 MHz, and military air traffic communications are conducted at 225-328.6 MHz. The list of frequencies for which notices have to be submitted is grossly overbroad, in light of the limited justification offered in the Notice of Proposed Rule Making, and in view of the limited number of facilities to be protected. SBE will be filing against FAA's new proposal. Modeling telecommunications regulation after transportation may have been the way history developed at the turn of the nineteenth century, but turning telecommunications regulation over to the FAA just seems like too many cooks spoiling the broth. ●

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
 Join host Hal Hosteller, WA7BGX

HAMnet

SBE Partners with NAB On 2007 Broadcast Engineering Conference

The Society of Broadcast Engineers (SBE) will serve as an organizing partner once again with the National Association of Broadcasters for their annual Broadcast Engineering Conference (BEC). 2007 marks the 13th consecutive year that SBE has partnered with NAB on the BEC.



SBE members will serve on the BEC organizing committee and serve as moderators for sessions. The BEC Committee determines the session topics and selects papers to be pre-

sented from the hundreds submitted each year. NAB is accepting technical paper abstracts now for the 2007 BEC. Go to the NAB web site, www.nab.org, and click on NAB2007. The annual BEC is part of the NAB spring convention held in Las Vegas each year. The dates for 2007 will be April 14 to 19. SBE members will be eligible to receive a discounted "partner" rate for full conference registration. More information will be available later this fall at the SBE web site, www.sbe.org and in the December issue of *The Signal*. ●

*where can I find a good job in broadcasting?
 WHO CAN WE HIRE FOR THAT TECHNICAL POSITION?*

RESUME Bank

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

Jobs ONLINE

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

Engineers Should Help Others Understand the DTV Transition

BY **Larry W. Ray, CBT**
SBE Member, Chapter 49

In February 2009, US TV broadcasters will discontinue the transmission of analog NTSC. Two things will happen. The March 2009 power bill should be considerably less, and your viewers --at least those viewers dependent on an antenna for local TV reception-- will discover the beauty of ATSC digital television. At least that's the plan.

The reality is more likely to be a good number of confused and angry former viewers. There is something engineers can do to help with the DTV transition and maybe save themselves some agony.

Besides having accurate PSIP, lipsync, dialnorm, etc., engineers need to help the on-air folks and others understand the transition.

I've heard some newscasts with misinformation about 2009 and DTV. If broadcast TV media can't get it right, it's really going to be difficult for the average viewer to comprehend.

I think a few points of discussion are:

- DTV does not always mean HDTV.
- An HD monitor will still require a separate ATSC tuner if an antenna is used after the transition. (How many expensive HD monitors are used with analog cable or "over-the-air" NTSC because consumers don't know they need a HDTV source to see HD.)
- Dish users that do not have "local into local" service may also need an ATSC set top unless their TV or dish receiver is ATSC compatible.
- A VCR and any other recorder will need an internal ATSC tuner or maybe its own set top box if an antenna is used.

• Cable subscribers won't lose access to "must-carry" stations.

Hopefully the non-engineers at your station are getting up to speed about DTV and you've already had this conversation. Or perhaps our local SBE chapters should consider a meeting with a discussion of "DTV for the Non-Engineer." We could invite media and management folks, present the facts and answer their questions. This might help engineers avoid getting slammed with questions after the analog shutdown.

I did notice a sign at Circuit City that explained SDTVs and why they will be needed in 2009. (Perhaps a tag or sticker on analog TVs and VCRs would also be helpful.) The DTV transition will not be easy. But knowledge is power. Maybe the SBE and engineers can help avoid some stumbling. ●

Recertification Made Easy

BY **James T. Bernier, CPBE, CBNT**
SBE Certification Committee Chairman

Each level of Certification is valid for five years, at which time the Certification must be renewed or advanced. Advancing to the next level requires completing and submitting an application form. Renewal at a current level can be done by retaking the SBE Certification exam, or by completing an application to recertify on professional credits. Because a test is not involved, most people favor recertifying on credits.

In many cases, recertification credits are earned for doing things that you normally do as part of your job and career advancement. What troubles some people are the steps required to provide the necessary documentation to claim the recertification credits.

Each level of Certification has a minimum number of credits required. These credits must be claimed in a minimum of four categories. There are 10 possible categories. Figure 1 lists the credits needed for each level of Certification.

Some credits are easy to earn. Employment in broadcast engineering itself helps you earn a few. By attending chapter meetings you will earn more. Other credits, such as presenting a program at a convention or meeting or having an article published, take more effort, but the effort is worth it.

PAPERWORK CHORE

When the time comes to renew your certification, finding accomplishments to support the claimed points is not a problem, but providing the appropriate documentation to support the claim can be an obstacle, particularly if you wait until the last possible moment to complete a recertification application.

There are two parts to documenting any claimed credits: maintaining a record of the source of the credits, and providing substantiation of the effort. It's not difficult to cover both portions with a single effort, but the key is to document the accomplishments as they occur. To do this, keep a rolling record of any accomplishments. There are many ways to do this. Some use a Word document or just a sheet of paper to simply record everything like a diary. Others keep a file folder and slip a note into it for each item being claimed. Both will commit the effort to a record, but these do not sort the information into categories, which can be a burden after five years of making notes.

It's easier to sort the information as it occurs. Instead of simply making a diary entry, create a form with all the categories on it. A sample is available online at www.sbe.org/cert_recert.php. This sample emulates the Recertification by Professional Credits form available online by providing category headers for each credit begin claimed.

Add an entry each time you accomplish something that you want to claim. Enter the information as it happens. Don't wait five years and then try to recall everything at once. By tracking your progress as it happens you will make it much easier on yourself.

Simply claiming the credits is only one part of the recertification process. While the National Certification Committee or the local certification

will document the presentation, a printed copy of the text is easier for the reviewer to evaluate. Category D provides credits for published articles. If this

is claimed, provide a copy of the article. Providing a copy of a book is not practical, but a copy of the title page and the table of contents will suffice. Category H awards credits for attendance at factory schools. Most of these schools provide a certificate of completion for the course. Include a copy of this certificate with your application. Claiming credit for attending local meetings does not need any supporting documentation. The chapter certification chairman and chapter secretary can verify this information.

Each credit claimed has something that can be used to support it. By including as much information as you can, the reviewer's job is simplified. This not only helps you prepare the application, but it hastens the review process.

Keep in mind that Certification is valid for five years, and the recertification credits claimed must be for work accomplished in the preceding five years. If your Certification is due for renewal in July 2007, you can claim any effort from July 2002 until July 2007. While work performed previous to 2002 in this example is important, it does not qualify for recertification credit.

Keep the information on a USB drive, or on your hard drive, or in a file folder. Use a system that works for you, just remember to maintain the information. You'll find that completing your recertification application is much easier. ●



jim.bernier@sbe.org

Figure 1: Credits Needed to Recertify

Level	Credits
Broadcast Networking Technologist (CBNT)	20
Audio or Video Engineer (CEA or CEV).....	20
Broadcast Radio or Television Engineer (CBRE, CBTE)	20
Senior Broadcast Radio or Television Engineer (CSRE, CSTE).....	25
Professional Broadcast Engineer (CPBE)	30

chairman has no reason to doubt anyone's honesty, providing some form of supporting documentation makes it easier for the person reviewing the recertification application to approve the claimed credits.

The Certification Committee regularly sees recertification applications that have only a single sheet with all the credits claimed. While these are accepted and processed, it is often not an easy task for the person reviewing the application. Quite often, the applicant must be contacted to provide additional information so the review can be completed.

WHAT KIND OF SUPPORTING DOCUMENT IS REQUIRED?

The SBE Handbook of Membership and Certification and the Maintenance of Certification form provide specific information on each category's supporting documentation. For example, credits claimed in Category A (employment in broadcast engineering) requires a statement of the work performed and the period claimed. This statement must be attested to by a supervisor. This requires preparing a statement and including it with the recertification application. Here's a tip: instead of asking your supervisor for the statement, prepare it yourself and have him or her sign it.

Category C awards credits for a paper or presentation. While a copy of a Power Point presentation

What's your
Certification
Quotient

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

The loop back address in TCP/IP for a Class A network is:

A) 255.0.0.0 C) 255.255.255.0

B) 255.255.0.0 D) 127.0.0.1

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

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®)

Raymond Goudreau, Holyoke, MA - Chapter 11
Terry Jordan, Fayetteville, NC - Chapter 93

CERTIFIED BROADCAST RADIO ENGINEER (CBRE®)

R. Michael King, Grand Junction, CO - Chapter 48

CERTIFIED SENIOR TELEVISION ENGINEER (CSTE®)

Leigh O'Malley Farmer City, IL - Chapter 49

CERTIFIED BROADCAST NETWORKING TECHNOLOGIST® (CBNT®)

Terry Jordan, Fayetteville, NC - Chapter 93

NEWLY CERTIFIED CPBE®

Applicant must have had 20 years of professional broadcast engineering or related technologies experience in radio and/or television. The candidate must be currently certified on the Certified Senior Broadcast Engineer® level.

CERTIFIED PROFESSIONAL BROADCAST ENGINEER® (CPBE®)

Thomas Bosscher, Hudsonville, MI - Chapter 102
Frederic Krampits, Chicopee, MA - Chapter 14
Mark Simpson, Tucson, AZ - Chapter 32

SBE CERTIFIED SCHOOL COURSE COMPLETION

CERTIFIED BROADCAST TECHNOLOGIST® (CBT)

Bates Technical College

Lohen Kinsman-Kersting, Olympia, WA
John Monroe, Tacoma, WA
Steven Peterson, Tacoma, WA
Letisha Vanderaart, Tacoma, WA

JUNE EXAMS

"Thank You" CHAPTER CERTIFICATION CHAIRS FOR YOUR ASSISTANCE

CERTIFIED BROADCAST RADIO ENGINEER (CBRE®)

Lawrence Bortacelli, Orlando, FL - Chapter 24

CERTIFIED BROADCAST TELEVISION ENGINEER (CBTE®)

David Miscia, Framingham, MA - Chapter 11
Ben Wong, Sacramento, CA - Chapter 43

CERTIFIED BROADCAST NETWORKING TECHNOLOGIST® (CBNT®)

Jasper Catalan, Toronto Ontario Canada
Nick Laratta, Toronto Ontario Canada

AUGUST EXAMS

"Thank You" CHAPTER CERTIFICATION CHAIRS FOR YOUR ASSISTANCE

CERTIFIED BROADCAST RADIO ENGINEER (CBRE®)

John Nulhem, Beattie, KS
James Schmidt, Lanoka Harbor, NJ - Chapter 15

CERTIFIED BROADCAST TELEVISION ENGINEER (CBTE®)

Christopher Crumbliss, Austin, TX - Chapter 79
Robert Lange, Morton Grove, IL - Chapter 26

CERTIFIED BROADCAST NETWORKING TECHNOLOGIST® (CBNT®)

Christopher Bailey, Moscow, ID - Chapter 117
Benjamin Cornejo, Highlands Ranch, CO - Chapter 48

Christopher Crumbliss, Austin, TX - Chapter 79
Randy Garrett, Knoxville, TN - Chapter 113
Bruce Harvey, Littleton, CO - Chapter 48
Louis Johnson, Clinton Township, MI - Chapter 82

John Opalko, Yamhill, OR - Chapter 124

Arthur Reis, New Lenox, IL - Chapter 26
Paul Spinelli, Cockeysville, MD - Chapter 46
Erick Steinberg, Mill Valley, CA - Chapter 40
Mark Taylor, Denver, CO - Chapter 48

CERTIFIED BROADCAST TECHNOLOGIST® (CBT)

Jon Wenger, Harrisonburg, PA - Chapter 78
CERTIFIED RADIO OPERATOR® (CRO)
M. Mayzes, Berkeley, CA - Chapter 40
Antonio Ortiz, Berkeley, CA - Chapter 40

CERTIFIED TELEVISION OPERATOR® (CTO®)

Mike Portz, Blue Springs, MO - Chapter 59

CERTIFIED BY LICENSE

CERTIFIED BROADCAST TECHNOLOGIST® (CBT)

William Carpenter, San Francisco, CA - Chapter 40

Robert Griffin, San Luis Obispo, CA - Chapter 40

Bryan Grover, Lancaster, OH - Chapter 52

Anthony Holbrook, Plainwell, MI - Chapter 102

Joshua Jamison, Elftingham, IL - Chapter 49

Charles Karbinsky, Lake Orion, MI - Chapter 82

William MacLeod, Jacksonville, FL - Chapter 7

Henry McKelvey, Capitol Heights, MD - Chapter 46

Alan Simpson, Naylor, MO

CERTIFIED RADIO OPERATOR® (CRO)

CERTIFIED RADIO OPERATOR® (CRO)

Sue Anderson, Jacksonville, FL
Robert Griffin, San Luis Obispo, CA
Todd With, Liberty, MO

CERTIFIED TELEVISION OPERATOR® (CTO®)

CERTIFIED TELEVISION OPERATOR® (CTO®)

Christopher Ashcraft, Jacksonville, FL
Timothy Dounn, Akron, OH
Jeffrey Evans, Jacksonville, FL
Franklin Gemind, Cuyahoga Falls, OH
Shawn Johnson, Rippey, IA
Vance Lang, Charlotte, NC
Arthur Mistretta, Moreno Valley, CA - Chapter 131
Charles Newcomb, Charlotte, NC
Adam Phillips, Longmont, CO

Matt Pongracz, Allentown, PA
Matt Ruff, Cuyahoga Falls, OH
Jeff Satterswhite, Hickory, NC
Brandon Tigue, Cullowhee, NC

RE-CERTIFICATION

The following applicants completed the re-certification 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®)

Don Bartie, Moreno Valley, CA - Chapter 131
Rickie Benson, Jacksonville, FL - Chapter 7
Thomas Daniels, Jr., Stafford, TX - Chapter 405
Jeffrey Keith, Bay Village, OH - Chapter 70
Kenneth Sell, Phoenix, AZ - Chapter 9
James Skinner, Lincoln, NE - Chapter 74
Charles Stallard, Knoxville, TN - Chapter 113
Johnny Stigler, Eutaw, TX - Chapter 67
Barry Thomas, Bloomfield Township, NJ - Chapter 15

CERTIFIED SENIOR RADIO ENGINEER (CSRE®)

Robert Henning, Mishawaka, IN - Chapter 30

CERTIFIED SENIOR TELEVISION ENGINEER (CSTE®)

Ronald Hacker, Perth Amboy, NJ - Chapter 15
Gary Schroder, New Albany, IN - Chapter 35

CERTIFIED SENIOR RADIO/TELEVISION ENGINEER (CSRTE)

Ernest Harvey, Harahan, LA - Chapter 72

CERTIFIED BROADCAST RADIO/TELEVISION ENGINEER (CBRTE)

Tung Thai, Tumwater, WA - Chapter 16

CERTIFIED BROADCAST RADIO ENGINEER (CBRE®)

Rodney Belzair, Bronx, NY - Chapter 15
Stephen Larpen, San Francisco, CA - Chapter 40
Bill Marriott, Indianantic, FL - Chapter 7
H. Kent Randles, Portland, OR - Chapter 124

CERTIFIED BROADCAST TELEVISION ENGINEER (CBTE®)

Richard Bach, Kenner, LA - Chapter 72
Stephen Blot, White Plains, NY - Chapter 15
Bernhart Gebbs, Richmond, IN - Chapter 25
Earl Murray, North Charleston, SC - Chapter 101
Clark Rhoads, Canyon Lake, CA - Chapter 131
Kevin Schrader, Marion, IA - Chapter 109
Larry Tanaka, Chicago, IL - Chapter 26

CERTIFIED BROADCAST NETWORKING TECHNOLOGIST® (CBNT®)

Don Bartie, Moreno Valley, CA - Chapter 131
James Blaubach, Madison, WI - Chapter 24
Dennis Chaney, Cincinnati, OH - Chapter 33
David Costanza, Harrisburg, PA - Chapter 41
Gina Dierks, Omaha, NE - Chapter 74
Charles Drake, Omaha, NE - Chapter 74
David Dunsford, Smyrna, TN - Chapter 135
Paul Easter, Lombard, IL - Chapter 26
Laura Gutknecht, Madison, WI - Chapter 24
Robert Hawthorne, San Antonio, TX - Chapter 69
Steven Herbert, Santa Monica, CA - Chapter 47
James Hermanson, Middleton, WI - Chapter 24
S. L. Johnson, Houston, TX - Chapter 105
Matthew Kinnan, Lenexa, KS - Chapter 59
Kevin LeRoy, Hanover, MD - Chapter 46
Steve Mankowski, Irwindale, CA - Chapter 47
Richard Ochoa, Wichita, KS - Chapter 3
Gary Schroder, New Albany, IN - Chapter 35
James Skinner, Lincoln, NE - Chapter 74
Charles Stallard, Knoxville, TN - Chapter 113
Darrel Sudduth, Plattsburgh, NE - Chapter 74
Thomas Taylor, Boise, ID - Chapter 117
Bary Thomas, Atlanta, GA - Chapter 15

CERTIFIED BROADCAST TECHNOLOGIST® (CBT)

Jan Bathurst, Clark Mills, NY - Chapter 22
Randy Brudigan, Ainsworth, NE - Chapter 87
Christopher Emge, Antioch, TN - Chapter 135
Jerry Erwin II, Maineville, OH - Chapter 33
Robert Hawthorne, San Antonio, TX - Chapter 69
Shirley Hazelett, Aurora, OH - Chapter 70
Mark Kesner, Winchester, VA - Chapter 37
Richard Ochoa, Wichita, KS - Chapter 3
Guy Partridge, DeSoto, TX - Chapter 67
Joe Piazza, Napa, CA - Chapter 40
Jeremy Scott, Beckley, WV - Chapter 116
Gerald Susoeff, Grand Junction, CO - Chapter 81
Ronald Waite, Maryville, TN - Chapter 113

CERTIFIED TELEVISION OPERATOR® (CTO®)

Raymond Brown, Moblie, AL
Bryan Durr, New York, NY
Gary Makowsky, Cypress, TX - Chapter 105
Doug Michelsen, Foster City, CA

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.

2006 Exam Dates

DATES	LOCATION	APPLICATION DEADLINE
November 10-20, 2006	Local Chapters	CLOSED
February 9-19, 2007	Local Chapters	December 29, 2006
April 17, 2007	NAB - Las Vegas	March 2, 2007
June 1-11, 2007	Local Chapters	April 20, 2007
August 10-20, 2007	Local Chapters	June 8, 2007
November 9-19, 2007	Local Chapters	September 21, 2007

Good Programs - the Key to Good Chapters

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

The late "Tip" O'Neill, the long-time Speaker of the U.S. House of Representatives once said that, "all politics is local." The same could be said for SBE. The vast majority of SBE members live or work in areas where there are active local chapters. For many of them, the local chapter is the reason they belong to the Society. It provides a gathering place and opportunity to meet for those who do similar work in similar settings. Members learn from other members by sharing ideas and swapping stories. Likely, the single most important factor that makes a local chapter successful is a good monthly program.

Over the course of one year, the 100 plus active SBE chapters offer a variety of topics and speakers for their local members. Chapter leaders can get some great ideas from other chapters just by learning about what's been done somewhere else. I took a look at a number of chapter meeting reports recently and have gleaned from them a sampling of meeting topics that have been presented over the last four months. Here are some ideas that you may want to try yourself.

On June 1st, Chapter 52 in Columbus, Ohio welcomed Bob Mikkelson of Blimp TV to their meeting. Blimp TV was in town to cover the PGA Memorial Golf Tournament and was moored at The Ohio State University's Don Scott Field. Twenty eight members and guests enjoyed the outdoor meeting as they listened to Bob explain about the blimp and

the equipment used for television coverage. In the summer, Blimp TV handles major golf tournaments and, in the fall, Monday Night Football. He may be coming to your town soon!

On August 16th, local member, Jim Hermanson, CPBE, CBNT, led a discussion on Wireless Ethernet for his fellow members of Chapter 24 in Madison, Wis. Members learned how to optimally configure "wi-fi" equipment and use security with simple tools and techniques. Chapter 105 in Houston, Texas, invited Andrew Mulrooney of Com Lab and Tyler Callis of SCMS to



Chapter 22, Central New York, meets on the third Wednesday of the month for an interesting topic or guest speaker.

demonstrate the Davicom Mac remote control. Sixteen members and guests attended the meeting on August 8th. Facility tours are always popular meetings and Chapter 36 in San Diego, Calif. held their July 19th meeting at Broadcast Microwave Services. The meeting included a showing of new projects being worked on in the company's lab, including IP over digital ENG microwave. Up in Seattle, Wash., Chapter 16 had

Cedric Taylor from Mackay Communications in on June 7th to talk about broadcast remote pickup technology. The presentation included a demonstration of equipment. Down the coast in Portland, Ore., Chapter 124 had

Christian Holbrook of WireCAD in on August 8th to talk about their design software. As is typically done by the three chapters in Oregon, Christian moved further down the coast and repeated his program in Eugene at the Chapter 76 meeting on August 9th and again in Medford for Chapter 141 on August 10th. Chapter 111 in Huntsville, Ala., brought in Marshall Graphics on August 1st to show their Facilis TerraBlock shared storage

system that works with both Avid and Apple editing systems.

Many chapters this summer have hosted the "Taste of NAB" road show presented by Larry Bloomfield. One of those was Chapter 122 in Youngstown, Ohio, which hosted the program on August 9th. "The Taste" exposes attendees to radio and TV equipment from 12 or more manufactur-

ers. Larry plans another cross-country road show for next year. Jon Bennett, chairman of Chapter 60 in Richmond, Va., provided the meeting program for his chapter on August 17th with the topic, "Gotcha's of IBOC." The program covered the various scenarios of IBOC implementation with lots of interaction and discussion by the members present.

The summer time is also a great time to get outdoors and fire up the grill. Many chapters hold an annual picnic, some of which include spouses and children. Chapter 91 in Lansing, Mich. held its annual "Burger Bash" on July 19th at WLNS-TV. Others hold theirs in parks and a few at mountain-top transmitter sites.

These have been just a small sampling of meetings held since June 1st. If you'd like to get some more ideas, visit the websites of SBE chapters. They typically will have their meeting information posted there. There are links from the SBE National website to all SBE chapters which have websites. Go to http://www.sbe.org/Chapters_by_State.php. ●



In January, Ken McDuff presented at the Chapter 118, Montgomery, Ala. meeting held at noon at Ryan's Steakhouse.

For all those who make
a broadcast happen.



Thomson Broadcast & Multimedia
is honored to sponsor the
SBE National Awards Reception.
For information on Grass Valley Broadcast solutions
visit: www.thomson-grassvalley.com



Are you connecting with your customers?

Advertise with SBE!

Contact Pollyanna Bayman
(317) 846-9000 or pbayman@sbe.org

**What's the fastest way
to join SBE?**

**Tell your friends &
colleagues it's at**

www.sbe.org

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

Oldcastle Precast, Inc.



— PRECAST CONCRETE SHELTERS —

- ☑ Speed of Deployment
- ☑ Flexible Design ☑ Expandable

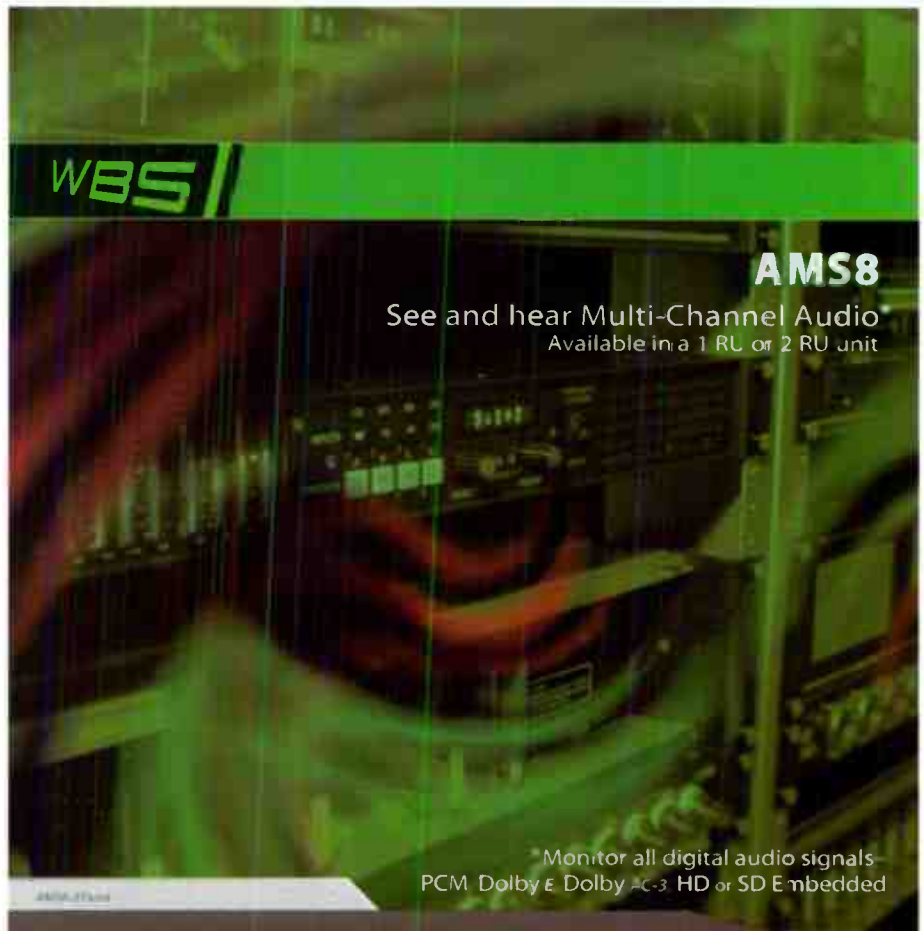
— FULL TURNKEY SERVICES —

- ☑ Program Management
- ☑ Real Estate
- ☑ Design • Engineering • Permitting
 - ☑ Site Development
 - ☑ Building Construction
 - ☑ Equipment Integration
 - ☑ Continuing Services
 - ☑ Tenant Improvements

1-317-569-9949



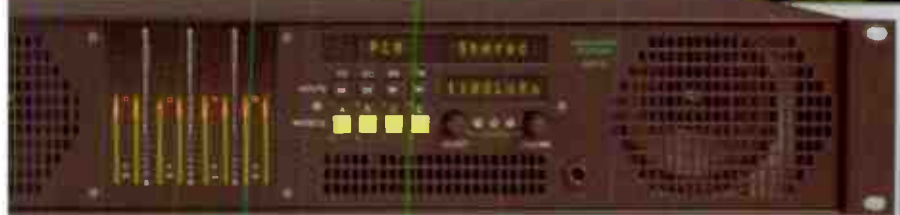
Oldcastle
strength you can count on



AMS8

See and hear Multi-Channel Audio
Available in a 1 RU or 2 RU unit

Monitor all digital audio signals—
PCM, Dolby E, Dolby AC-3, HD or SD Embedded



Features Include:
Proportional Mix Down, Global Level Control, Digital and Analog Outputs,
Dolby Volt-over Capability, Four Presets, Simultaneous VU/PFM Displays, One Rack Unit of Space



ward-beck systems

455 Milner Ave., Unit 10 416.335.5999
Toronto, ON, Canada 860.771.2556
M1B 2K4 ward-beck.com

Web Toolkit: Coming Soon to a Chapter Near You

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

With the growing popularity of websites and Internet communication, SBE wants to make it a little easier for new chapters to come up with ideas for their specific chapter websites. At the Strategic Planning meeting in Kansas City, Mo., July 8, 2006, one of the 250+ ideas brainstormed was just that, a Web Toolkit.

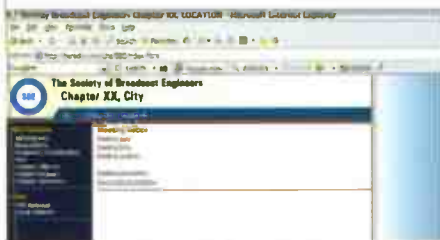
Now, individual chapters have an easy-to-use tool to build their own sites. President, Chris Scherer, CPBE, CBNT, developed the standard HTML web template to help your chapter create a professional, informative website.

Each chapter is not required to have a web-

site, but if it chooses to do so, the chapter is responsible for getting a domain name in place, web hosting, content, and maintenance of their site. Remember, since each individual SBE chapter is its own entity, the web template is a tool that SBE National provides, and is not a requirement.

Broadcast.net has provided chapters with space to host their sites and provides a URL such as www.broadcast.net/~sbe1, where the chapter number is used. Some chapters use a chapter member's company to host the site and add "/sbe" to the hosting domain. Other chapters have registered a unique domain such as www.sbe22.org.

The Web Toolkit is modeled after the national website and has the current SBE logos in color and black and white to use for chapter websites, mailings and business cards of individual members. Specific instructions on when and how to use the SBE logos and



The sample HTML Web template, can be used as a guide for chapters to design their individual chapter websites.




The Web Toolkit will be conveniently linked to www.sbe.org and house important information, such as when to use the SBE logo and other identity branding.


official name will also be noted there. Content ideas are listed, such as meeting information, officers, e-newsletters, and ways to contact members and the webmaster.

The national office will launch this web toolkit in the coming month, so keep your browser pointed to www.sbe.org for the latest updates. If you have any questions about proper logos to use for your chapter website, or the Web Toolkit, contact Pollyanna D. Bayman at the national office at 317-846-9000 or e-mail playman@sbe.org.


BUY OR RENT OUR COFDM PRODUCTS



Portable High-power Transmitter (RFX-PHT)




ENG Package (RFX-ENG) transmitter, amplifier, controller



6-Way Diversity Receiver (RFX-RMR-X6)


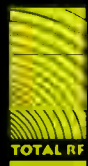
BECAUSE EVERY SHOT COUNTS



High Definition with Camera Control (RFX-HD-CMT)

2 GHz RELOCATION

Choose RF Central as your preferred equipment vendor for 2 GHz BAS Relocation. Call us at 1-717-249-4900 or go online at www.rfcentral.com

Finally,



some good news for Broadcasters

Mackay Communications is a worldwide turnkey satellite communications provider

Cost effective remote broadcast solutions

Remote reporting solutions

Satellite communications solutions for remote voice and data applications



Find out how Mackay can reduce your remote broadcasting costs
Contact Mackay Communications, Inc. at 1 - 8 7 7 - 4 M A C K A Y



... is an authorized distributor for Inmarsat, Globalstar, Indium, Thuraya, Nera, Thrane and Thrane and VSAT satellite equipment and airtime services.

2 GHz BAS Relocation

**We're ready
when you are ...**

www.mrcbroadcast.com

MICROWAVE RADIO
COMMUNICATIONS



In the Circle...

a snapshot of an SBE Member

W. David Johnson, CBT

Satellite Truck Operator /
Maintenance Technician
WBNS-TV and the Ohio
News Network
Senior Member
SBE Chapter 52, Central
Ohio
Joined SBE in 1980



Best known for: I was the
"AV guy" for CompuServe for 17 years.

Picture here: Last year I was in Georgetown, K.Y. for a pre-season scrimmage. The "Ben-Gals" (Bengals Cheerleaders) were interested in my satellite truck. I'm the one with the hat. (Even my wife likes the picture!)

Focal Point: While I appreciate all of SBE's services, Certification is most important to me. When I was laid off four years ago, my certification was most instrumental in opening doors for me. I had never planned to get certified, but when I ran for national SBE board of directors, certification was required. Glad now that I did it!

Getting Started: My dad had been a radioman in the Air Force and I grew up with a reel to reel in the house. I always had an interest in technology. I became interested in broadcasting in junior high school when, like many others my age, I would hide a transistor radio under my pillow at night and DX.

Sphere of Influence: Chris Stewart, now with Agilent, worked with me early on when I was considering engineering (I was already working in radio). Chris was chief engineer of a station at 18. I still have the study guides he gave me. Dave Palmer took me to my first SBE meeting. I joined after just one meeting.

When I'm not working... You'll probably find me bicycling. I've ridden as far as 200 miles in two days! I have 5 bikes ranging from a mountain bike to a carbon fiber touring bike to a tandem. My wife and I take a week long bike tour on the tandem every year.

You may not know... While I was laid off, I worked as a substitute teacher...kindergarten to high school. After dealing with a third grade class, news directors are not scary.

Favorite Gadget: Right now, my favorite gadget is my little MP3 player. I take it everywhere.

Your Best Move!

Make ERI Part of Your Broadcast Strategy

- Antennas
- Filters and Combining Systems
- Transmission Line and RF Components
- Broadcast Towers and Structural Products



ELECTRONICS RESEARCH, INC. ERI

Your Single Source for Broadcast Solutions™
Call 877 ERI-LINE • Visit www.eriinc.com

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



Hertz offers discounts to SBE members on rental car rates. For more information or to use the discount, contact Hertz at (800) 654-2210 or www.hertz.com.

Hertz

RESUME Bank

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

WHO CAN WE HIRE
FOR THAT
TECHNICAL POSITION?

Where can I find a
good job in
broadcasting?

Jobs ONLINE

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

NATIONAL *from page 1*

the market duties as Director of Engineering in Montgomery, Ala. The SBE Educator of the Year award went to Gary Sgrignoli, who has become very well known among broadcast engineers for his seminar on 8-VSB technology, which he has presented across the country for several years. Sgrignoli is from the Chicago area.

Ten chapters and one member were recognized in twelve additional award categories. The individual and chapter awards presented recognized accomplishments achieved during 2005.

Best Technical Article, Book or Program by an SBE Member:

John Battison, P.E., CPBE

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 C. Smith, CPBE

Best Chapter Website:

Chapter 54, Hampton Roads, Va.

Webmaster: Ted Hand, CPBE, 8-VSB

Most Certified Chapter (Class A):

Chapter 117, Palouse-Clearwater, Idaho

Certification Chairman: Dave Brawdy, CPBE

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, CPBE, CSTE, CBNT

Highest Member Attendance (Class A):

Chapter 81, Grand Junction, Colo.

Chapter Chairman: Bill Frost, CSRE

Highest Member Attendance (Class B):

Chapter 103, Nashville, Tenn.

Chapter Chairman: Ted K. Randall, CBNT

Another highlight of the National Awards Dinner was the keynote presentation of David Sumner, CEO and Executive Vice President of the American Radio Relay League (ARRL). Mr. Sumner gave an enlightening presentation about the technology that amateur radio operators are using today, the spectrum issue they face and the good work they do in times of disaster and emergency.

The Annual Membership Meeting was also held during the SBE National Meeting. Besides President Scherer, the other three incumbent officers were also inducted for a second one-year term. They include Vice President, Clay Freinwald, CPBE; Secretary, Vincent A. Lopez, CEV, CBNT; and Treasurer, Barry Thomas, CPBE, CBNT.

Six directors were elected to serve two-year terms. They are Ralph Beaver, CBT; James T. Bernier, Jr., CPBE, CBNT; Keith M. Kintner,

CPBE, CBNT; Thomas R. Ray III, CPBE; Christopher D. Tarr, CBRE, CBT, CBNT; and Larry J. Wilkins, CPBE, AMD, CBNT. Scherer recognized the members of the 2005-2006 Board of Directors with a certificate and made special mention of Robert "RJ" Russell, CSTE, CBNT, whose term of service had ended.

Two other recognitions were made during the meeting including recognition of two chapters for their participation in the 2006 Membership Drive. Chapter 117 of Palouse-Clearwater, Idaho and Chapter 80 of Fox Valley, Wis. both received Golden Recruiter Awards. Neal Sitrer, of Chapter 105 in Houston, Texas, was recognized as the Grand Prize winner of the 2006 SBE Membership Drive along with the new member he recruited, David E. Rodriguez, also of Houston, Texas.

The local chapter host of the National Meeting, Chapter 22 of Central New York, was recognized for its work and also for the production of a great regional event. Chapter Chairman, Francis Fasuyi, CPBE, and Convention Chairman, Tom McNicholl, CBTE, were recognized for their leadership.

Many of the events of the 2005 SBE National Meeting couldn't have been possible without the support of several SBE Sustaining Members which provided sponsorship support. Our thanks to Microwave Radio Communications, which sponsored the National Awards Dinner; Thomson Broadcast & Media Solutions, which served as a major sponsor of the reception that preceded the dinner, along with host, SBE Chapter 22. Finally, thanks to the Scala Division of Kathrein, Inc., which sponsored the annual Fellows Breakfast for the 10th consecutive year.

Look for a special photo section featuring the 2006 National Meeting in the December issue of *The Signal*. ●

Leader-Skills Scheduled for 2007

Once again, Leader-Skills, the seminar which has trained over 1,300 engineers in the art of leadership is coming to Indianapolis in 2007. Course I will be held June 5-7, and Course II is scheduled for August 7-9. The location is to be determined. Richard D. Cupka, Sr. will be the instructor for his 42nd year of the course. The seminar, which used to be a five day jam-packed, shed-your-skin and open up kind of class, was later broken down to two courses, three days each. Having courses I & II allowed for more digestion of the material, time to apply it at work, and a chance to review it during the

second course, often held two months later, so the value of the lessons could "stay with you."

Some comments about the course demonstrate that many people did have to shed their skin and face the facts about themselves.

"One of the most down-to-earth and realistic, eye opening, close-to-home presentations I've ever attended."

"Eye opening experience."

"Very revealing."

"I learned more about myself in three days than I have in the last 50 years."

"Absolutely 'life' changing experience. Totally

insightful and educational."

Registration for Course I will begin December 1, 2006. This year, the class filled up quickly. Make plans to attend this insightful course for engineers planning to enter or who are currently in the management field. The course cost is to be announced, however, the cost of each of the three day courses in 2006 was \$545. Keep an eye out for updates on Leader-Skills 2007 in upcoming issues of *The Signal* and on our website at www.sbe.org. For more information, contact Pollyanna D. Bayman at (317) 846-9000 or pbayman@sbe.org. ●

Impact of SBE Filings on Members

BY **Dane E. Erickson, P.E., CSRTe, 8-VSB, CBNT**
Chairman, SBE FCC Liaison Committee

In the previous issue of the Signal, I explained how SBE determines which FCC issues should be commented on, and how those comments are created. This issue will address how some of those comments, in this writer's opinion, have impacted SBE members.

Since I became the Chairman of the SBE FCC Liaison Committee in 1988, SBE has filed about 150 comments. Most were formal comments, reply comments, or petitions for reconsideration to FCC rulemakings, but there were also letters to FCC officials, to the FCC Chairman, and to the House Subcommittee on Telecommunications and the Internet, which has oversight of the FCC. Some direct lobbying of the Congress was also involved; for example, in 1991 SBE was successful in having a bill introduced that would have required that at least one FCC Commissioner be an engineer. This was H.R. 3501, introduced by then Congressman Don Ritter, who holds a Doctorate in Engineering from M.I.T. H.R. 3501 was introduced in the 102nd Congress, and had the title "Federal Communications Commission Engineering Sciences Qualification Act of 1991." The bill intentionally broadly defined an "engineer" as any person holding a four-year or higher engineering degree from any accredited school; or any person holding senior or fellow status in a nationally recognized engineering society; or any person who is a Registered Professional Engineer (PE). Any engineering discipline would qualify; the goal was to ensure that at least one FCC Commissioner had his or her own technical background. Unfortunately, the bill died in Committee at the end of the 102nd Congress, although with sixteen sponsors by that time.

So, you may be asking, how did that attempt benefit SBE members? Only indirectly, by trying to ensure that FCC decisions affecting broadcast stations, and especially Broadcast Auxiliary Service (BAS) spectrum, are based on sound engineering principles, and do not succumb to political pressures or wishful thinking. Remember, if a BAS spectrum issue gets poorly handled by either the FCC or Congress, it is the broadcast engineer in the trenches who has to still make it work. That means *you*.

Okay, so how about some more concrete

examples? Let's start with Office of the Managing Director Docket 94-19, concerning User Fees. In that rulemaking the FCC proposed assessing a one-time \$105 fee to holders of FCC lifetime operator licenses or permits; for example, the lifetime General Radiotelephone Operators License (formerly the First Class Radiotelephone Operators license), which many SBE members hold. Largely as a result of the SBE comments opposing this one-time fee, the Commission ended up not adopting the proposal. So that was a \$105 savings to many SBE members.

Next I would claim success by SBE in steering the FCC to a practical, workable solution for transitioning the 2 GHz TV BAS band from 1,990–2,110 MHz to 2,025–2,110 MHz. If you are an SBE member who works at a TV station, this most likely affects you. Remember the "dark" days, when the Commission proposed an unworkable transition plan, where only the top-100 markets would get transitioned? The SBE comments were responsible for convincing the FCC that this would cause a larger-market/smaller-market spectrum "train wreck," when the ENG truck of a larger-market station, already transitioned to the new band plan, had to cover news in the vicinity of a smaller-market station, still using the old band plan. Or remember the plan for two transitions: Phase I with six 14.5-MHz wide channels and one 15-MHz channel, and then a do-it-all-over-again Phase II, with six 12.1-MHz wide channels and one 12.4-MHz wide channel? Instead, and as a direct result of SBE filings, broadcasters got a single, nation-wide transition, with seven equal-bandwidth 12-MHz wide channels, plus the forty 25-kHz wide Data Return Link (DRL) channels (in two 0.5-MHz bands, at the lower and upper edges of the new 2,025–2,110 MHz TV BAS band). And, it now appears that it may be possible to use the DRL channels for Interruptible Fold Back (IFB) applications, in addition to automatic transmitter power control (ATPC) for transmitters in ENG platforms.

Another clear success as the result of SBE filings was convincing the FCC to allow the routine licensing of microwave studio-to-transmitter (STL) links using (gasp!) digital modulation; this is a boon to both Aural STLs used by radio stations, and to TV STLs used by TV stations (RM-9418, which became ET Docket 01-75). SBE was also successful in getting the FCC to abolish the 25 dB "step function" penalty of short microwave paths. Instead, the

Rules now apply a graceful transition for power cut-backs applying to 7 GHz paths shorter than 17 km, and to 13 GHz paths shorter than 5 km.

Another SBE success area is the creation of an "understanding" with OET that experimental licenses and experimental STAs authorizing operation on broadcast or BAS frequencies have an SBE frequency coordination clause, requiring the experimental licensee to contact the local SBE frequency coordinator before commencing experimental operations. While all experimental authorizations are issued on a "no interference basis" (NIB) to licensed stations, this doesn't mean much if the station that is licensed and entitled to protection can't identify or locate the offending experimental operation. Requiring an experimental licensee to contact the local SBE frequency coordinator is a minimal burden, and letting the local SBE frequency coordinator know of experimental operation, and providing a "hot line" telephone number to call in the event of interference, can save radio and TV station engineering staff (that's you, again) much grief. It also makes the job of the FCC's Enforcement Bureau easier, too.

Now things get a bit more nebulous, because they involve changes supported by other entities in addition to SBE, or opposed by other entities in addition to SBE (most often, MSTV and NAB). But, I believe that the SBE comments have a significant role in making needed changes happen, and preventing some that are less than well thought out. For example, keeping MSS from gaining access to the 455–456 MHz remote pickup (RPU) band for feeder and service uplinks (IC Docket 94-31). The proposed sharing of the 2 GHz TV BAS band with Wireless Fixed Access Local Loop Services (WFA-LL), in RM-8837. Oh, and remember the crazy proposal to use 89.7 MHz for an Emergency Data Radio System (ERDS)? SBE comments helped defeat that interference-causing scheme.

Finally, there are three issues where SBE is currently involved in protecting BAS spectrum, and for which the final chapters are yet to be written: DoD uplinks at 2 GHz, grandfathered TV BAS Channel A10 (2,483.5–2,500 MHz)



versus MSS Ancillary Terrestrial Component (ATC) base stations, and the proposal by Clarity Media System for Part 78 CARS "Trucker TV" base stations at 2 GHz, transmitting omnidirectionally and using 99% of the 2 GHz TV BAS band. Clarity's parent, Flying J, has over 250 truck stops in the U.S., and has indicated it eventually wants to equip all of them with Trucker TV base stations. And, if Clarity is successful in obtaining its multiple waiver requests, how could the Commission then not grant similar waivers to competing truck stop operators? It would be a sad irony if the 2 GHz

TV BAS band, freshly converted to digital operations with 12-MHz wide channels, got "trashed" by a combination of Trucker TV base stations and super high power DoD uplinks.

In summary, SBE is the only organization dedicated to the protection of BAS spectrum. And BAS spectrum is the lifeblood of broadcast operations. That, in turn, means that every SBE member who works at a radio or TV station, or in an industry serving broadcasters, has a stake in the work of the SBE FCC Liaison Committee. ●

What's the fastest way to join SBE?

Tell your friends & colleagues it's at

www.sbe.org

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

SECURITY FOR YOUR FINANCIAL FUTURE

The SBE Term Life Plan can provide the financial security your family needs. This life insurance helps make sure they'll be able to meet current expenses – such as mortgage and car payments – as well as future expenses, such as college tuition.

VALUABLE BENEFITS

- Up to \$660,000 of Coverage.
- Affordable Group Rates.
- No Exclusions! – After coverage is validly in force for two years, benefits are payable for death from any cause, at any time, anywhere in the world.
- Portable Coverage.
- Premiums Can Be Waived If You're Disabled
- Living Benefit Option ("Accelerated Death Benefit") – Apply for a portion of your benefits if you qualify as being terminally ill. (Subject to certain policy restrictions and limitations; not available to Mass. residents.)

For more information, call (800) 424-9883

The SBE Term Life Plan is administered by Marsh Affinity Group Services, a service of Seabury and Smith, and underwritten by New York Life Insurance Company, 51 Madison Avenue, New York, NY 10010 on Policy Form GMR.

John C. Breckenridge Jr.
President

Seacomm Erectors, Inc.

*Complete Tower Erection • Inspection • Maintenance
24 Hour Emergency Service*

P.O. Box 1740
Sultan WA 98294-1740
www.seacomm.com

Phone: (360) 793-6564
Fax: (360) 793-4402
seacomm@premier1.net

SBE Membership and Certification Pins Order Form

Name: _____
Address: _____
City: _____ State: _____ Zip: _____
Daytime Phone: _____



SBE Membership pin
Qty: _____

Certified Professional Broadcast Engineer® (CPBE®)
Qty: _____

Membership #: _____ Certification #: _____

Please send me _____ pin(s) for only \$12 each. \$ _____

Shipping & Handling \$1 each (\$3 minimum charge) \$ _____

TOTAL \$ _____

Payment: Check Visa MasterCard American Express

Credit Card #: _____ Exp. Date: _____ ^SC

Name on Card (print and signature) _____

Billing Address (if different) _____

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

Order online: www.sbe.org/store_merchandise.php

Mail to: SBE • 9102 North Meridian Street, Suite 150 • Indianapolis, IN 46260

Fax to: (317)-846-9120

Pins shown at 50% actual size.

	Certified Broadcast Technologist® (CBT) Qty: _____
	Certified Broadcast Networking Technologist® (CBNT®) Qty: _____
	Certified Radio Operator® (CRO) Qty: _____
	Certified Audio Engineer (CEA®) Qty: _____
	Certified Broadcast Radio Engineer (CBRE®) Qty: _____
	Certified Senior Broadcast Radio Engineer (CSRE®) Qty: _____
	Certified Television Operator® (CTO®) Qty: _____
	Certified Video Engineer® (CEV®) Qty: _____
	Certified Broadcast Television Engineer (CBTE®) Qty: _____
	Certified Senior Broadcast Television Engineer (CSTE®) Qty: _____

SBE Accredited Frequency Coordinators

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

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

Accredited July 22, 2006 through Sept., 14 2006

Coordinator	Location	Affiliation
Eddie Durham	Callaway, VA	Chapter 78
Robert Griffin	San Luis Obispo, CA	

Lesson No.1

**Don't
Travel
Down the
Wrong
Path**



Here are insurance programs designed to protect members and their businesses.

PROINSURE – Protection against liability for errors and omissions is one of the principal benefits. Not only does it protect you and your firm, but it also fulfills the proof-of-coverage requirements that are becoming prevalent to obtain contracts.



For more information, contact
MIMS International • 800-899-1399
e-mail: mims@mimsintl.com



Apply SBE
certifications
toward
a college
degree!

excelsior.edu

Through a unique educational partnership with SBE, Excelsior College, accredited world leader in distance education, offers college credit for select SBE certifications so you can earn the college degree you need in Electronics Instrumentation Technologies or Electronic Engineering Technology. To learn more: 888-647-2388 (press 2-7 at the prompt).

EXCELSIOR COLLEGE

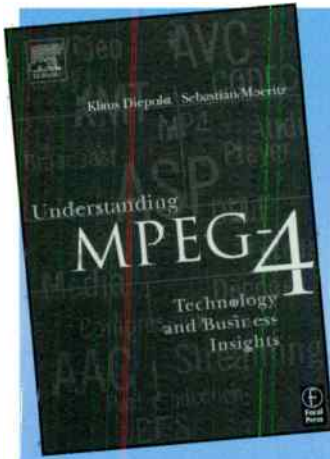
Contract & Consulting Engineer Resources

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

Contract & Consulting Engineer Services - For SBE members involved in contract and/or consulting engineering work, SBE provides two services designed to aid you in your work. A sample contract is available at no charge and covers most of the issues that concern contract engineers. In addition, contract and consulting engineers can be listed, for a small fee, in the annual Membership Directory & Buyers' Guide and on the SBE website.



SPOTLIGHT:

Understanding MPEG 4, Technology and Business Insights

SEBASTIAN MOERITZ AND KLAUS DIEPOLD

This book offers an up-to-date introduction to this interactive and multimedia compression standard (including MPEG-4 Part 10), with real examples and information as to how and where this technology should be used. It describes video and audio creation, production, distribution, reception and consumption environment and explains everything you need to know in jargon-free language. **Pub. 2004**

328 pages
Item #F-79

Member Price: \$35.96
Non-Member Price \$39.95

The Electronics Handbook, 2nd Ed.

JERRY WHITAKER, CPBE

This updated edition provides a comprehensive reference to the key concepts, models and equations necessary to analyze, design and predict the behavior of complex electrical devices, circuits, instruments and systems. It encompasses the entire electronics field, from classical devices and circuits to emerging technologies and applications. It not only covers the engineering aspects, but also includes sections on reliability, safety and engineering management as well. **Pub. 2005**

2,640 pages
Item #C-11

Member Price: \$119.96
Non-Member Price: \$149.95

Radio Chief Operator's Handbook, 2nd Ed.

JACK LAYTON, CPBE

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

71 pages
Item #S-08

Member Price: \$39
Non-Member Price: \$49

Communications Systems, 4th Ed.

A. BRUCE CARLSON, PAUL CRILLY, JANET RUTLEDGE

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

864 pages
Item #M-61

Member Price: \$100.00
Non-Member Price: \$125.00

Television Operator's Certification Handbook, 6th Ed.

FRED BAUMGARTNER, CPBE, CBNT,
AND DODG GARLINGER, CPBE, CBNT

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

68 pages
Item #S-06

Member & Non-Member Price:
\$42

Certification Handbook for Radio Operators

RON BARTLEBAUGH, CBNT

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

72 pages
Item #S-09

Member & Non-Member Price:
\$42

Books You Can Use!

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

Order Now! Fax this form (with credit card payment) to: (317) 846-9120

Prepayment is required on all orders. Shipping is calculated per item. Allow 2-4 weeks for processing and shipping within the continental U.S. Please provide a street address as all orders are shipped via ground delivery service. For express shipping or shipping outside the U.S., please contact SBE at sbestore@sbe.org or call (317) 846-9000. Credit card orders may also be called in or made online at the SBE website. Checks should be made payable to "SBE" and mailed to: SBE Bookstore, 9102 N. Meridian St., Ste. 150, Indianapolis, IN 46260.

TITLE	ITEM #	BOOK \$	S/H \$ (per item)	QUANTITY	TOTAL
				TOTAL ORDER	

SHIP TO: _____ Address: _____ _____ City/State/Zip: _____ Daytime Phone: _____ E-mail: _____	PAYMENT METHOD: <input type="checkbox"/> Check <input type="checkbox"/> Visa <input type="checkbox"/> MasterCard <input type="checkbox"/> American Express Credit Card Number: _____ Exp. Date: _____ ^Security Code: _____ Card Holder's Signature: _____ Print Card Holder's Name: _____ Billing Address (if different): _____
--	--

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



CERTpreview

Certification Sample Test Software

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

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

\$27 per test
add \$3 per CD*
for shipping/handling
*Multiple tests can be purchased on one CD

- Certified Broadcast Technologist (CBT)
- Certified Audio Engineer (CEA)
- Certified Broadcast Radio Engineer (CBRE)
- Certified Broadcast Television Engineer (CBTE)
- Certified Broadcast Networking Technologist (CBNT)
- Certified Video Engineer (CEV)
- Certified Senior Broadcast Radio Engineer (CSRE)
- Certified Senior Broadcast Television Engineer (CSTE)

Name: _____

Address: _____

City/State/Zip: _____

Daytime Phone: _____

E-Mail: _____

Test(s) Amount: \$ _____ Shipping/Handling: \$ _____

Grand Total \$ _____

PAYMENT METHOD:

- Check (payable to SBE)
- Visa
- MC
- AmEx

Credit Card #: _____ Exp. Date: _____

Card Holder's Signature: _____

Print Card Holder's name: _____

FAX OR MAIL ORDER TO:

SBE • 9102 N. Meridian St., Suite 150 • Indianapolis, IN 46260
Fax: (317) 846-9120 • Questions? (317) 846-9000

New SBE Store Item!



Slimlight Screwdriver Kit

Price USD: \$10.00*

Slim, compact precision kit with all-metal screwdrivers (two phillips; two flathead) and flashlight that automatically lights up when rotated into open position. Translucent blue case, with SBE logo imprinted in white, opens to raise drivers into position for easy removal. Easel on back props up kit for hands-free light and tool access. Item #632

To order, call (317) 846-9000

*Prices include shipping & handling

GROUP SAVINGS PLUS®

How will you spend your savings?

Auto and Home Insurance Savings for SBE Members®

For a free, no-obligation rate quote, please call **1.800.524.9400.**



Discounts, credits and program features are available where state laws and regulations allow and may vary by state. Certain discounts apply to specific coverages only. To the extent permitted by law, applicants are individually underwritten; not all applicants may qualify. Coverage provided and underwritten by Liberty Mutual Insurance Company and its affiliates, 175 Berkeley Street, Boston, MA. © 2006 Liberty Mutual Insurance Company. All Rights Reserved.



Earn Your Degree at Home!

Cleveland Institute of Electronics offers nationally accredited distance learning programs in electronics and computer technology!

Partial list programs offered:

- A.A.S. in Computer Technology
- A.A.S. in Electronic Engineering
- Electronics Tech with FCC Prep.
- Broadcast Engineering
- Wireless Communications

www.cie-wc.edu

Visit our Web Site for course descriptions, tuition prices or to request a **FREE Course Catalog.**

www.ciebookstore.com

Visit CIE's bookstore for self-paced training courses starting under \$50. (Videos, DVDs, Software, Books)

Or call **1-800-243-6446**
1776 E. 17th St., Cleveland, OH 44114



John M. Lyons, CPBE will receive the 2006 Radio World Excellence in Engineering Award from the editors of Radio World, the newspaper for radio managers and engineers. Lyons is assistant vice president and director of broadcast communications for The Durst Organization in New York. Recipients of the award represent the highest ideals of the U.S. radio broadcast engineering profession and reflect those ideals through contributions to the industry.

Barry Thomas, CPBE, CBNT has been appointed to Vice President / Engineering of the radio division of Lincoln Financial Media Company. Thomas comes to Lincoln Financial Media from Westwood One Radio Networks, where he served as Vice President of Engineering for three years. He also has held engineering and managerial positions with StratosAudio, Thomas Media System & Design, Comedy World Radio Network, AMFM/Chancellor Media, OmniAmerica Group of Cleveland and Ardman Broadcasting of Ohio. Thomas currently serves as national treasurer to the Society of Broadcast Engineers.

Dennis Eversoll, CPBE, CBNT is the new Regional Engineer for Cumulus Broadcasting for the following markets: Kansas City, Topeka, Columbia, Jefferson City, Stockton, Faribault / Owatonna, Rochester, and Sioux Falls. He previously worked for Cumulus in a Regional position based in Savannah up until 1999 when he left to join Computer Concepts automation.

Jim Turvaille CSRE, CBNT has recently accepted a new position as Corporate Expansion Specialist for WAY-FM Media Group in their Corporate Offices in Colorado Springs CO where he will coordinate expansion projects nationwide and deal in all FCC matters for WMG. Jim has served as Network Director of Engineering for WAY-FM in their Nashville Network Operations Center since the fall of 1998.

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.

SBE would like to welcome its newest members:

NEW MEMBERS

- Dan C. Allmann - San Diego, CA
- Michael S. Baker - Panama City, FL
- Gerry Barnes - Louisville, TN
- Kevin S. Beckley - West Palm Beach, FL
- Amber Bradshaw - Kansas City, MO
- Brent W. Caffey - Tulsa, OK
- Michael T. Carroll - Montgomery, AL
- Kenneth C. Cash - Zanesville, OH
- Barry C. Chow - Batavia, NY
- Peter Claffey - Lansdale, PA
- Christopher Connolly - Denver, CO
- David W. Denton - Tampa, FL
- Sanders J Falgout - Terrytown, LA
- Douglas R. Frederiksen - Marlow, OK
- Brian Gieryk - Apple Valley, CA
- Bryan K. Grover - Lancaster, OH
- Carlos E. Guandalini - Falls Church, VA
- Greg Gutierrez - Arlington, VA
- Thomas R. Haugen - Portland, OR
- Eric C. Jingst - Perrysburg, OH
- Darryl R. Jones - FPO, AE
- Charles D. Karbginsky - Lake Orion, MI
- David Leicht - Saugus, CA
- Steve Looney - Lincoln, NE
- Harry S. Lovell - Colonial Beach, VA
- William N. MacLeod - Jacksonville, FL
- Ben P. Mankin - Franklin, TN
- James A. McGlon - Tampa, FL
- Steven D. Miller - Jackson, MS
- Rafal Monzon - San Antonio, TX
- Ronald F. Moore - Las Vegas, NV
- Scott L. Nielson - Kaysville, UT
- John A. Ovalle - Orangevale, CA
- Rodney D. Paulson - Milwaukee, WI
- Shahid S. Rathod - Karachi, Sindh, Pakistan
- Matthew C. Rockwell - Madison, WI
- Gary C. Rogers - Marietta, GA
- Francis I. Sandico - Pittsburg, CA
- Karl L. Schoning - Norcross, GA
- Bhupinder K. Sharma - Falls Church, VA
- Rick Shepherd - Bakersfield, CA
- Alan W. Simpson - Naylor, MO
- Bradley J. Steele - Tulsa, OK
- Scott A. Stremiecki - West Lafayette, IN
- Eric C. Weaver - Palo Alto, CA
- Brian R. Williams - Ranchos de Taos, NM

NEW ASSOCIATE MEMBERS

- Robert C. Kingsley - Wichita, KS
- Patrick Curran - Frankfort, KY
- Anthony E. Holbrook - Plainwell, MI

- Jeffrey S. Ware - Northbrook, IL
- David M. Thimsen - Boise, ID
- Christopher P. Hobeck - Farmville, VA
- Eric B. Walker - Tulsa, OK

NEW STUDENT MEMBERS

- Doug Thompson - Naperville, IL
- Roger L. Wiseman - Glen Dale, WV

REINSTATED MEMBERS

- Frank J. Bolognino - Stamford, CT
- James A. Bremer - Redding, CA
- Donald A. Dobbs - Keller, TX
- Steve N. Garifo - Centreville, VA
- Christopher L. Girard - Cape Girardeau, MO
- Robert D. LaFore - Acworth, GA
- Henry W. Lam, Jr. - Houston, TX
- Allen E. Lane - Cape Girardeau, MO
- Frank A. Mengel - Eagle River, AK
- Schuyler C. Park - Margaret, AL
- Andrew W. Prouse - Salisbury, MD
- Dale H. Rochon - Columbia, MD
- Peter B. Sakowski - Mountaintop, PA
- John C. Tucker - Sachse, TX
- Brian D. Walsh - Sacramento, CA
- Lee A. Williams - Jean, NV

In Memorium



**HERBERT GODWIN
(BUCKY) STOVER III**
SALEM, VA.

May 26, 1957- August 3, 2006

*SBE Chapter 78 Chairman,
Certification Chairman,
and Frequency Coordinator*

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
Strain Srivastava
(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
LHF TV Broadcast Transmitters

AMERICAN TOWER CORPORATION • 2000
Peter A. Starke
(781) 461-6780
Broadcast Tower Development/
Construction/Management

ANITEK • 2005
Tina Richer
(224) 521-8425
Audio/Video Cable & Interconnect
Products

ANTON/BAUER INC. • 2004
Paul Dudeck
(203) 929-1100
Battery Solutions for ENG

AUDENAT-AZTEC INC. • 2000
Sophie Lion Poullain
(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

BELEN ELECTRONIC DIVISION • 1991
Kin Coates
(765) 983-5200
Wire and Cable

BROADCAST ELECTRONICS, INC. • 1978
Ray Miklius - Studio Products or
Tim Bealer - RF (217) 224-9600
Radio Equipment Manufacturer

**BROADCAST ENGINEERING MAGAZINE •
1984**
Bradley L. Dick
(913) 341-1300
Journal of the Broadcast Industry

**BROADCAST MICROWAVE SERVICES,
INC. • 1997**
Russell Murphy - East
or Jim Kubit - West
(540) 932-3660 or (805) 581-4566
or (800) 669-9667
Manufacturers, Transmitters,
Receivers, Antenna Systems

BROADCAST STORE (BCS) • 1997
David Neff
(818) 551-5858
New & Used ProVideo Gear

BROADCAST SUPPLY WORLDWIDE • 1986
Tom Roalivram
(800) 426-8434
Audio Broadcast Equipment
Supplier

BROADCASTERS GENERAL STORE • 2004
Buck Waters
(352) 622-7700
One Stop Broadcast Store

CANARE • 1991
Cheryl Moritz
(818) 365-2446
Audio/Video Interconnect Products

CANON USA, INC. • 1985
Gordon Tubbs
(201) 807-3300 or (800) 321-4388
Broadcast Lenses & Transmission
Equipment

CITRON CORP. • 1992
Carol Keane
(631) 845-2031
HD/SD Character Generators and MUX

CLARE WIRE & CABLE • 1991
Shane Collins
(800) 222-5348
Audio, Video & Remote Camera Cables

CMBE, INC. • 1999
Chip Morgan
(802) 758-5000
High Performance Broadcast
Engineering

**COAST TO COAST TOWER SERVICE, INC.
• 2001**
Mike Jackson
(972) 923-9504
Broadcast Tower & Antenna Specialist

COMET NORTH AMERICA • 2005
Steve Claterbaugh
(214) 235-6596
Capacitors, Variable & Fixed

COMEX 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) 733-9111
AM & FM BROADCAST TRANSMITTERS

CRISPIN CORPORATION • 2006
Brian Gleason
(919) 845-7744
Broadcast Automation Solutions

DATAWORLD • 1998
John T. Neff
(800) 368-5754
Coverage Maps and Services

DUALTEK CORPORATION • 2006
Doug Woelcher
(732) 991-2837
Obstruction Lighting, L.E.D. Based
Wire and Cable

DELECTIC COMMUNICATIONS • 1995
Jay S. Martin
(202) 655-4555
TV & FM Broadcast Products

DIGITAL ALERT SYSTEMS, LLC • 2005
Bruce Robertson
(520) 488-8667
IP Based EAS ENDEC

DISKSTREAM INCORPORATED • 2006
Jan Russell
(416) 750-8872 ext. 230
Under Monitor Tally Display Systems,
Monitor Walls, Signal Alarm Systems

DMT USA, INC. • 2003
Tom Newman
(856) 423-0010
Television Transmitters and
Translators

DSC LABORATORIES • 2002
Michael Wiegand or Susan Corley
(905) 673-3211
Test Charts & Illuminators

**DU TEER, LUNDIN & RACKLEY, INC. •
1985**
Jeff Reynolds (941) 329-6000
Consulting Engineers

DYMO CORPORATION • 2006
Mark Podesta
(860) 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, Satorn
Amps, TWTs

EGONCO • 1980
(800) 532-6626 or (530) 642-7573
New & Rebuilt Transmitting Tubes

EMCO SYSTEMS INC. • 2003
Don Baclus
(800) 362-6197
Digital Audio Automation & Delivery

**ENVIRONMENTAL TECHNOLOGY INC. •
1997**
John Cahill (800) 234-4239, ext. 229
Dehydrators, Deicing Sensor &
Controls for Broadcast/FM and
Satellite Antennas

ERI - ELECTRONICS RESEARCH • 1990
David White
(812) 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/HLS Vehicles

FULMON, INC. • 1986
Thom Calabro
(973) 633-5600
Broadcast & Communications
Products

GEPCO INTERNATIONAL, INC. • 1995
Ken Bernd
(847) 795-9555
Audio, Video Cable Products

GLOBALSTAR DATA CORPORATION • 2000
Bob Jones
(818) 701-7771, ext. 31
Data Storage Solutions Providers

GOOGLE INC. • 2005
Scott Bodgan
(949) 794-2002
SS32, Mastron, ASP Solutions

**HARRIS CORPORATION, BROADCAST
COMMUNICATIONS DIVISION • 1977**
Joe Mack (TV) or Chris Panell
(Radio) or Bob Duncan (Software)
(513) 459-3406 or (406) 556-0280
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)

HOLDROCK 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. GERBER, CBT • 1999
Manager, NFL Frequency
Organization Group

JOSEPH ELECTRONICS INC. • 2003
Yohay Hahamy
(847) 501-1584
Broadcasters One-Stop Supplier

KATHEN INC., SCALA DIVISION • 1985
Michael Wm. Bach or Mike Johnson
(541) 779-6500
Antennas for Broadcasting &
Communications

KPFF CONSULTING ENGINEERS • 2004
Madison Batt
(206) 926-0508
Tower Engineering, Inspections Design

**L-3 COMMUNICATIONS ELECTRON
DEVICES • 2003**
Steve Bleak
Direct - (800) 326-3561, ext. 229
Tubes, Power

LBA TECHNOLOGY, INC. • 2002
Jerry Brown
(252) 757-0279
AM/MW Antenna Equipment &
Systems

LEA INTERNATIONAL • 2004
Carol Rasser
(208) 762-6121
Power Quality Products & Services

LEADER INSTRUMENTS CORP. • 2002
George Gonos
(813) 600-1785
Electronic Test & Measuring
Equipment

LP TECHNOLOGIES, INC. • 2006
Samuel Lee
(316) 816-9696
Spectrum Analyzers

MARKET VIDEO SUPPLY • 2002
Tom Moretti (845) 246-3036
Audio, Video, Audio Visual
Broadcast Supply

**MAXELL 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

**MICRONET COMMUNICATIONS, INC. •
2005**
Jerry Arnes (972) 422-7200
Coordination Services / Frequency
Planning

**MICROWAVE FILTER COMPANY, INC. •
2003**
Sherry Bell
(315) 438-4700
Passive Electronic Filters

**MICROWAVE RADIO COMMUNICATIONS
• 1991**
Nadine Frchette (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 Amoscalo
(973) 839-1011, ext. 1197
Enclosures, Power, Accessories,
Furniture

MINIM DESIGN INC. • 2005
Jay Minkin (206) 250-7481
System Integration / Design /
Documentation

MONAWR • 1995
Jamie Silva
(800) 422-9961
Wire and Cable

MORROW TECHNOLOGIES, INC. • 2002
Tish Boyles
(727) 531-4000
Spectrum Analyzers

MOSLEY ASSOCIATES, INC. • 1977
Dave Chancy
(805) 968-9621
RF & TI STLs

**NATIONAL ASSOCIATION OF
BROADCASTERS • 1981**
(202) 429-5340
Industry Trade Association

NATIONAL FOOTBALL LEAGUE • 1999
Jay Gerber
Game Day Coordination Operations

NAUFEL MAINE, INC. • 2002
Gary Manteuffel
(207) 947-8200
Radio Broadcast Transmitter
Manufacturer

NEPAL ELECTRONICS • 2004
Madeline Torres
(800) 522-2253
Cable, Connectors, Cable Assemblies

NEURAL AUDIO • 2006
Mark Seigle
Surround Sound Technologies

**NORTHWEST TOWER ENGINEERING,
PLLC • 2003**
Steven Diamond, P.E.
(425) 258-4248
Tower Engineering, Structural
Analysis

NOTI LTD. • 2002
Ron Noti (505) 327-5646
Folded Unipole Antennas, Detune
Systems, Lightning Prevention

NUCOM, INC. • 1996
John Dulaney (908) 852-3700
Digital Microwave Transmission
Equipment

NVISION, INC. • 1997
Dong Butlerhagen (530) 265-1000
Routers, Master Control & Terminal
Equipment

OLDCAST PRECAST, INC. • 2006
Douglas Dornas (678) 371-8315
Precast Buildings/General
Construction/Program Management

OMT TECHNOLOGIES INC. • 2001
John Paley (888) 665-0501
Automation, Skimming/Logging
Software

ORAN • 1996
Steve Gordoni
(805) 497-4685
Broadcast Audio Products

**PANASONIC BROADCAST & DIGITAL
SYSTEMS COMPANY • 1985**
Tom Moore
(201) 392-6176
Professional Broadcast Equipment

PASTERNAK ENTERPRISES • 2001
Christine Hammond
(949) 261-1920
Coax & Fiber Products

PESA SWITCHING SYSTEMS, INC. • 1997
Robert McAlpine
(800) 328-1008
Routing Switcher Manufacturer

PHE & 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
(631) 499-5159
Automation, Routing &
Infrastructure

**PROPAGATION SYSTEMS, INC. (PSI) •
2005**
Doug Ross
(814) 472-5540
Quality Broadcast Antenna Systems

PROPHET SYSTEMS INNOVATIONS • 2003
John Gager (308) 284-3007
Audio and Video Content
Management

PROVIDEO SYSTEMS, INC. • 2000
Dave Goldsmith
(419) 874-2850
Sales, Consulting, Design &
Integration

PULSECOM • 2003
Stan Bailey
(630) 961-3253
Telco Broadband Audio
Transmission

**QUINTECH ELECTRONICS AND
COMMUNICATIONS INC. • 2002**
Richard E. Bush (724) 549-1412
RF Signal Management

**RADIAN COMMUNICATION SERVICES
INC. • 1986**
John McKay
(866) 4-RADIAN
Towers, Antennas, TV Transmitter
Installation

RDI • 2004
John Gatts
(928) 778-9678, ext. 111
Audio, Video, Control & Test
Equipment Manufacturer

RF CENTRAL, LLC • 2005
Jeff Winemiller
(717) 249-4900, ext. 222
Digital Wireless Microwave Equipment

RICHARDSON ELECTRONICS • 1987
Chris Chinchilla
(800) 348-5580
Power Grid Tubes

RICKLAND TOWERS • 2001
David Denton
(813) 286-4140, ext. 6872
Tower Owner/Management

ROHE & SCHWAB • 2003
Eddy Vanderkerken
(469) 713-5322
Broadcast Transmitters, Test &
Measurement

ROSCOR CORPORATION • 1998
Tom Voigt
(847) 299-8080
DTV System Integration

ROSS VIDEO LTD. • 2000
Burt Young (613) 652-4886
Manufacturer, Television Broadcast
Equipment

SCMS, INC. • 2000
Bob Cauthen
(800) 438-6040
Automation, Skimming/Logging
Software

SEACOM ERECTORS, INC. • 1997
John Breckenridge
(360) 793-6564
Tower/Antenna Erections

SEKORE, INC. • 2005
Jeff Murray
(800) 736-2673
Audio/Video Test Equipment

SHIRVE LABS • 1996
David Allen
(207) 647-3327 or 888-SHIVELY
FM Antennas & Combiners

SIGMA SVS • 2005
Jeff Wolter
(408) 350-7210
Integration, Support, Training

SMEL & WILCOX, INC. • 1995
John Shike
(818) 556-2616
Video Equipment Manufacturer

STARLESS LLC / DOTY-MOORE • 2004
Les Kutas
(215) 631-1313
Tower Engineering / Tower Service

SUNDANCE DIGITAL, INC. • 2004
Steve Krant
(972) 444-8442
Broadcast Automation Solutions

SUPERIOR BROADCAST PRODUCTS • 1999
Benny Springer
(800) 695-7919
Vacuum Tube and Solid State
Transmitters

SUPERIOR ELECTRIC • 1995
Michael J. Miga
(860) 585-4552 or (800) 821-1369
Power Protection Equipment

SETRO TOWER, INC. • 1989
Gene Zastrow
(415) 681-8850
Broadcast Tower Leasing

SWITCHDATE, INC. • 1995
Jim Hoffman
(773) 792-2700
Electronic/Electromechanic
Components

TEKTRONIX, INC. • 1977
Jon Hammarstrom
(505) 627-6936
TV Test, Measurement Equipment

TELECAST FIBER SYSTEMS, INC. • 2003
Richard Gerry
(508) 754-4858
Fiber Connectivity Solutions for
Broadcast

TELEMETRICS INC. • 2006
Jim Wolfe
(201) 848-9818
Camera Remote Control Systems

TELECOMUNICATIONS, INC. • 1992
Murray Porteous
(818) 566-6700
Intercom Systems, Microphones,
Headsets

TELOS SYSTEMS/OMNIA/AXIA • 2003
Kirk Hamack
(216) 241-7225
Telos Systems - Talk-Show Systems
/ CODECS POTTS & ISDN, Omnia,
A Telos Company - Audio
Processing, Axia, A Telos Company -
Professional Networked Audio

**TERRESTRIAL RF LICENSING COMPANY
• 2003**
Steven Sloucm
(888) 373-4832
FCC Licensing Services

**THE DUSTY ORGANIZATION - 4 TIMES
SQUARE • 2004**
John M. Lyons, CPBE
(212) 997-5508
TV/FM/Microwave Tower Site

THE WHITLOCK GROUP • 2000
Kevin Thompson
(800) 726-9843
Broadcast and Presentation Solutions

**THOMSON BROADCAST & MEDIA
SOLUTIONS • 1986**
William Powes
(404) 929-5007
TV/Film Production & Broadcast
Professionals

THEME TECHNOLOGY • 2003
Kevin Webb (888) 211-6999
POTTS, ISDN Codes & Audio/Video
Products

TOTAL RF MARKETING • 2001
Tom Sharkoski
(215) 633-1000
Wireless Broadcasting Equipment
Rental

TRELL SYSTEMS, INC. • 2006
Brian Goldberg
(661) 702-8900
Broadcast Control Systems

TRON-TEL, INC. • 1993
W.M. (Bill) Grass
(888) 819-4877
Part 74 Video Links

UNIBAR, INC. • 2001
Michael A. Marley
(315) 699-4400 or (800) 739-9169
Tower Obstruction Lighting
Designer, Manufacturer, Distributor

VALCOM • 1996
Bill Burtenshaw
(519) 824-3220
AM/FM Broadcast Antennas

V-SOFT COMMUNICATIONS • 2002
Adam Puls
(319) 266-8402
Broadcast Engineering Software &
Consulting

WARD-BECK SYSTEMS LTD. • 2004
Michael Jordan
(416) 335-5999
Metering, Monitoring, Distribution,
Conversion

WESTWOOD ONE • 2006
Chris Greene, SVP/Affiliate Sales
(212) 641-2000
Radio and TV Programming

**WIRELESS INFRASTRUCTURE SERVICES •
2006**
Travis Donahue
(951) 371-4900
Wireless & Broadcast
Telecommunication Systems

WOLTER TECHNOLOGIES INC. • 2004
Chris Shaw
(510) 870-0810
Audio Video Monitoring Systems

WYSONG ENTERPRISES INC. • 2005
Rodney Wysong
(423) 325-6900
Helicopter E.N.G. Solutions