



the SIGNAL

BIMONTHLY PUBLICATION OF THE SOCIETY OF BROADCAST ENGINEERS

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2010**

Volume 23, Number 1

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on the web yet?*

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Senate Bill would add engineers to FCC Commissioners' staffs

Senate Bill 2881 was introduced on December 14 by Senators Olympia Snowe (R-Maine) and Mark Warner (D-Virginia). If enacted as written, it would give each FCC Commissioner the authority to add a "staff engineer" to their advisory staffs.

Vinny Lopez, CEV, CBNT, president of the Society of Broadcast Engineers, remarked, "Ensuring the technical integrity of the FCC decision-making is perhaps our most important legislative goal. This legislation will go a long way toward returning technical expertise to the FCC Commissioner's offices." Lopez added, "We encourage other members of the Senate to support this well-crafted legislation. SBE will seek the introduction of a companion Bill in the House and we will urge



**Senator Olympia Snowe
(R-Maine)**



**Senator Mark Warner
(D-Virginia)**

rapid passage of both Bills in the House and the Senate."

SBE General Counsel, Chris Imlay, in his regular column in this issue of the Signal, has more about the proposed legislation, its importance and what SBE members can do to help support it. See page 5.

SBE at the 2010 NAB Show and the NAB Broadcast Engineering Conference

Schedule of SBE Events and Meetings during 2010 NAB Show

Since 1995 the Society of Broadcast Engineers has been NAB's organizational partner for the presentation of the NAB Broadcast Engineering Conference (BEC). Like those previous, this year's BEC will be the largest and most comprehensive broadcast technical conference in the world, beginning with the Ennes Workshop on Saturday, April 10 and

ending on Thursday, April 15. SBE will have a full slate of meetings and events during the week and will have a busy exhibit booth that will open beginning Sunday afternoon with hours through Thursday.

The BEC is chaired this year by SBE national board member, Joseph L. Snelson, Jr., CPBE, 8-VSB. Snelson is vice president of engineering

*See **NAB** on page **9***

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Win in the 2010 Membership Drive

Recruit a new member & make it happen!

The 2010 Membership Drive begins on March 1st, lasting until May 31st. "We Make It Happen" is this year's membership drive theme.

With numerous educational opportunities, networking, professional certifications and more, SBE will 'make it happen' so you - the broadcast engineer - will continue to advance in your career. Help your peers advance in theirs by introducing them to SBE.

In addition to being eligible for Membership Drive prizes, you will also receive a five-dollar discount on your 2011 membership renewal for each new Regular or Sustaining member you recruit (up to five). With so many great and rewarding reasons to recruit new members, it's easy to make it happen!



GRAND PRIZE

- Flat Screen HDTV & a trip to the 2010 SBE National Meeting in Madison, Wis. October 26-27
includes airfare for one to Madison (from within the continental US) and two nights hotel stay

FIRST PRIZE

- Panasonic Lumix Digital Camera

SECOND PRIZE

- Paladin Tools PT-540 Powerplay Multi-tool for Electrical and Networking courtesy of Broadcast Supply Worldwide

OTHER PRIZES

- Web Camera courtesy of Broadcast Microwave Services
 - *Directional Antennas Made Simple* by Jack Layton, courtesy of Layton Technical Services
 - *Networking: A Beginner's Guide*, Fifth Edition courtesy of McGraw-Hill
 - (6) SoftMetal Server logo shirt courtesy of Ross Video
 - (2) Logo pull over fleece courtesy of Kathrein Scala
 - (2) Logo Polo's courtesy of Continental Electronics
- MORE TO COME!**

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RENEW ONLINE NOW!

Attention Regular, Senior, Associate and Student Members:
You can now renew your membership online! Membership renewal notices were mailed in early February. If you do not receive your renewal notice, contact the SBE National Office at (317) 846-9000. Renewals are due by April 1, 2010.
Youth and Sustaining Membership renewals are due on the anniversary month of joining the Society.

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Continuing the Digital Transition – Ennes Workshop at NAB Show

by **Fred Baumgartner, CPBE, CBNT**

Ennes Workshop Organizer and Ennes Trustee

Three quarters of a century ago, broadcasters had barely figured out a business plan for AM radio. Already things were changing. Watching Felix the Cat rotate on a turntable was very cool, Armstrong's FM sure had fidelity, but imagine standing there and wondering, "now what do we do with that?" One thing about broadcasting engineering; while pieces mature and even fade, the art and business keeps developing, morphing and expanding.

On the anniversary of the DTV transition, much has changed; rooms and travel to Las Vegas have come down in price, FM digital power levels are likely to increase, Mobile TV searches for a business model, 3-D begins its trickle down from the theater, spectrum becomes even a more scarce commodity, Audio over IP digs deeper into facilities, CAP updates EAS, and even our day-to-day simple tasks like placing a wireless microphone become more complicated.

For more than a decade, the SBE-Ennes/PBS engineering centric tutorials have been a staple of the NAB week occurring April 10, the Saturday before the floor opens. As always, we strive to bring broadcast engineers the most compact and broad reaching one-day educational program we can. We seek the writers, the engineers and the visionaries; many who rarely present outside of this event.

The SBE-Ennes/PBS NAB program and the SBE-Ennes traveling programs are all parts of the larger SBE educational effort. If you've been to the SBE-Ennes program at NAB, you know it is one of the best attended broadcast engineering educational events in the world ... and for a reason.

Saturday, April 10th, 2010 - 8:00 am to 5:00 pm

Morning Moderator -Fred Baumgartner, CPBE, CBNT

8:00 – 9:00 am

Audio over IP Tutorial - Part 1

by Skip Pizzi, Media Technology Consultant

9:10 – 9:55

Audio over IP Tutorial - Part 2

10:00 – 10:45

Next Generation EAS

by Clay Freinwald, CPBE, RF Systems Engineer, Entercom and other Seattle area broadcasters

10:45 – 11:30

Considerations for adding MobileDTV to a broadcast station

presented by Richard Chernock, Chief Technology Officer at Triveni Digital, Inc.

11:30 – 12:00

SMPTÉ Update

presented by Peter Symes, Director, Standards & Engineering, Society of Motion Picture and Television Engineers (SMPTÉ).



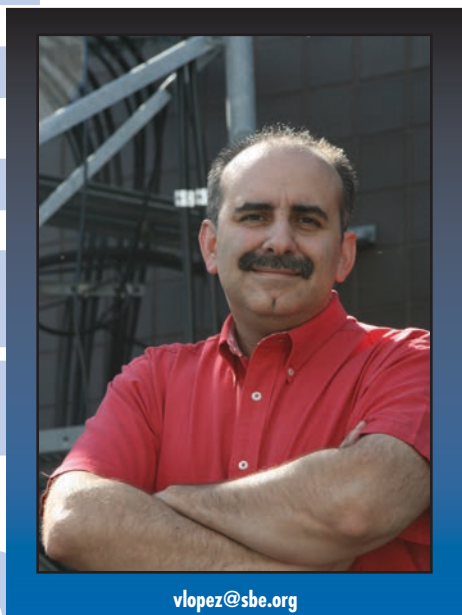
Where should the station license be kept?

- A. At the transmitter**
- B. In the public file**
- C. At the control point**
- D. In the studio.**

answer on page 13

As time goes by ...

by **Vinny Lopez, CEV, CBNT**
SBE President



have to say this, since I took over as President in October, I have learned a huge amount about the Society that I never knew before. First, I learned that there is a whole lot more that the president does than what I had thought - for example, right out of the gate, a visit to D.C. to lobby the FCC, and meet with our strategic partners, NAB and MSTV. Then there's the day to day things that need to be done, the driving of the Society according to the direction that the Board of Directors dictate, the conference calls, it all adds up. It is a challenge, but we will move forward successfully.

Another recent development has to do with S.2881, a senate bill introduced by Senator Olympia Snowe of Maine. Its aim is to put more engineering expertise in the hands of the FCC commissioners. I will not steal any thunder from our General Counsel, so be sure to check out his comprehensive article on this topic later in this issue.

Now that winter has most of the country in it's grip, and outdoor activities are waning, it's the perfect time to head to a chapter meeting. Maybe you haven't been in a while. Most chapters meet at

least every month, and offer an exciting opportunity to network with fellow engineers, connect with friends that you haven't seen in a while, or learn about a new technology. Many of you know I am a geek at heart, and I often find out about new things from going to chapter meetings. If you still can't get out to a chapter meeting, don't forget about the "chapter of the air," and IRLP HAMnet if you are an amateur radio operator. More information on these and all chapters is available at www.sbe.org.

Attendance at chapter meetings not only benefit you in the ways I have already mentioned, but you also earn re-certification credit for each chapter meeting you attend, which certainly comes in handy around re-certification time. Let's say your chapter holds an average of eight meetings per year, over five years, that's 20 certification points. Hopefully, all of you will become "member active" this winter and check out your local chapter scene.

I'm always looking for new tech tips. I did not hear about this at a local meeting, but I will be passing it on at a future one. It's Qik.com. What this site does is allow you to use the camera in your smartphone to stream video to the qik.com site or livestream, or facebook, or many others via cellular networks. How does this relate to broadcasting you might ask? Say something big goes down, there is no live truck, sat truck or link of any kind available. A photog, or reporter, or anyone for that matter can send the video from

the location via this method. Or you can have someone in a parade, or a 10k race, triathlon, or anywhere else with this and get a unique perspective. Yeah, it's not broadcast quality, but I've seen equivalent shots from satphones on the big news networks that looked about the quality you get from a setup like this.

As I write this, we are a couple of days away from the start of CES. With budgets and economic conditions the way they are, I'm curious as to how many of you plan on attending CES as well as NAB?

Lastly, I want to try a little fun thing for the rest of the year. You may have noticed in this and my last *Signal* articles that the title is either obscure or not related to the content. Well, this is on purpose. Sometime in the future, we'll have a little contest to see if anyone can pick up the commonality in the titles of my *Signal* articles. I'll even come up with a prize for the winner. More details on this when it's time for the contest. Until then, keep tweaking.

P.S. In case anyone is wondering, The time reference in my title and the one in Chris Imlay's title are just a coincidence.



Photo by John Poray, CAE

SBE General Counsel Chris Imlay, CBT and SBE President Vinny Lopez, CEV, CBNT in front of the National Association of Broadcasters headquarters during their trip to Washington D.C. in November.

Technical resources at the FCC; Time has come today



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

Sometimes, good ideas just take awhile to come to fruition. It's that way with engineers at the FCC. SBE has had on its legislative agenda for the longest time a plan to bring more focus by the decision makers at the FCC on technical issues. There is

now a good mechanism to do that, in the form of a Bill recently introduced by Senator Olympia Snowe from Maine.

It is important to say, first thing, that no one at SBE doubts the competency or professionalism of the engineers in the Commission's offices and bureaus. The FCC Office of Engineering and Technology is chock full of engineers who are both competent and professional. So is the Media Bureau. Most of the readers of this column have personal experience with the Audio Division and Video Division engineers. They are accessible, friendly and knowledgeable. We like them. They help us do our jobs. I remember a pearl of wisdom from a law professor at The American University Law School, many years ago now. He told me that his view of communications law is that it is "nothing more than knowing who to call at the FCC." Though ego and experience prevents me from accepting that in toto, there is some truth in his oversimplification. I often tap the wisdom of FCC Audio and Video Division engineers, and I learn a lot from them.

But let's be honest: the staff engineers at the FCC do what they are told by the decision makers at the FCC, and the decision makers are policy driven. And all too often, if not all the time, the decision makers, being the five FCC Commissioners, don't make policy decisions which take into account technical considerations and realities. They don't, because they aren't skilled in that area. So, inevitably, decision making on topics that involve technical considerations suffers, and we end up with Frankenstein's monsters such as BPL and TV White Spaces devices. In SBE's view, there is no substitute for technical competence in the offices of each Commissioner, where policy is determined.

In 1982, the "Communications Amendments Act of 1982" (Pub. L. 97-259), in an effort to provide the FCC Commissioners with some flexibility, deleted a longstanding requirement in Section 4(f)(2) of the Communications Act of 1934 that one of

the three professional assistants which each FCC Commissioner was entitled to appoint had to be an "engineering assistant." The 1982 legislation, however, left it to the Commissioners themselves to determine the field of expertise of all three of each Commissioner's staff assistants. Since that time, very few Commissioners have retained a staff assistant with specifically technical professional qualifications.

In October of 1991, at SBE's urging, then Rep. Don Ritter (himself an engineer) introduced HR. 3501, which would have required that at least one Commissioner be skilled in the engineering sciences. We were able to obtain a few cosponsors for this House Bill, but frankly, it went nowhere, because in hindsight it was naive and unrealistic. FCC Commissioner slots are highly political appointments, and no administration would willingly allow limits on its authority to make Commissioner appointments. And if the bill passed, which Commissioner appointment would the engineer have to be? Because the Commissioners vote on policy items, and their decisions are not based on consensus but on majority vote, what would be the point of having only one Commissioner have an engineering background? The Bill failed and it was never reintroduced, and that is just as well. It was well-intentioned, but not well conceptualized. So, SBE regrouped. On its legislative agenda for a long time since has been a more realistic, and we thought achievable, return to the pre-1982 statutory provision that one of the three Commissioner's assistants be an engineer, loosely defined. This, however, limits the authority of the FCC Commissioners, and so they have never supported it. It takes away discretion that they were given and that they would like to keep and protect. So, for years, the Commission's three staff assistants have been lawyers and economists, and SBE's agenda item got very little traction.

Senator Olympia Snowe, however, has a better idea. She and Senator Warner of Virginia, on December 14, 2009, introduced S.2881, the "FCC Commissioners' Technical Resource Act." This Bill simply and effectively would add a component of technical competence to the Commissioners' offices without limiting the Commissioners' discretion with respect to the qualifications of the other three professional staff assistants, by permitting (but not requiring) each Commissioner to add a fourth staff assistant, an "electrical engineer or computer scientist to provide the Commissioner technical consultation

See **FCC** on page **13**

School Profile - Cayuga Community College

by **David Priester, CPBE**



As part of its mission, the SBE Certification Committee examines college level programs that prepare students for professions in the broadcast and media fields of interest to the SBE. Students graduating with satisfactory academic records from academic programs which are found to be comprehensive and approved by the committee are offered Broadcast Technologist certification without sitting for the standard examination. Periodically in this column a school participating in this program is profiled. In December, I visited with Steve Keeler, an active SBE member and Telecommunications Department Coordinator at Cayuga Community College in Auburn, New York.

Cayuga Community College is a two year unit of the State University of New York system. Opened in 1953 as Auburn Community College, the school now enrolls nearly 4,000 students across two campuses as well as online and concurrent high school programs. The degree programs approved by the SBE Certification Committee are contained within the telecommunications department and grant an A.A.S. upon completion of the requirements. Three broad options are available. Audio-Radio Production is designed to prepare students for employment in audio production, recording, including an available concentration in music production, and radio. Radio/TV Broadcasting prepares graduates for careers in electronic media and telecommunications. Several different

concentrations are available including those in the video and film production, journalism and digital media fields. A third program, telecommunications technology, is more oriented toward the installation and maintenance of communications facilities and equipment. Each year there are approximately 120 students in the telecommunications programs. The teaching staff includes two full time professors and ten adjuncts chosen for their teaching ability and practical knowledge of the industries they work in. Supporting the faculty are two full time professional technical staff positions.

One of the guiding philosophies Steve Keeler emphasized is the combination of technical training and production experience in all three programs. He believes that it is essential for someone working in the broadcast field to be at least familiar with the tasks and challenges of the other people working around him or her. A student primarily interested in learning to install and maintain a broadcast plant needs to learn what it is like to be in front of the camera or to produce and direct a program segment. And similarly a production concentration student is going to be most effective professionally if they understand how the technical plant they are using works and how the pieces fit together and interact to some degree. To this end, no matter what your particular interest is, the Telecommunications degree programs encourage or require course work in technology as well as production and

operations. Students in the technology program become directly involved in the wiring and maintenance of the audio, radio and production facilities available to the students.

The facilities available to the students in these programs are extensive. The television studio has recently been updated and is fully high definition. As well as fixed television production facilities the school has a pool of portable equipment for field production use. Students are exposed to a variety of different video and audio editing systems and software. Computer lab facilities provide the platform for a variety of software applications and the electronics lab provides the venue for teaching basic and intermediate electronics and circuits and computer technology. The Telecommunications Department is also the home of the Cayuga Community College radio station, WDWN-FM, operating both analog and digital transmitters enabling technology students RF experience with both systems. The recording program has an entrepreneurial project that launched their own record label and is now releasing their own recordings, hoping to work up to four to five new releases each year.

Opportunities for graduates of the Cayuga Community College programs are wide and varied. The programs' practical

SBE Certification 2010 Exam Schedule

Dates	Location	Application Deadline
February 5-15, 2010	Local Chapters	CLOSED
April 13, 2010	NAB	March 26, 2010
June 4-14, 2010	Local Chapters	April 16, 2010
August 6-16, 2010	Local Chapters	June 4, 2010
November 5-15, 2010	Local Chapters	September 17, 2010

approach prepares one for immediate employment in various communications fields including the media production and broadcast professions. Other students continue their education. Some continue on in electrical engineering or telecommunications management programs. Others go on to four year

colleges majoring in communications and production. Cayuga Community College has matriculation agreements with the Park School of Communications at Ithaca College and the SUNY College at Fredonia offering enhanced transfer opportunities.

The SBE is very pleased to be

associated with Cayuga Community College in a long standing relationship. For further information on the programs at CCC, contact Steve Keeler, Telecommunications Department Coordinator, keeler@cayuga-cc.edu. More information is available at www.telcomcayuga.com.

CONGRATULATIONS

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.

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Ng Yiu Chung, Hong Kong – Chapter 144
Thai Ka Ho, Hong Kong – Chapter 144
Lau Kam Ching Kieran, Hong Kong – Ch. 144
Tsz Ming Chui, Hong Kong – Chapter 144
Choy Kam Wing, Hong Kong – Chapter 144
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Wong Chi Wing, Hong Kong – Chapter 144

EXAMS AT OAB

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Thomas Taylor, Boise, ID – Chapter 115

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Alfred Shjarback, Warren, NJ – Chapter 15

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Amy Braswell, Lake Worth, TX
Kenneth Ingram-Lyle, Denver, CO
Gary Makowsky, Cypress, TX

CERTIFIED RADIO OPERATOR® (CRO)

Rodney Freed, Martin, TN
Richard Humphrey, Carmichael, CA

12:00-1:00 **Break**

*Afternoon Moderator,
James "Andy" Butler, CPBE*

1:00 – 3:00

**Management/Media Skills and
the Future of Broadcast
Engineering**

*presented by Terry Baun, CPBE, AMD,
CBNT, Director of Engineering and
Operations, Wisconsin Educational
Communications Board*

3:00 – 3:45

HD Radio™ Update

*presented by Hal Kneller, CPBE, AMD,
DRB, CBNT, Market Development
Manager, Nautel, Ltd.*

3:00 – 3:30

**Wireless Mics after the DTV
Transition**

*presented by Ralph Beaver, CBT,
President and CEO of Media Alert LLC.*

3:30 – 4:15

**Impacts of 3D Television on
Video and Broadcasting**

*presented by Dan Holden,
Comcast Fellow/Chief Scientist,
Comcast Media Center*

4:15 – 5:00

**Reorganization of Broadcast
Workflows**

*presented by Greg Doyle,
Senior Consultant,
Diversified Systems Inc.*

To attend the SBE Ennes Workshop presented as a part of the NAB Broadcast Engineering Conference at the 2010 NAB Show, you must be registered for the full conference. Go to www.nab.org to register.

Candidates sought for SBE national board of directors

The SBE exists because of the volunteer efforts of members like you at the local and national level. The SBE Nominations Committee is currently seeking candidates to run in the summer elections for the upcoming terms. Capable members, from all corners of the field of broadcast engineering, are needed to serve. To be eligible, candidates for national office must be Regular, Senior or Life members of the SBE, or be the designated representative of an SBE Sustaining Member, in good standing. All candidates must also hold a current SBE engineering-level certification and must maintain that certification through all terms of office. All of the directors serve in an "at-large" capacity.

Directors serve terms of two years and are expected to attend two full meetings of the board each year. These meetings are held in the spring during the NAB Show, and in the fall during the SBE National Meeting. Terms of officers are one year. Officers are expected to attend the two full meetings of the board plus two meetings of the executive committee, which are held during the winter and summer.

All those who serve must be willing to cover their own travel expenses to attend the meetings. Some employers and chapters have helped cover this expense for some members of the board in the past.

Members of the board may be appointed by the president to serve as a chairman or as a member of a national committee.

Members interested in serving the SBE as a member of the national board are encouraged to contact the chairman of the SBE Nominations Committee, Jim Leifer, CPBE, Director of Engineering and IT with Clear Channel Communications in South Florida. Jim is also a current member of the Board and can explain the duties and responsibilities to you in detail and answer any questions you may have. You can reach Jim at jimleifer@hotmail.com. The Nominations Committee must submit its list of candidates to the SBE National Office by April 30, so if you are interested, be sure to contact Jim before that date. You may also contact the other members of the Nominations Committee. Their names are listed at www.sbe.org in the "Who We Are" section.

Election ballots will be mailed no later than July 27 to all voting members. The results will be known on August 26 when all the ballots mailed to SBE National Headquarters are counted by the official board of tellers. Those elected will be inducted into office on October 27 during the SBE National Meeting, which will be held in Madison, Wis., in conjunction with the Wisconsin Broadcasters Clinic, sponsored by Chapter 24 of Madison and the Wisconsin Broadcasters Association.

Please consider contributing your leadership and experience to the Society by offering to run as a candidate and, if elected, serving as a member of the national board of directors. Not only will your Society benefit, but you will too, as you develop friendships and strengthen your professional networking with other members from around the country.

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Fellow Nominations Deadline March 26

The Fellow designation is the highest level of SBE membership and recognition presented by the Society of Broadcast Engineers. Nominations for 2010 must be received no later than March 26 for consideration this year.

Information on how to submit a nomination is available at

the SBE website. Click on the "Awards & Recognition" tab on the left hand side of the home page and then click on "SBE Fellow." Submit your nominations to Fellowship Committee Chair: Troy Pennington, CSRE CBNT, 6156 Hampton Hall Way, Hermitage, TN 37076 or to troy.pennington@cumulus.com.

NAB from page 1

for Meredith Broadcast Group.

Other members of the committee include:

Dom Bordonaro, CSRE, Cox Radio;

Michael Cooney, CSRE, Beasley Broadcast

Group; David Folsom, Raycom Media;

Thomas Hankinson, ABC; Jim Kutzner,

PBS; Andy Laird, Journal Broadcast

Group; Glenn Reitmeier, NBC Universal

and Jeff Smith, CSRE, CBNT, Clear Channel

Radio, NYC. Organizing the Ennes

Workshop presented by SBE is Fred

Baumgartner, CPBE, CBNT, of the Ennes

Educational Foundation Trust. John

Marino of NAB and John Poray of SBE

also work with the committee.

SBE Exhibit Booth

SBE's exhibit booth will be on the second floor concourse of the Las Vegas Convention Center South Hall, Lobby Booth 27. The location is just up the escalator from the South Hall main entrance and just outside the entry to the exhibits on the second floor. This is the same location as in recent years. The BEC technical sessions will be located nearby, in the South Hall second floor meeting rooms.

Be sure to stop by the SBE booth while at the convention. We'll have the new SBE CertPreview and all of the SBE published handbooks as well as technical books from major publishers. There will also be an assortment of SBE logo items. Membership renewals and new memberships may also be transacted at the booth. SBE staff and national Board members will be at the booth to answer your questions about membership, certification, educational programs and regulatory issues.

Booth Hours

Sunday 2:00 pm – 4:00 pm

Mon – Wed 9:00 am to 6:00 pm

Thursday 9:00 am – 2:00 pm

Booth Location

LVCC South Hall Lobby Booth 27 near the entrance to the second floor exhibit hall. See the SBE web site, www.sbe.org for a floor plan indicating the booth location.

SBE SPRING MEMBERSHIP MEETING

Our annual spring SBE Membership Meeting will be held on Tuesday, April 13 from 5:00 pm to 6:00 pm in the South Hall at the Las Vegas Convention Center (room to be announced). We will be recognizing a number of our local chapter certification chairs during the meeting. Some very nice prizes are planned to be given away to those attending. The highlight of the meeting will be the presentation of the SBE Lifetime Achievement Award to an SBE member. The recipient will not be aware of the award until the announcement is made during the meeting.

SBE will hold several other meetings during the 2010 NAB Show that may be of interest to you. (Located at the Las Vegas Hilton Hotel unless otherwise indicated)

Saturday, April 10

Ennes Workshop, 8:00 am – 5:00 pm (Conference registration required) LVCC South Hall 2nd Floor

SBE Certification Committee Meeting, 6:30 pm – 11:00 pm, Conference Room 7

Sunday, April 11

SBE Board of Directors Meeting, 8:30 am - 12:00 pm;

Conference Rooms 1 & 2

SBE Education Committee Meeting, 2:00 pm to 4:00 pm; Conference Room 1

Monday, April 12

Ennes Trust Annual Meeting, 12:00 pm – 1:00 pm, Conference Room 7

SBE EAS Meeting, 2:00 pm – 4:00 pm, Conference Rooms 4 & 5

Tuesday, April 13

SBE Certification Exams, 9:00 am – 12:00 Noon, Conference Rooms 9 & 10

SBE Frequency Coordinators Meeting, 10:00 am – 12:00 pm, Conference Rooms 7 & 8

SBE Spring Membership Meeting, 5:00 pm – 6:00 pm, LVCC Room TBA

Registration Discounts for SBE Members

Members of SBE can register for the NAB convention at a special "partner" rate, a savings of \$100 off the NAB non-member rate. To get the discount, SBE members register using the regular NAB on-line registration form. When completing the form, check the "Partner" box at the bottom and select "Society of Broadcast Engineers" from the drop-down box.

We hope you'll join many of your fellow SBE members April 10-15, in Las Vegas for the 2010 NAB Show and NAB Broadcast Engineering Conference!



Upcoming Webinars

SBE RF Safety Course

Wednesday · February 24 · 2:30-5:45 p.m. EST

This three hour course, regularly updated, provides an overview of RF radiation issues and practices for broadcasters, including the biological effects of RF radiation and the distinct differences between RF radiation and ionizing radiation, FCC and OSHA regulations, workplace hazards, transmitter sites and more. Instructing the course once again will be noted RF safety expert Richard Strickland of RF Safety Solutions. Register online at www.sbe.org under Education/Courses/Seminars.

Leadership Development Series

Wednesdays · March 10 · April 28 · May 26 · 2:00 p.m. EST

SBE, in conjunction with Rodney Vandevener, SBE Leadership Development Course Instructor, is offering an affordable series of three webinars on leadership. This series provides an introduction to leadership, and will explore basic principles of leadership (March 10), how effective communication (April 28) can dramatically increase efficiency and employee satisfaction, and how motivation (May 26) plays an essential part in employee commitment. The Leadership Development Webinar Series is not meant to take the place of the 3-day live course on Leadership Development, scheduled August 3-5, 2010. In contrast, it will give you an idea of what to expect in the full course. Participants may register for one, two, or all three webinars at www.sbe.org. Members who register for all three will receive a significant discount.

UPCOMING ENNES WORKSHOP

South Florida Ennes Workshop

Hosted by SBE Chapter 53 - Miami (www.sbe53.com)

When: Thursday, March 4, 2010, 9:00 a.m.-5:00 p.m. EST

Where: Clear Channel Communications

7601 Riviera Boulevard

Miramar, Florida 33023

Cost: SBE Members - \$30 / Non-Members - \$45

Registration: Visit www.sbe.com under Education / Ennes Workshop Tab for more information and to register.

New and Improved! SBE Leadership Development Course

Tuesday – Thursday, August 3-5, 2010 · Atlanta, Georgia



Rodney Vandevener,
Course Instructor

Plan now for a valuable opportunity to develop and refine your people and leadership skills in a course designed specifically for those in the broadcast engineering field. This course will help not only employees but employers as well in key areas of management and leadership.

The SBE Leadership Development Course has been redesigned and is now offered as an intense 3-day course, covering basic and advanced concepts of outstanding leadership. In the past, it was offered as 2 courses, each consisting of three days. The first course was an introductory course, while the latter was considered advanced.

Designed to take technically proficient people and instill in them sound leadership, supervisory and management skills, the SBE Leadership Development Course is equally beneficial for those who are already in management and for those without prior management or supervisory experience.

SBE has offered the SBE Leadership Development Course since 1997 (NAB sponsored this course from 1965 to 1995).

This concentrated course is designed specifically for

broadcast engineers who have or aspire to have management responsibilities. SBE offers the course in cooperation with instructor Rodney

Vandevener of Vantech Training (www.vantechtraining.com).

This highly interactive course will be challenging and rewarding, and includes training in the following areas:

- **Understanding the Dynamics of Leadership**
- **CAPS Study: Discover Your Leadership Behavioral Style**
- **Communications**
- **Effective Motivation Techniques**
- **Building Winning Teams (team process & team advantage)**
- **Responsible Management**
- **Leadership is an Attitude**
- **Managing Conflict, Counseling and Discipline**

"Continues to be an important program that many broadcast engineers and members should take"

Attendee, Leadership Development Course, August 2006

This three-day event challenges you to improve your leadership skills as you better understand and improve how you interact with others. Bring a team and share the experience of this highly interactive event. Come, enjoy, learn and have some fun growing as a leader in the process.

SBE's Leadership Development Course has a new instructor. Rodney Vandever is an associate professor of Organizational Leadership and Supervision at Purdue University who also has over 30 years of industrial and business experience.

The cost per member is \$580. For more information on the 2010 SBE Leadership Development Course and to register, visit our website at www.sbe.org under Education in the Courses/Seminars tab. If you have questions regarding this course, contact Kimberly Kissel at kkissel@sbe.org or (317) 846-9000.

Justifying Professional Development to Your Company

Getting approval to take a course geared toward skill advancement or general professional development can be daunting. Here are some things to consider as you seek approval from your manager or company.

Presenting to Your Manager

Develop a 'Purpose of Attendance' by making a list of the things you would like to accomplish. For instance, how will your company benefit? Will any part of the program help solve a current issue at your company? Identify revenue opportunities for your organization as well as ideas on how to reduce costs in specific areas. Be specific. How else might your company benefit? Next, how will you benefit? You might benefit through growing your personal and professional network, as well as learning new skills, or solving a specific issue you are having at work (lack of a specific skill, dealing with difficult people, etc).

Create a memo or complete a standard request form to detail your request. Review how the training opportunity is relevant to your company and/or you by reiterating the points you noted above. Commit to and follow through in writing a detailed account of your experience upon your return and publicize it. Managers will appreciate

"Opened my eyes to a whole new way of looking at leadership and challenged me to act."
Attendee, Leadership Development Course, June 2007

and be likely to approve future funding if you share the wealth of your knowledge with co-workers. A sample memo is available at: <http://www.sbe.org/JustifyingProfessionalDevelopment.php>. Lastly, and probably

most importantly, schedule a follow-up meeting with your boss to discuss the request in person.

Expenses and Budget Considerations

What other costs are involved in this opportunity (travel, lodging, etc.)? Of those costs, which ones are you willing to cover, if necessary, and which ones will you ask the company to finance? Does the company need to have dollars in the budget right now? Is there money in another department's budget that is unused?

Other Points to Ponder

Professional development can prove extremely beneficial to companies through increased morale, decreased turnover, enhanced job performance and efficiency improvements. Even in lean times, workforce development is a necessity for forward-thinking organizations. Regarding the leadership courses offered by SBE, convey to your manager that you have an interest in working in a more productive way with others in your organization and that leadership training is beneficial to help you accomplish this. SBE programs are seen as an excellent value based on SBE's reputation for quality and relevant programming - See what others thought of SBE educational offerings by visiting our website at www.sbe.org under Education.

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On-line Membership Renewal Arrives

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

Most members will be receiving a membership renewal mailing this month and I encourage you to renew before the April 1 deadline. We've made it easier to do this year with a new on-line renewal system. Go to sbe.org and click on the "Renew Membership" button. By using your SBE member number and your unique password printed on your renewal mailing, you can access SBE's new on-line renewal system. In addition to renewing your membership, you will be able to request information (PDFs) about SBE programs and services, make donations to the Ennes Scholarship Funds and more, all in just a few short minutes. VISA, MasterCard and American Express are accepted. Be sure to peel off and retain the membership card from the mailing when you renew.

SBE continues to offer members who are having financial hardship due to unemployment the opportunity to request a waiver of dues at renewal time. To qualify, individuals must have been a member for at least one year, be unemployed due to layoff, downsizing or medical issues. Requests for hardship waivers should be sent via email to me at jporay@sbe.org. I share them with our Membership Committee chairman for a decision. Requests are only seen by the two of us and our office database manager, who updates the renewal. Requests for waivers are accepted from February 1 through June 30 each year.

SBE's growing education program has a variety of opportunities coming up over the next several months. February 24 at 2:30 pm EST will be the next SBE RF Safety Course live webinar, presented by

Richard Strickland. If you haven't taken this yet, it's well worth it. More than 500 people have since we began the series.

For those of you in South Florida, we'll have an Ennes Workshop on March 4 at the Clear Channel facilities in Miramar, hosted by Chapter 53. Presentations for both radio and television engineers will be included. Attendance earns credit towards SBE recertification.

Also in March we will have the first of three live webinars on management training for broadcast engineers. We are pleased to have Purdue University Associate Professor, Rodney Vandever present, "The Function and Nature of Leadership" from 2:00 pm to 3:15 pm EST on Wednesday, March 10. Rodney will follow that up with "Leadership and Communication" on April 28 and "Leadership and Motivation" on May 26; also from 2:00 pm to 3:15 EDT. These will serve as great lead-ins to the full SBE Leadership Development Course, planned for August 3-5, to be held this year in Atlanta, Ga.

There is more in March. Former SBE Frequency Coordination Committee Chairman, Ralph Beaver, CBT will present a two-part live and interactive webinar on event frequency coordination. He'll explain how to do it from his years of experience coordinating hundreds of sports and news events. This should be of great interest to those who offer, or would like to offer, event frequency coordination services, as well as local frequency coordinators.

You can find more information about all of these educational programs and

register by visiting the SBE website, www.sbe.org. And don't forget about the SBE University of on-line, on-demand technical courses for broadcast engineers. They are available 24/7 at the SBE website.

For those heading to Las Vegas in April for the annual NAB Show, SBE will be there with its exhibit booth, spring Membership Meeting, Certification Exams and more. SBE members whose employers are not members of NAB can get a discount of \$100 off the NAB non-member registration rate. Check the "Partner" field when registering online at www.nab.org and select "SBE" from the drop down box list of official Show partners. Hotel rates are way down this year and airfares are pretty low too if you don't wait until the last minute. We hope to see you there.

As you can see, there are plenty of educational opportunities available to you – including your own SBE chapter meetings; your best opportunity to create and develop professional relationships with other broadcast engineers in your area while soaking up knowledge from the monthly programs. You'll get the most out of your membership by participating.



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Madison, Wisconsin to host 2010 SBE National Meeting

SBE President, Vinny Lopez, CEV, CBNT has announced that the 2010 SBE National Meeting will be hosted by Chapter 24 in Madison, Wis. on October 26-27. The National Meeting will be held in conjunction with the Wisconsin Broadcasters Clinic, presented by the Wisconsin Broadcasters Association and SBE Chapter 24. The location will be the Marriott Madison West Hotel, in Middleton, a western suburb of Madison.

The SBE National Meeting serves as the Society's opportunity to recognize individual members and chapters for

outstanding achievement with the SBE National Awards, as well as spotlight a local or regional SBE event such as the Broadcasters Clinic.

The SBE National Meeting consists of the Annual SBE Membership Meeting, the SBE Annual Awards Reception and Dinner, Annual SBE Fellows Reunion, fall Board of Directors meeting and several committee meetings.

The Wisconsin Broadcasters Clinic is probably the longest continually held regional broadcast engineering conference in the U.S., dating back 60 years. It

includes three days of technical sessions (October 26-28) and a broadcast equipment and services trade show. Chairman of the Clinic is SBE Fellow, Leonard Charles, CPBE of WISC-TV in Madison.

More information about the SBE National Meeting and the Wisconsin Broadcasters Clinic will be available later this spring. If you are located in Wisconsin or surrounding states, or will be in the area in late October, we hope you will plan to attend.

FCC from page 5

when appropriate to interface with the Office of Engineering and Technology, Commission bureaus, and other technical staff of the Commission."

This will provide first hand, competent input to each of the Commissioners tasked with making often highly technical decisions in docket proceedings and adjudicatory matters, and a mechanism for bringing the competency of the Commission's staff engineers directly to the Commissioners. It has the beauty of, in effect, returning to the benefits of the pre-1982 Communications Act without taking anything away from the

administration's appointment authority or the Commissioners' discretion in retaining the three professional staff assistants that they have now. Sure, adding a fourth professional staff position per Commissioner has a budget impact; the effective cost of adding five technical professionals to the Commission's staff is substantial in absolute terms, but not in the grand scheme of the Commission's budget. Overall, in SBE's view, this Bill is all good. We believe that it has bipartisan support. Senator Snowe's office (which includes, by the way, an EE on staff) has determined that it has the support of the Commission as well.

SBE is now engaged, with the help of Senator Snowe's office, in obtaining a companion bill in the House of Representatives. We hope that this will be a relatively simple process. We think, though, that SBE members should consider writing their Senators and asking them to support S.2881, and when we obtain a House Bill, to do the same with their Representatives in Congress. Good things come to those who wait, but the waiting is over. Now is the time to get this Bill enacted. It is good for broadcast engineers. Time has come today.



Correction from the December SIGNAL:
Paul Burnham won a Broadcast Tools Sentinel donated by SCMS Inc.

ENNES

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FOUNDATION TRUST

The Ennes Educational Foundation Trust would like to thank the following supporters for their scholarship funds contribution:

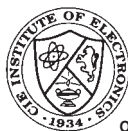
Harold Ennes Scholarship Fund

- Chapter 20, Pittsburg, Pa.

Robert D. Greenberg Scholarship

- Harriet F. Greenberg, Silver Spring, Md.

The Ennes Educational Foundation Trust offers scholarship, presents educational programming and provides grants for educational projects that benefit broadcast engineering and the broadcast engineer. To make a tax-deductible donation, make your check payable to the Ennes Educational Foundation Trust and mail it in care of the Society of Broadcast Engineers, 9102 North Meridian Street- Suite 150, Indianapolis, IN 46260.



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See FCC rule 73.1230
question on page 3

Chapter 56 - Tulsa, Oklahoma

Chairman: Bill Lee, CBTE
www.sbe56.org

What: SBE-56 2009 Fall Training Conference When: October 22, 2009

Update on HD Radio by Troy Langham, CSRE, ClearChannel, Frank Christel, KWTU/KWGS, University of Tulsa and Brad Newman, KWTU KWGS, University of Tulsa.

EAS - What's Next by Roger Herring, KTUL

Tower Safety by Les Kutasi, Precision Communications, Inc.

Operating Under Emergency Conditions by Steve Davis, CSRE, Clear Channel

Amazing IOT Technology by Gerald Weaver, CBT, KOTV

The Joy of Documentation by Ann Bruun, KJRH

Do-it-yourself Fiber Optics by Gerald Weaver, CBT, KOTV

Broadcast Measurements by Tim Diehl, CBRE, RF Solutions and Ray Klotz, CPBE, Sierra Multimedia, Inc.



"Our 2009 Fall Training Conference was a great opportunity to learn from our own members some valuable information that is applicable to our jobs," said Chapter Chairman Bill Lee.

"This was our first attempt at such an event on a local level and it was very well attended; drawing engineers from Missouri and Arkansas as well." said David Shaffer, Chapter Program Committee Chair.



In the Circle ... a snapshot of an SBE Member

Geoff King, CBT Broadcast/IT Engineer, CNN Production Systems / CNN BEST

Joined SBE in 2004, Chapter 5, Atlanta

Focal Point: I value information gained and associations made with other professionals in my field. My chapter also attempts to hold meetings at various locations. It's always interesting to see other facilities and their use of current technology.

Involvement with SBE: I value information gained and associations made with other professionals in my field. My chapter also attempts to hold meetings at various locations. It's always interesting to see other facilities and their use of current technology.

Job Satisfaction: I enjoy the fact that I work in an industry that is constantly changing. When I first became involved in this field, networking of broadcast gear was not very common. Today nearly all broadcast equipment has a built in network interface. This evolving technology has presented me with a challenging but rewarding work environment. I am also fortunate that I work for a company that supports training and SBE certification.

SBE welcomes its newest members:

New Members

Lynne W. Alexander - Tucson, AZ
Richard D. Mills - Burbank, CA
Mark Myers - Livermore, CA
Alan Rabin - Sunrise, FL
James A. Brooks - Singapore
Joseph Mandujano - Valencia, CA
Dustin R. Pamplona - Twin Falls, ID
Robert Stark - Largo, FL
William Turner - Apex, NC
Augustine C. Saydee - Fort Meade, MD
Theo Economides - Chicago, IL
John A. Simonenko - Douglasville, GA
Ned Chini - Fremont, CA
Scott D. Fybush - Rochester, NY
Lalo Gabremadhin - Sherman Oaks, CA
Doug A. Rosebrugh - Bridgenorth, Ontario, Canada
Gary Temple - Fresno, CA
Andrew W. Vu - Clovis, CA
Jaime J. Baumann - Houston, TX

George M. Harris - Auburn, ME
Joshua A. Knapp - West Sacramento, CA
Michael D. Lucas - Fairburn, GA
Barry Scanlan - Owensboro, KY
Dave Shelton - Vail, AZ
George S. Brewer - Windsor, CT
Selvakumar Chelliah - Las Vegas, NV
Eric J. Hirschberger - Wayne, NJ
Frank G. McCoy - Forest Lake, IL
Donald Mezzetti - Bayside, NY
Shiu Hang Mow - Ma On Shan, Hong Kong
Kimberly A. Mullin - Glenmoore, PA
Saul Erlich - Shawnee, KS
Robert Struppeck - Northern Marianas Islands, AP
Richard C. Grinstead, III - Leander, TX
Jeffrey M. White - Aberdeen, WA
John Colyer - San Diego, CA
Glenn A. Gass, Jr. - Chattanooga, TN
Gilbert Geer - Lancaster, PA
Mark P. Greenhouse - Washington, DC

Richard L. Keltner - Indianapolis, IN
Jack E. Morris - Suffolk, VA
Richard G. Newell - Victorville, CA
Kevin R. Salger - Charlotte, NC
Marcus A. Truex - Doral, FL

New Student Members

David C. Christensen - Holladay, UT
Christina E. Beck - Phoenix, AZ
Rodney T. Freeman - Muncie, IN
Cheung Kwui Pik - Hong Kong
Ching Lee - Hong Kong
Yeung On Yi - Hong Kong
Leung Wai Cheung - KLN, Hong Kong
James M. Garner - Rockville, MD

New Youth Members

Alex Altman - Alameda, CA

Reinstated Members

Marc A. Lehmuth - Kennesaw, GA

Mike W. Irby - Tucson, AZ
Kenneth R. Hunold - Hackettstown, NJ
Derek C. Young - Jersey City, NJ
Robert L. Coyle - Perry, GA
Rusty W. Burchfield - Bakersfield, CA
Leroy E. Marburger - Brownsburg, IN
Harmon D. Throneberry - Jacksonville, FL
Mark S. Brown - Boulder Creek, CA
Paul W. Muskoff - Strongsville, OH
John J. Palumbo - New Orleans, LA
David J. Goldstein - North Dartmouth, MA
Steven C. Thompson - Marietta, GA
Gerald L. Weaver - Broken Arrow, OK
Jeffrey W. Pearce - Washington, NC
Mark A. Jacobson - Streamwood, IL
Antonio E. Puell - Union City, NJ

Reinstated Associate Members

Daniel F. Oswald - Arlington Heights, IL

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

ADC Telecommunications Inc. • 1998
Anne-Marie Gunderson (952) 917-3072
End to End Connectivity Solutions

Advanced Broadcast Solutions • 2008
Mark Siegel (206) 299-9990
Systems Integrator

Ai • 1995
Mark Polovick (607) 215-0653
UHF TV Broadcast Transmitters

American Tower Corporation • 2000
Peter A. Starke (781) 461-6780
Broadcast Tower Development/
Construction/Management

Anixter • 2005
David Ste-Marie (800) 995-6158
Audio/Video Cable & Interconnect Products

Anton/Bauer Inc. • 2004
Paul Dudeck (203) 929-1100
Battery Solutions for ENG

Audemat-Worldcast Systems Inc. • 2000
Christophe Poulain (305) 249-3110
Audio Signal Processing

Audionamix • 2009
Olivier Attia (800) 787-4134
RDS Generator, Metering, Monitoring,
Remote Control Manufacturer

Autumnwave • 2009
Patrick Park (717) 715-0560
TS Analyzer Tuner

AXCERA • 1983
Mike Rosso (800) 215-2614 ext. 101
Television Transmitters & Exciters

Belden Electronic Division • 1991
Kip Coates (765) 983-5200
Cable and Connectivity

Beveridge Consulting, Inc. • 2006
Gregory J. Beveridge (720) 810-3464
Broadcast Engineering Technical Consulting

Bexel • 2009
Garrick Lewis (818) 565-4314; Calrec

Broadcast Electronics, Inc. • 1978
Ray Miklius - Studio Products
Tim Bealor - RF (217) 224-9600
Radio Equipment Manufacturer

Broadcast Engineering Magazine • 1984
Bradley L. Dick (913) 341-1300
Journal of the Broadcast Industry

Broadcast Microwave Services, Inc. • 1997
Tim Noonan (319) 277-4767
Manufacturer, Transmitters, Receivers,
Antenna Systems

Broadcast Supply Worldwide • 1986
Shannon Nichols (800) 426-8434
Audio Broadcast Equipment Supplier

Broadcasters General Store • 2004
Buck Waters (352) 622-7700
One Stop Broadcast Store

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

Chyron Corp. • 1992
Carol Keane (631) 845-2031
HD/SD Character Generators & MOS

Communications Laboratories • 2008
Jared Maynard (321) 409-9898
Emergency Management Network

Comrex Corporation • 1997
Chris Crump (978) 784-1776
Remote Audio Broadcast Equipment

Comsearch • 2004
Tim Hardy (703) 726-5651
Frequency Coordination Services,
Continental Electronics

Continental Electronics Corporation • 1976
Michael Troje (800) 733-5011
FM Analog & IBOC Transmitters

Crouse-Kimzey Co. • 2008
Lee Edwards (972) 660-6100
Broadcast Equipment Sales

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

Dejero Labs • 2009
Bogdan Frusina, CTO (519) 886-8070
Complete Cellular ENG Platform

Dialight Corporation • 2006
Doug Woehler (732) 991-2837
Obstruction Lighting, L.E.D. Based

Dielectric Communications • 1995
Matt Leland (803) 951-7443
TV & FM Broadcast Products

Digital Alert Systems, LLC • 2005
Jim Heminway (585) 765-2254
Emergency Alert Systems

DigiTenna, LLC • 2009
Brad Eckwielen (920) 564-6224
Television Reception Antenna Manufacturing

DSC Laboratories • 2002
Michael Wiegand (905) 673-3211
Test Charts & Illuminators

DTS • 2009
Mark Seigle (425) 814-3200

du Treil, Lundin & Rackley, Inc. • 1985
Jeff Reynolds (941) 329-6000
Consulting Engineers

e2v • 1997
Vijay Patel (914) 592-6050
Klystrons, MSDC IOTs, IOTs, Satcom Amps,
TWTs

Econco • 1980
Debbie Storz
(800) 532-6626 or (530) 662-7553
New & Rebuilt Transmitting Tubes

Empower RF Systems • 2008
Jon Jacocks (310) 412-8100
DTV Transmitter & Translator

ENCO Systems Inc. • 2003
Don Backus (800) 362-6797
Digital Audio Automation & Delivery

ERI - Electronics Research • 1990
David White (812) 925-6000
FM & TV Antennas, Transmission Line, Filters,
Combiners and Towers

Fiber Instrument Sales, Inc • 2009
David J. Porta (315) 736-2206

Floral Systems • 2008
Jim Berry (352) 372-8326
Television Broadcast Automation

Frontline Communications Corp. • 2000
Doug McKay (727) 573-0400, ext. 120
Broadcast/Command/HLS Vehicles

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

Gepco International, Inc. • 1995
Ken Bernd (847) 795-9555
Audio, Video Cable Products

Grass Valley • 2000
William Powers (404) 929-5007
TV/Film Production & Broadcast
Professionals

**Harris Corporation, Broadcast
Communications Division • 1977**
Joe Mack (TV) (513) 459-3406
Chris Pannell (Radio) (406) 556-0280
Bob Duncan (Software) (719) 439-0130
Broadcast Equipment & Services

HD World • 2006
Michael Driscoll (203) 371-6322
HD World Conference & Exposition

Image Video • 1997
Zach Wilkie (416) 750-8872 ext. 228
Under Monitor Tally Display Systems,
Monitor Walls, Signal Alarm Systems

IneoQuest • 2009
Tom Tucker (508) 339-2497
Video Quality Assurance Solutions

Jay S. Gerber, CBT • 1999
(205) 491-6904 Manager,
NFL Frequency Organization Group

JDSU • 2007
Brigitte Robbins (919) 338-5061

Joseph Electronics Inc. • 2003
Yohay Hahamy (847) 501-1584
Broadcasters One-Stop Supplier

Kathrein Inc., Scala Division • 1985
Michael W. Bach (541) 779-6500
Antennas for Broadcasting &
Communications

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

L-3 Communications Electron Devices • 2003
Steve Bliet (570) 326-3561, ext. 229
Tubes, Power

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

LEA International • 2004
Carol Rassier (208) 762-6121
Power Quality Products & Services

Lincoln Financial Media • 2007
Don Shaw (704) 374-3639
Media, Communications

LYNX Technik • 2007
Steve Russel (661) 251-8600
Broadcast Terminal Equip

Markertek Video Supply • 2002
Andrew Barth (845) 246-3036
Audio, Video, A/V Broadcast Supply

Maxell Corporation of America • 1991
Patricia Byrne (201) 794-5900
Broadcast Video Products

Micronet Communications, Inc. • 2005
Jerry Armes (972) 422-7200
Coordination Services / Frequency Planning

Microwave Radio Communications • 1991
Nadine Frechette (978) 671-5700
Video Microwave Systems

Middle Atlantic Products • 2005
David Amoscatto (973) 839-1011 x1192
Enclosures, Power, Accessories, Furniture

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

MoreCom, Inc. • 2009
Kyle Moorehead (763) 533-5535
Networking & AV Construction

Moseley Associates, Inc. • 1977
Dave Chaney (805) 968-9621
RF & T1 STLs

National Association of Broadcasters • 1981
(202) 429-5340
Industry Trade Association

National Football League • 1999
Jay Gerber
Game Day Coordination Operations

Nautel, Inc. • 2002
Gary Manteuffel (877) 662-8835
Radio Broadcast Transmitter Manufacturer

**Panasonic Broadcast & Digital Systems
Company • 1985**
Tom Moore (201) 392-6176
Professional Broadcast Equipment

Pasternack Enterprises • 2001
Christine Hammond (949) 261-1920
Coax & Fiber Products

Pike & Fischer • 1991
Mitch Cohen (646) 424-3817
FCC Rules & Regulation

Prime Image, Inc. • 1997
Rodney Hampton (408) 867-6519
Digital Audio/Video Equipment

Pulsecom • 2003
Dave Corp (703) 471-2908
AM, FM and HD STLs, Copper and Optical

**Quintech Electronics and
Communications Inc. • 2002**
Richard E. Bush (724) 349-1412
RF Signal Management

Radian Communication Services Inc. • 1986
John McKay (866) 4-RADIAN
Towers, Antennas, TV Transmitter Installation

RCS • 2003
Diana Stokoy (308) 284-3007
Audio and Video Content Management, Music
Scheduling, Radio Automation

RDL • 2004
Chuck Smith (928) 778-9678, ext. 142
Audio, Video, Control & Test Equipment
Manufacturer

RF Extreme, LLC • 2009
Don Hoeler (908) 852-3700 ext 3110

RF Specialities of Texas, Inc. • 2008
Don S. Jones (806) 372-4518
Transmitters, Antennas and More

Richland Towers • 2001
David Denton (813) 286-4140, ext. 4235
Tower Owner/Management

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

ROSCOR Corporation • 1998
Tom Voigts (847) 299-8080
DTV System Integration

Ross Video Ltd. • 2000
Kyle Luther (613) 652-4886
Manufacturer, Television Broadcast
Equipment

Salzbrenner Stagetec Media Group • 2009
Russel Waite (888) 782-4391
Professional Audio Solutions

SCM Construction • 2009
Samuel Mitchell (972) 274-5151
General Contractor/Transmitter/Facility
Services

SCMS, Inc. • 2000
Bob Cauthen (800) 438-6040
Broadcast Equipment- New/Used

Seacomm Erectors, Inc. • 1997
John Breckenridge (360) 793-6564
Tower/Antenna Erections

Score, Inc. • 2005
Garrett Carter (800) 736-2673
MPEG Operation and Test Equipment

Shively Labs • 1996
David Allen 888-SHIVELY
FM Antennas & Combiners

Sigmat • 2008
Ed Portko (610) 783-6666
Broadcast Equipment Support Sales

Snell & Wilcox, Inc. • 1995
John Shike (818) 556-2616
Video Equipment Manufacturer

Stainless LLC/Doty-Moore • 2004
Ed Deetscree (215) 631-1323
Tower Engineering/Tower Service

Superior Electric • 1995
Michael J. Miga (860) 507-2052
Power Protection Equipment

Sutro Tower, Inc. • 1989
Eric Dausman (415) 681-8850
Broadcast Tower Leasing

TC Electronic • 2008
Stacey Moran (818) 665-4906
DTV Audio Level Processing

Technostrobe • 2009
Francis Lacombe (877) 578-7623
FAA lights - High Intensity

Tektronix, Inc. • 1977
Jon Hammarstrom (503) 627-6936
TV Test, Measurement Equipment

Telos Systems/Omnia/Axia • 2003
Denny Sanders (216) 241-7225
Telos Systems - Talk-Show Systems

Terrestrial RF Licensing Company • 2003
Steven Slocum (888) 373-4832
FCC Broadcast Auxiliary Licensing Services

TESSCO • 2008
Scott Palermo (410) 229-1562
STL, Cable Test Equipment

**The Durst 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

Tieline Technology • 2003
Kevin Webb (317) 845-8000
POTS, ISDN, Codecs & A/V Products

Total RF Marketing • 2001
Tom Sharkoski (215) 633-1000
Wireless Broadcasting Equipment Rental

Troll Systems, Inc. • 2006
Brian Goldberg (661) 702-8900
Broadcast Control Systems

TV Magic • 2008
Eva Langer (858) 650-3155
Broadcast Systems Integrator

Unimar, Inc. • 2001
Thad Fink (813) 643-6791 or
(813) 943-4322
Tower Obstruction Lighting Designer,
Manufacturer, Distributor

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

V-Soft Communications • 2002
Lisa Erickson (319) 266-8402
Broadcast Engineering Software & Consulting

Ward-Beck Systems Ltd. • 2004
Michael Jordan (416) 335-5999
Metering, Monitoring, Distribution,
Conversion

Warning Systems, Inc. • 2008
Elysa Jones (256) 880-8702
CAP, Warning, Emergency Alert

Westwood One • 2006
Dee Perkins (315) 472-1560
Radio and TV Programming

Wireless Infrastructure Services • 2006
Mr. Travis Donahue (951) 371-4900
Broadcast System Integration Services

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