



the

SIGNAL

BIMONTHLY PUBLICATION OF THE SOCIETY OF BROADCAST ENGINEERS

**AUGUST
2007**

Volume 20, Number 4

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Pittsburgh hosts SBE National Meeting



The 2007 National Meeting of the Society of Broadcast Engineers will be hosted by Chapter 20 of Pittsburgh, Penn. on October 10-11 in conjunction with its Annual Equipment Expo. The Expo is a two-day event that features technical papers and a broadcast equipment and services exhibition. Chapter 20 and SBE National invite any and all SBE members and others interested in broadcast technology to attend.

The 2007 National Meeting of the Society of Broadcast Engineers will be hosted by Chapter 20 of Pittsburgh, Penn. on October 10-11 in conjunction with its Annual Equipment Expo. The Expo is a two-day event that features technical papers and a broadcast equipment and services exhibition. Chapter 20 and SBE National invite any and all SBE members and others interested in broadcast technology to attend.

The SBE National Meeting and Chapter 20 Annual Equipment Expo will be held at the Pittsburgh ExpoMart and Radisson Hotel, located in Monroeville, Pennsylvania, 12

See **PITTSBURGH** on page **15**

National Board Election Underway

The annual election of members to serve on the national Board of Directors is currently taking place. The Board consists of 17 members, including 12 directors and four officers: the president, vice president, secretary and treasurer. The immediate past president completes the Board.

Our Nominations Committee, chaired this year by Board member, James T. Bernier, Jr., CPBE, CBNT of Alpharetta, Ga. has assembled a slate of officer and director candidates who have committed their time and resources to serve if elected. Several additional candidates

have also been nominated by at least ten voting members to run for director seats and have, likewise, made a commitment to serve if elected.

The official ballot was sent via USPS First Class mail no later than July 30th to all voting members of SBE. That includes Regular, Senior and Fellow members and the voting representatives of SBE's Sustaining Members. When the ballot reaches your mail box, please take the time to review the descriptions and opinions of all the candidates, make your

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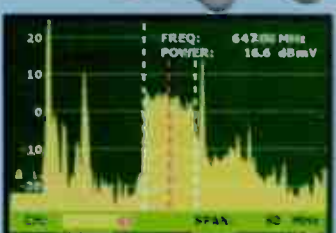
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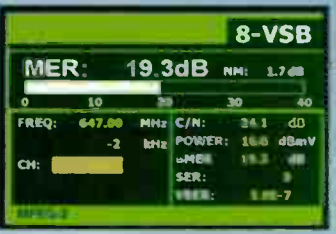
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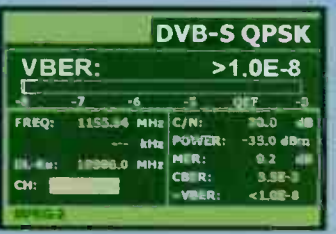
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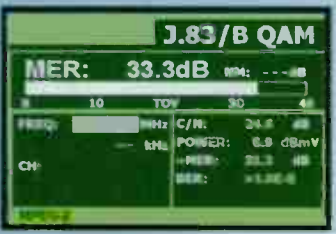
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Clay Freinwald, CPBE, Vice President
Entercom • Auburn, Wash. • k7c7@blarg.net

Vincent A. Lopez, CEV, CBNT, Secretary
WSYT-TV • Syracuse, N.Y. • vlopez@wsytv.com

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Lincoln Financial Media • Atlanta, Ga. • barryt@broadcast.net

DIRECTORS

Ralph Beaver, CBT, Media Alert LLC
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Roseland, N.J. • acvideo2@comcast.net

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

Ted Hand, CPBE, WSOC-TV
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Hal H. Hostetler, CPBE, KVOA Television
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NATIONAL STAFF

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

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

Whitney L. Allen, Communications Manager
wallen@sbe.org

Scott Jones, Database Manager
kjones@sbe.org

Debbie Hennessey, Executive Assistant
dhennessey@sbe.org

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

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Visit SBE at IBC

The Society of Broadcast Engineers will be exhibiting at the International Broadcasting Convention (IBC), held at the RAI Convention Center in Amsterdam, The Netherlands from September 7 through 11. SBE President Chriss Scherer will attend on SBE's behalf and staff SBE's booth at the show.

There were more than 1,000 exhibitors at IBC in 2006 and more than 40,000 people attended from many countries in Europe and other continents. IBC is the second largest

broadcasting exposition event in the world, after the NAB spring convention.

SBE has members in more than 20 other countries outside the United States and has affiliation agreements with eight professional broadcast engineering organizations in seven different countries.

If you are a member or prospective member of SBE and will be attending, we hope you will include a stop at the SBE booth, #9.545.

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selections and return the ballot to the SBE National Office no later than August 30. Use the special election return envelope provided. Allow at least five business days for your ballot to reach the National Office. Allow two weeks if you are outside the U.S. Mail early! Each year a number of ballots arrive after the election is over and consequently are not included in the tabulation.

This year, there are 11 candidates vying for six available director seats on the Board. There is also one candidate for each of the four officer positions.

A group of SBE members from Chapter 25 in Indianapolis will tabulate the votes on the evening of August 30. Candidates will be notified the following day of the results. Those elected will take office following an induction ceremony held during the SBE National Meeting on October 11, in Monroeville, Penn. The National Meeting is being held in conjunction with the Chapter 20 (Pittsburgh) SBE Regional Convention.

The list of candidates follows. More information about each candidate and their responses to questions about their background, opinions and goals for SBE will be found in the material that accompanies the ballot. If you don't receive a ballot by August 6, please contact Whitney Allen at the National Office at (317) 846-9000 or wallen@sbe.org



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Watching the elections

BY **Chris Scherer, CPBE, CBNT**

SBE President

The news of the upcoming government elections is a popular topic in the news, but there's another election that you should be watching as well. The SBE national elections are currently underway, and the ballots are due in the national office by August 30. As an SBE member, you have a voice in choosing the next national leaders of the Society. I hope that you will participate in this important responsibility of SBE membership.

All SBE members in good standing will receive a ballot in the mail. Look for yours soon if it has not already arrived. Included with the ballot is some information about all the candidates. This information provides some insight into each candidate's career experience, industry views and goals for the society. While it's important to return your ballot sooner than later, you should take the time to learn about each candidate. Read the information provided. Discuss the candidates with other members. If you have questions, contact a candidate to learn more about him or her and his or her views.

While there is one officer candidate for each of those positions, there are more board candidates running than the six available seats. Unfortunately, this means that some qualified individuals will not win their election bids. I look forward to seeing these

individuals participate on national committees and projects.

I have reached the end of my term limit as the president of the SBE, so I have no conflict commenting on the elections. I will remain on the board as the immediate past president.

FINDING LEADERS

The national elections are only one part of the Society's leadership path. SBE leadership begins at the chapter level. Some chapters have a robust election process that includes multiple candidates for the positions. Other chapters struggle to get someone to step up to take on even the most basic responsibilities. Either way, a chapter's health can be supplemented by planning a line of succession.

I have heard many people use the excuse that they don't know anything about being a chapter chairman, so they can't serve in that capacity. Actually, the excuse is often used for any chapter position. It's okay to be uncertain in a new situation, but that is not a valid excuse. New chapter leaders can always count on previous chapter leaders to help guide them. If there are no previous chapter leaders, call on some of the elected national directors or on the leaders of another chapter. Every chapter is assigned a liaison from the national board, and that person is an ideal resource.

Don't ever feel that you're on your own.



Any successful project needs a champion, but that champion doesn't have to do it all himself. Delegate tasks, recruit assistance and turn a solo project into a group effort. We're all a part of the SBE, and part of our reason to join is to help other members.

Take an active voice in the leadership of the SBE, be it on the local or national level.

THE NATIONAL BOARD

The SBE national board of directors has six to 12 elected board members and four elected officers. Board members serve two-year terms, and those terms are staggered so that only half the seats are elected each year. Officers serve one-year terms.

The immediate past president is also a voting member of the board of directors.

Term limits allow an individual to serve up to 10 consecutive years in a national position. There are additional limits for officers within that 10-year period.

Complete details about terms and responsibilities of the board of directors are covered in the SBE By-laws.

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The Times, They Are A' Changing



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

Yesterday I was at a meeting in Philadelphia with some of the SBE officers and Board members and a couple of other folks, and the general topic turned to the frequency coordination program. We were talking about the changes that have occurred in the past 25 years in Broadcast Auxiliary spectrum management. While the general consensus was that the practical, technical and regulatory changes in BAS spectrum use have been profound, there have been practically no changes in SBE's frequency coordination program.

I very comfortably started talking (something I am usually comfortable doing) about how proud SBE was that the frequency coordination program was a volunteer program and that it had always been that way, and that it should stay that way because it was one method of providing a useful service at no cost to the broadcast industry, and because coordinated BAS use was a universal good. The program, because it has been successful and enjoys a high degree of cooperation from broadcasters, is also a means of illustrating to non-technical management in a relatively visible way the value and professionalism of broadcast engineering. For SBE, it builds equity that we spend in advocating the interests of broadcast engineers, at FCC, in Congress, and within the industry.

I was comfortable with that view of the coordination program, which is one of the major programs of the SBE (the others being certification, educa-

tion and advocacy). It startled me when I was told by one of the members of our meeting group that in his personal opinion, my view of BAS frequency coordination is antiquated, and that some modernization and profound changes were in order. Since I hate change of any type, I got a bit defensive. Why change what works and what has worked for so long? But driving home later, I realized that perhaps he was right. Because of changes that have already occurred in BAS use, the BAS spectrum, and the scope of the job, maybe our volunteer paradigm is not any longer the best way to proceed. Maybe we need to consider some changes.

BAS frequency coordination 25 years ago was rather straightforward. It was largely the product of the engineering community in Los Angeles (a horribly overcrowded market, both above and below 1 GHz). Figuring out a means of fitting ten pounds of users in a five pound bag, the Southern California Frequency Coordination Committee (NCFCC) set up the Home Channel Plan for local television broadcasters which accommodated both locals and itinerants. It was based on two concepts: (1) basic database maintenance, and (2) licensee-to-licensee contact. Of the two, the latter was the most important. The only purpose of the database was to keep track of fixed point-to-point facilities, STLs, ICRs, etc. and other local users, and to allow itinerants to know who to contact locally to coordinate use of a channel. The database administrator/coordinator's role was largely that of a facilitator, in effect. He or she facilitated a conversation between the local licensees and the itinerants, who

talked to each other to set up something out of the ordinary. It was self-coordination to a large extent. The coordinators using that system weren't attempting to "engineer" a path or an ENG operation for a licensee at all. Some markets still work that way today.

It was extremely important to the Los Angeles engineering community that they be viewed as facilitators of licensee-to-licensee contact. Most of the coordination work was done by engineers who worked for a licensee in that same market. It would be unethical and impolitic for an engineer who worked for a station to attempt to do more than just put licensees in touch with each other and maintain a database of who is where. Otherwise, the engineer opens himself or herself up to allegations of restraint of trade (or worse) if an ENG shot by a competitor fails, or if interference results to an STL, as the result of a recommendation of the coordinator to use a particular channel. Facilitation, not engineering, was what the coordinators did.

With time, the perception of coordinators changed in some markets. Some of the itinerant users envisioned the SBE coordinators in some markets as people who assign channels, or engineer paths for the licensees. And some coordinators, frankly, have come to view themselves as both the assigners of channels and the spectrum police. Given the complexity of many large markets now, that perception, and the role of the coordinators, is certainly understandable and may be inevitable. Doing licensee-to-licensee contact is something that itin-

erants, for example, have no time to do, so they pass that on to the coordinator. "Don't tell me who to call, just tell me what channel to use." It is tempting to minimize the intrusion on your time by just recommending the use of Channels X, Y and Z when the call comes in on a Friday for a Saturday event. But that is a big change in the role of the coordinator.

Some say that when the Part 74 rule changes went into effect a couple of years ago, and fixed BAS facilities, to be licensed or modified, required commercial coordination and PCNs, that reduced the role of SBE volunteer coordinators, who were left with mobile and essentially "event" type coordination to do. I suggest otherwise. I believe that the coordinators still have to keep track of fixed BAS facilities because if they don't, they won't be able to coordinate mobile or itinerant operations in bands where both types of operation occur. And fixed 2 GHz facilities are still coordinated by volunteer SBE

coordinators. Furthermore, coordination of BAS bands no longer just involves BAS licensees. It involves all kinds of sharing partners, compatible and otherwise, that FCC has seen fit to stick into "our" bands. And the event coordination is so complicated now, and the spectrum so crowded, that some engineers have created business opportunities doing the coordination for the larger events that volunteers do for free.

Is it time to consider other strategies? Should BAS coordination continue to be a volunteer project? Is it too much to expect a volunteer or two to handle coordination in a market? Is it the right time to consider making frequency coordination a business opportunity for an enterprising SBE member? These are serious questions, but ones that ought to be thought about before the program fails, or becomes inefficient or flawed, under its own weight. Oh, the times, they are, a' changing.

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New York, Boston, Tampa to host Ennes Workshops

The Ennes Educational Foundation Trust, in cooperation with the Society of Broadcast Engineers, will present three Ennes Workshops in the coming months. The first will be on September 15 in New York City, held at the 4 Times Square building in mid-town Manhattan and sponsored by Chapter 15 of New York City. On October 4, the Bos-Con SBE Regional Convention (Chapter 11, Boston) will include an Ennes Workshop as a part of its program in Marlborough, Mass. at the Best Western Royal Plaza Hotel. Completing the Ennes Workshop calendar for 2007 will be a workshop hosted by Chapter 39, Tampa Bay, at Neilson Media Research, Global Technology and Information Center in Oldsmar, Fla. on Friday, October 19.

Each Workshop is a full-day event and will include both television/video and radio/audio presentations. The full-day format allows presenters to go into more depth with their subjects than the typical conference paper. Presentations are non-commercial and focus on technology.

Here are just some of the presenters and their topics who will participate at all three workshops:

James Heard, ERI - Tower Safety
Jim York, Dielectric Communications; Analog RF Systems - uses in a digital world, retuning and reusing
Steve Lampen, Belden Cable - Proper Wiring Techniques for Broadcasters

John Bisset, Broadcast Electronics on Workbench Tips for radio Engineers

Ennes Trustee, Fred Baumgartner, CPBE, CBNT and the SBE National Office, are organizing the workshops in cooperation with the host chapters. Fred, who is director of broadcast engineering for Media Flo USA in San Diego, will also serve as moderator

for the workshops.

NEW YORK CITY - SEPTEMBER 15

The Saturday, September 15 workshop in New York City will begin at 9:00 am and conclude by 5:00 pm. The 4 Times Square building is located in Mid-town Manhattan at 42nd Street and Broadway. Registration for the workshop includes lunch and breaks and is just \$35 for SBE members and \$45 for non-members. To register, go to the SBE website, www.sbe.org/ennes_workshops.php. Payment can be made by VISA, MasterCard or American Express or by check. Registration by September 12 is required as a list of attendees must be provided to building security in advance. Chapter 15 is arranging special tours of transmitter sites at the Empire State Building and 4 Times Square on Friday, September 14 and tentatively, a trip to the Armstrong Tower facility in Alpine, N.J. on Sunday. The chapter is also inviting those attending the Ennes Workshop to meet at 6:00 pm Saturday for dinner (on your own) at a local restaurant. Spouses are invited. Visit the Chapter 15 website to sign up for the tours and the dinner.

MARLBOROUGH, MASS. - OCTOBER 4

The Bos-Con workshop program will begin at 9:00 am and conclude at 5:30 pm on October 4. The Best Western Royal Plaza Hotel & Trade Center is located 45 miles west of Boston in the town of Marlborough, Mass. The hotel is just off Interstate 495 and US 20. Thanks to the sponsorship of Chapter 11's Bos-Con Regional Convention, the registration fee is just \$25 and includes lunch AND dinner. To register, visit the Bos-Con web site,

www.bos-con.com. Advance registration is strongly encouraged so sufficient seating and food can be arranged. Visit the Bos-Con website to register and for more details at www.bos-con.com.

TAMPA, FLA. - OCTOBER 19

This Friday workshop will be held at the corporate facility of Neilson Media Research located just outside of Tampa in Oldsmar, Florida from 9:00 am to 5:00 pm. Registration for the workshop includes continental breakfast and afternoon refreshments, provided by Neilson. Lunch will be on your own in Neilson's full service café. The registration fee is \$35 for members of SBE and \$45 for non-members. Register at the SBE website, www.sbe.org/ennes_workshops.php. Registration by October 15 is required as a list of attendees must be provided to building security in advance.

Ennes Workshops are one-day educational programs for radio and television engineers and technicians. Topics and presenters are selected who bring the latest information on technology that engineers need today and in the future at their facilities. Each Workshop typically features as many as 10 speakers with topics ranging from 45 minutes to an hour or more. Part of the day, the program splits into dual tracks as many of the sessions are specific for radio or TV engineers.

Program flyers and registration information will be mailed to SBE members within a few hundred miles of each location, but anyone with an interest in broadcast technology is invited to attend.

Educational opportunities abound

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

Late summer and the fall months offer many educational opportunities for SBE members. These equipment tradeshows, seminars and workshops provide a chance to learn about new technology or brush up on some of the existing technology that you may need.

A number of SBE chapters will be sponsoring tradeshows and technical presentations that are economical to attend in both time and money. They offer an opportunity to get up close to the equipment, which may not be possible at the big national shows (if you get to go!). Here's a run down of the events that are coming up.

AUGUST

The annual Nebraska Broadcasters Association Conference is first up on August 17. SBE Chapter 74 is involved with this event, which will be held at the Cornhusker Marriott Hotel, 333 S. 13th Street, in Lincoln. There is no cost. However, registration is required by contacting chapter chairperson, Gina Dierks, CBT, CBNT, CTO at (402) 554-4258 or emailing Gina at gdierks@kptm.com. Information can also be found at www.sbe74.org.

OCTOBER

In October, the annual BOS-CON SBE Regional Convention, presented by Chapter 11 of Boston, will take place on the 4th and 5th in Marlborough, Mass. The venue will be the Royal Plaza Hotel and Trade Center. There is no charge to attend the tradeshow on October 5. Bos-Con will be presenting an Ennes Workshop on October 4th from 9:00 am to 5:30 pm.

The fee for the Workshop is just \$25 and includes lunch and dinner. For more details and to register, visit www.bos-con.com. Bob Yankowitz, CPBE serves as Bos-Con chairman.

Also in October will be the Broadcasters Clinic, a staple on the Wisconsin broadcast engineering calendar for more than 50 years. Chapter 24 works closely with the Wisconsin Broadcasters Association to put this excellent program together. The Clinic will be held on October 9-11 at the Marriott Madison West Hotel in Middleton. The cost to register before September 15 is \$115 for two days or \$130 for all three days. After September 15, the cost increases to \$130 and \$150. Registration includes admittance to the technical papers, trade show and some meals. For additional information, visit www.sbe24.org. The chairman of the Broadcasters Clinic is Don Borchert.

Another October event is the annual Chapter 20 Broadcast Equipment Expo in Pittsburgh, Pennsylvania. This year the event, in its 36th year, will be on the 10th and 11th, with evening exhibit hours on the 10th. The location is the Radisson Hotel and Pittsburgh ExpoMart in the eastern suburb of Monroeville. This year, the Chapter 20 Broadcast Equipment Expo will also be hosting the SBE National Meeting, which will include the Annual Membership Meeting, Fellows Luncheon and National Awards Reception and Dinner (read more about the SBE National Meeting on page one of this issue of the SBE Signal). For more information, visit the Chapter 20 website, www.sbe20.org. Chairman of the Chapter 20 event is John Humphrey, CPBE.



Completing a very full month of October will be the 35th annual SBE Chapter 22 Broadcast & Technology Expo on the 16th and 17th. The location again this year will be the Event Center at Turning Stone Casino Resort in Verona, New York. This event is free to attend and pre-registration is encouraged using their on-line registration system. The Broadcast & Technology Expo includes a large trade show and a full day of technical papers. It also includes pre-show Radio and IT workshops on the 16th. For more information, visit their website, www.sbe22expo.org. Chairman of the event is Tom McNicholl, CBTE.

In addition to the SBE regional conventions, there are three Ennes Workshops scheduled in September and October. The first is in New York City, sponsored by Chapter 15 on September 15; next up is Marlborough, Mass., hosted by Chapter 11 on October 4 and then the workshop in Tampa, Fla., sponsored by Chapter 39, on October 19. Information on all three Ennes Workshops can be found at http://www.sbe.org/cal_conv.php.

Chapter 42 in Orlando is sponsoring an ATSC Digital Television 8-VSB Transmission seminar on August 9-10, led by Gary Sgrignoli.

As you can see, there are plenty of SBE chapter-sponsored opportunities to expand your knowledge this fall and also earn some SBE recertification points while you're at it.

Is your chapter hosting a special educational event in the coming months? Let me know about it and we'll help you get the word out! ●

2.5 GHz TV BAS Band Developments



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

Chairman, SBE FCC Liaison Committee

In 2004 SBE had filed what it felt to be an elegant proposal to solve the conflict between new Broadband Radio Service (BRS) Channel 1 at 2,496–2,502 MHz, the new Mobile Satellite Services (MSS) Ancillary Terrestrial Component (ATC) band at 2,487.5–2,493.0 MHz, and grandfathered TV Broadcast Auxiliary Services (BAS) Channel A10 at 2,483.5–2,500 MHz. As shown by the attached Figure 1 (next page), the SBE solution would occur in two steps: In Step 1 TV BAS Channels A8 (2,450–2,467 MHz) and A9 (2,467–2,483.5 MHz) would be converted to 12-MHz wide digital channels on a narrow-in-place basis. Grandfathered Channel A10 would also be converted to a 12-MHz wide digital channel, but with a 2.25-MHz downward shift in its center frequency. This would keep new Channel A10d1 (d = digital, 1 = Step 1) entirely within existing Channel A10, and thus have minimal impact to on-going analog operations on adjacent-channel A9 (which includes Private Operational Fixed Service (POFS) licensees), while eliminating the present 4-MHz overlap with BRS1. This would allow markets that are converting from the old Instructional Television Fixed Service (ITFS) and Multichannel Multipoint Distribution Service (MMDS) band plan to the new Educational Broadband Service (EBS)/BRS band plan to proceed without fear of massive co-channel interference between mobile cellular-like operations on BRS1 and grandfathered TV Pickup operations on Channel A10 (i.e., electronic news gathering (ENG) operations).

In Step 2 Channels A8d1, A9d1 and A10d1 would be re-packed, beginning at 2,450 MHz, and assigned new center frequencies; this would then place the top of Channel A10d2 at 2,486 MHz, thus not only eliminating the overlap with MSS ATC, but providing a 1.5-MHz guard band between those two mutually-exclusive uses of spectrum. (The conflict

between grandfathered ENG operations on Channel A10 and mobile, cellular-like operations by MSS ATC customers is identical to the incompatibility between MSS and Advanced Wireless Services (AWS, or 3G) operations at 1,990–2,025 MHz. Indeed, this is why the Commission determined, in the ET Docket 95-18 rulemaking, that TV BAS operations would have to be shifted from 1,990–2,110 MHz to 2,025–2,110 MHz. Yet in the IB Docket 02-364 rulemaking the FCC's International Bureau had bizarrely concluded that MSS ATC operations could somehow frequency coordinate (i.e., protect) mobile TV BAS operations on Channel A10 in the same area, at the same time. This is, of course, administrative wishful-thinking by an FCC Bureau that is clearly biased in favor of all things MSS, even to the extent of what borders on spectrum management silliness.

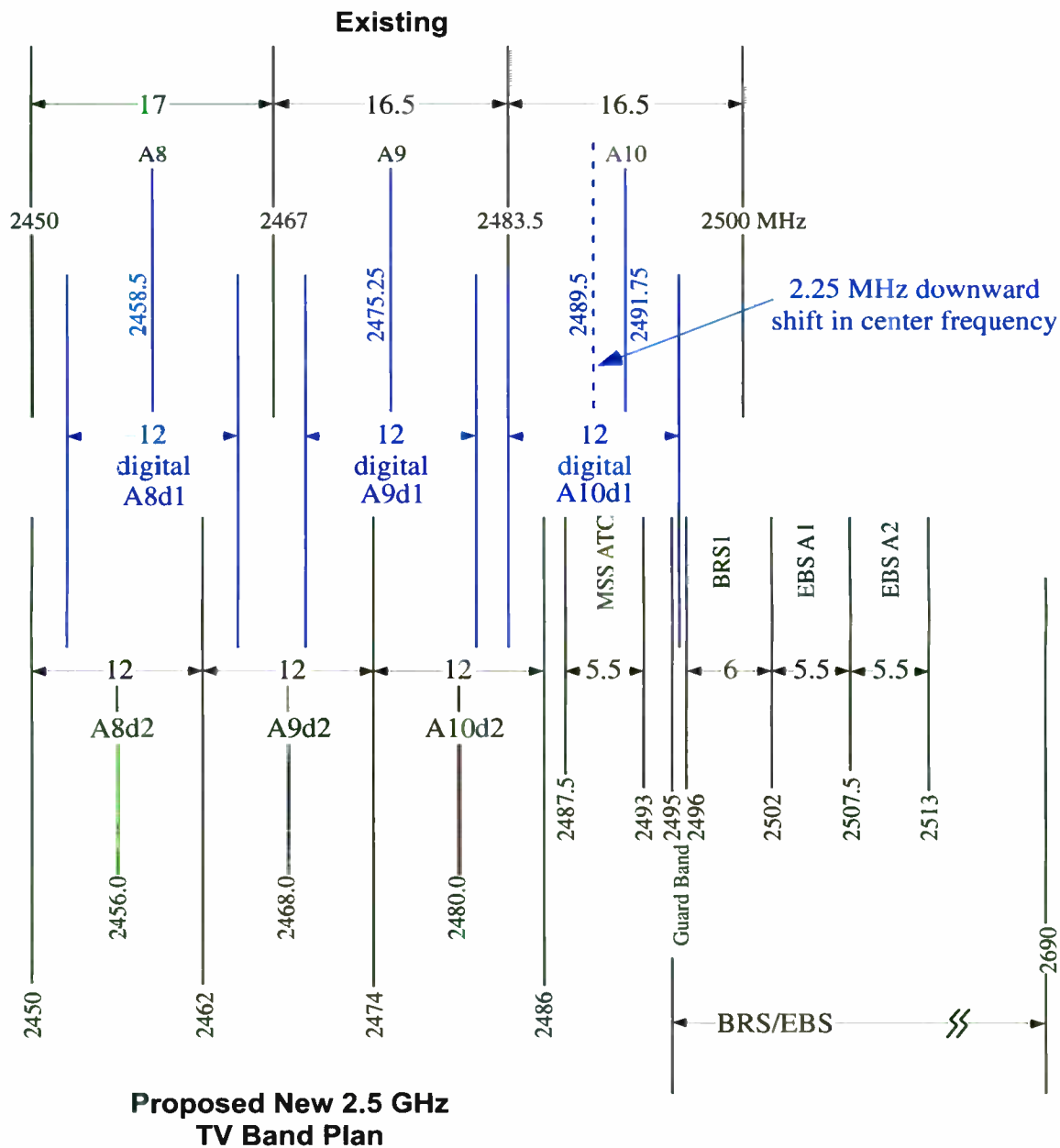
So, SBE was understandably disappointed when its proposed solution to the 2.5 GHz TV BAS Channel A10/BRS1/MSS ATC mess was not eagerly embraced by the FCC, as it would effectively pull both the BRS1 and MSS ATC spectrum chestnuts out of the fire. Further, because all of the new 2 GHz TV BAS digital radios being provided to broadcasters by Sprint Nextel, as part of the de-interleaving of 800 MHz Specialized Mobile Radio (SMR) band, and Sprint Nextel getting 5 MHz of 2 GHz spectrum in return (at 1,990-1,995 MHz, taken from the un-used MSS allocation), these radios are also capable of digital operation at 2.5 GHz. Further, because the SBE-proposed re-farming of the 2.5 GHz TV BAS band would have center frequencies that would be integer-multiples of the 250 kHz steps used by modern radios with frequency synthesizers, adopting the Step 1 center frequencies, and the Step 2 center frequencies when the time comes, would be simple. Thus, the incremental hardware cost to broadcasters would be almost zero, since there are only about ten 2.5-GHz-only TV BAS licensees that are not already receiving new radios as a result of the Wireless Telecommunications Bureau

(WT) Docket 02-55 rulemaking that obligates Sprint Nextel to provide new radios to all 2 GHz TV BAS licensees.

MAY 30 SBE-SPRINT NEXTEL MEETING AT THE FCC BREAKS THE LOGJAM

However, as a result of a May 30 meeting at the FCC between SBE and Sprint Nextel representatives and Office of Engineering and Technology (OET) staffers, it now appears that the Commission will proceed with the SBE-proposed re-farming of the 2.5 GHz TV BAS band. One additional advantage of this re-farming would be the restoration of a third channel at 2.5 GHz to all TV BAS eligible entities; currently, only the roughly 110 TV BAS licensees that held licenses that included Channel A10 authority as of July 25, 1985, have grandfather rights to use this channel. Because this is such an important right, since grandfathered Channel A10 stations are co-primary with MSS, those TV BAS licensees have been careful not to let the license inadvertently expire, and thus lose the grandfather rights to Channel A10. Further, since a TV Pickup license does not limit the number of transmitters that can be used by a licensee, the extent of the grandfathered operations could actually increase over time. This means that if those grandfathered stations were to continue to operate on the present Channel A10, MSS ATC operators would be obligated to protect the co-primary and earlier-in-time TV BAS Channel A10 operations. As was pointed out by SBE in its IB Docket 02-364 comments, the only way this could happen would be for MSS ATC to shut down their base stations when a grandfathered Channel A10 TV Pickup station needed to operate in the same area. This, of course, would most likely not be acceptable to MSS operators, or to their customers, so a band-clearing is the only solution, just like was done for the 2 GHz TV BAS band. ●

Existing vs Proposed New 2.5 GHz TV BAS Band Plan



All frequencies and bandwidths are in MHz.



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SOCIETY OF BROADCAST ENGINEERS, INC.
 Indianapolis, Indiana

You know you're good ... but prove it!

BY **Doug Garlinger**
SBE Certification Committee

The SBE began offering an 8-VSB Specialist Certification last year in anticipation of the growing need for Broadcast Engineers to demonstrate their competence in the new U.S. Digital television standard. The 8-VSB Specialist Certification is open to all television broadcast engineers currently holding 5-year level CBTE or higher.

Many transmitter engineers are in an aging demographic group and are thinking about retirement in a few years rather than subjecting themselves to testing in a new technology and modulation scheme.

However, we know from experience that stations get sold and department heads change.

When that happens, a transmitter engineer, who has enjoyed years of job security at his station, can suddenly be in the position of having to prove himself all over again. Worse yet, it may be necessary to leave the station, voluntarily or involuntarily, and try to move to a better work environment. Or perhaps, after retirement from your regular employment, you may want to offer your hard-earned experience to other stations in your market or at your dream retirement location for extra income.

I have heard it so many times over the years from seasoned transmitter engineers, "I don't need to take a test to prove what I already know. The station's on the air isn't it? That's proof enough. Nobody else knows that transmitter the way I do and if they get rid of me they'll find that out in a hurry, the hard way."

All of those statements may be true, but it has been my observation that new owners and

new supervisors sometimes do have to learn those lessons the hard way. But, that doesn't keep you employed or get you your job back.

With respect to your financial future, it is wiser to consider yourself as a professional that can perform a valuable service rather than simply as an employee. You should take a new look at the skills you possess and how you can hone them further. You need to be thinking of ways you can "sell" yourself to a new boss, new owner or a new station. In the marketing terms that we so love, you need to "brand" yourself. An SBE Certified Broadcast Engineer with an 8-VSB Specialist Certification is a brand to be proud of and it is recognized and respected within the broadcast industry.

Our world as television transmitter engineers is about to change forever. In just 18 months, analog TV will be gone and there will be only 8-VSB modulation for full-power over-the-air television stations. Management is starting to get that. The DTV transmitter used to be largely ignored and if it was off the air for a while you didn't get any flack. It may have been difficult to get repairs or improvements approved. In recent months, that attitude is changing and I'll bet you have seen that change at your station.

The FCC is deadly serious about the Feb 17, 2009 analog shut-off date. If you doubt this, just ask the company that was recently fined \$2.8 million dollars for importing television sets without a DTV tuner. If you have put off learning about 8-VSB, you still have time and you will be surprised to learn how much you already know.

In its simplest concept, an 8-VSB transmitter uses essentially single-sideband suppressed-carrier modulation and acts as a 19.39 Mbps

one-way modem. The instantaneous amplitude of the 8-VSB RF envelope is sampled every 93 ns. When sampled at the proper symbol clock sampling times, the in-phase (X-axis) value of the signal corresponds to one of 8 specific digital values that are typically displayed in a constellation diagram as 8 vertical bands (representing constellation units) from left (-7) to right (+7).

In Figure 1, note the two phasors from the center of the display to the upper left (-7 level) and upper right (+7 level). A concept you may encounter when studying for the 8-VSB Specialist Certification test is, "Which phasor represents the instantaneous sample where the 8-VSB signal has the largest RF carrier envelope?"

Well, the phasors are obviously the same length, so the answer must be that the RF carrier envelope is of equal amplitude for both the sampled -7 level and the +7 level. You may think this is true because you are accustomed to seeing a constellation display that does not account for the 1.25 offset for the pilot. However, a +7 is actually a +8.25, a -7 is -5.75 and a -1 is +0.25. The true zero point is just to the left of the -1 symbol band. When you look at Figure 2, it is now quite clear that phasor 2 is of greater amplitude.

This is a useful piece of information when you observe a constellation display showing a "bowing" of the +7 level such as on the right side of Figure 3. It is likely that this HPA device has reached saturation and is beginning to clip the 8-VSB signal. It is somewhat analogous to observing sync compression in an analog television transmitter. You have simply run out of amplifier head-room. You already knew this, if you had just given it some serious thought.

If you have an interest in pursuing the 8-VSB Specialist Certification, the 8-VSB SBE Certpre-view Sample Test software offers a sample test very much like the actual test and is a worthwhile investment. The SBE, in cooperation with Focal Press, plan to release a new book entitled "ATSC Digital Television Transmission: 8-VSB Theory and Practice" by Gary Sgrignoli. This book should be available in 2008. ●



Figure 1



Figure 2



Figure 3

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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Kurt Haase, Pittsburgh, PA - Chapter 20
Charles Lewis, West Jefferson, NC

CERTIFIED BROADCAST TECHNOLOGIST® (CBT)
John Landry, Middleton, CT - Chapter 14

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.

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SBE CERTIFIED SCHOOL COURSE COMPLETION

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Southern Alberta Institute of Technology
Alexander Bershadsky
Kamal Bhangale
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Billy Chan
Angus Cox
Rheal Dumais
Anthony Prins
Giuseppe Scrozzo
Cameron Thomson
Shawn Tompkins
Ryan Vanner
Bates Technical College
Frank Beals, Carlton, OR
Mike Bergman, Ruston, WA
Matthew Gassman, University Place, WA
Chad Giles, Covington, WA
Steve Rosario, Tacoma, WA
Todd Sykes, Graham, WA
Austin Taylor, Fircrest, WA
Boise State University
William Russell, Boise, ID
David Thimsen, Boise, ID

JUNE EXAMS

"Thank You" CHAPTER CERTIFICATION CHAIRS FOR YOUR ASSISTANCE

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Jason Knapp, Columbus, OH - Chapter 52
Mike Raide, Shortsville, NY - Chapter 57

CERTIFIED BROADCAST RADIO ENGINEER (CBRE®)
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CERTIFIED VIDEO ENGINEER® (CEV®)
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Sam Vasa, Olney, MD - Chapter 37

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Chuck Ingle, Roscoe, IL - Chapter 96
John Mulhern, Liberal, KS

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Brian Bonds, Gary, IN - Chapter 26
Chris Cormier, Orlando, FL - Chapter 42
Larryson Foltran, Detroit, MI - Chapter 82
James Godfrey, Kent, OH - Chapter 70
Aaron Hillman, Spokane, WA - Chapter 21
Randall Jones, Newman Lake, WA - Chapter 21
David Kolesar, College Park, MD - Chapter 37
Victor Munoz, El Paso, TX - Chapter 38
Tom Needham, Owasso, OK - Chapter 56
Mike Raide, Shortsville, NY - Chapter 57
Erich Rastetter, Douglaston, NY - Chapter 15
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John Tyler, Pawcatuck, CT - Chapter 14

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Jim Grubbs, Springfield, IL - Chapter 49

Harold Henderson, New Orleans, LA - Chapter 72
Jason MacDonald, Quail Valley, CA - Chapter 131
Clinton Hooper, Madison, TN - Chapter 103
Terry James, Dahlgren, IL - Chapter 121
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Chris Fetter, Fort Worth, TX
Eric Jingst, Perysburg, OH
Ron Rogers, Spring, TX
Troy Schaefer, Springfield, IL
Bill Sherwood, Tulsa, OK
Kent State University
Joseph Meyer, Wooster, OH
Colin Moriarty, Canton, OH
Erik Semall, Kent, OH
Josh Talbott, Kent, OH
Griffin Truxell, Akron, OH
David Ullman, Kent, OH
Patrick Wentz, Aurora, OH
Alyssa Zimmerman, Kent, OH
TXCN/WFAA
David Boyd
Kelly Ethridge
Larry Harper
Kristina McCaleb
Randy McLean
Chris Nixon
Mike Purdy
Melissa Rasmussen
Jason Roach
Andrita Studios/Playboy
Charles Dorn
Tobey Jones
Kris Miya
Justin Richardson
Harvey Salter
Tremain Whidbee

RE-CERTIFICATION

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

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James Bernier, Jr., Alpharetta, GA - Chapter 5
Robert Richardson, Montpelier, VA - Chapter 60

CERTIFIED SENIOR RADIO ENGINEER (CSRE®)
Alan Lane, Huntersville, NC - Chapter 45
Troy Pennington, Nashville, TN - Chapter 103

CERTIFIED SENIOR TELEVISION ENGINEER (CSTE®)
Steven Benedict, Vancouver, WA - Chapter 124

CERTIFIED BROADCAST RADIO/TELEVISION ENGINEER (CBRTE)
Chris Brown, Arcadia, CA - Chapter 47

CERTIFIED BROADCAST RADIO ENGINEER (CBRE®)
James Cooper, III, Lyman, SC - Chapter 86

CERTIFIED BROADCAST TELEVISION ENGINEER (CBTE®)
J. Mark Hillman, Dayton, OH - Chapter 33
Michael Jackson, Sugar Hill, GA - Chapter 5

CERTIFIED AUDIO ENGINEER® (CEA®)
Ron Jones, Manhattan, KS - Chapter 3

CERTIFIED BROADCAST NETWORKING TECHNOLOGIST® (CBNT®)
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Chris Brown, Arcadia, CA - Chapter 47
John Caluger, Hendersonville, TN - Chapter 103
Regner, Capener, Sunnyside, WA - Chapter 136
Shui Wah Cahn, Cerritos, CA - Chapter 47
Joe Cordova, Henderson, NV - Chapter 128
Paul Dausman, Lake Oswego, OR - Chapter 124
Mario Hieb, Salt Lake City, UT - Chapter 62
Marvin Marcelo, Pullman, WA - Chapter 117
Troy Pennington, Nashville, TN - Chapter 103
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Christopher Imlay, Silver Spring, MD - Chapter 37
James McCoy, Bristol, VA - Chapter 113
John O'Brien, La Canada, CA - Chapter 47
Korey Pack, Zion, IL - Chapter 26
Richard Serre, Moline, IL - Chapter 65

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Paul Colton, Boulder, CO
Yolanda Dozier, Las Vegas, NV
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David Rowe, New York, NY
Thomas Smith, Landing, NJ
Roderick Toombs, Atlanta, GA
James Walters, Duluth, MN
Esseline Woody, Richmond, VA

A Real Problem: Real Code Use in EAS Tests

BY the SBE EAS Committee

"WHEN THE LEVEE BREAKS, MAMA, YOU GOT TO MOVE."¹

But what if the levee didn't break and this was only a test? Tests of the Emergency Alert System are currently being sent in some areas using real emergency codes. Is there the potential for confusion? You bet. The requests come from two sources, the National Weather Service and state and local emergency managers. Both sources say they want to be sure the nation's premier public warning system is functioning properly but a recent SBE press release says that these so called "live" or "hot" code tests should be discouraged at least until technology can come to the rescue.

SBE recently became aware of talks between the NWS and the FCC on the possibility of sanctioning broadcasters' use of real EAS event codes for test purposes. NWS officials say the use of real codes helps NOAA weather radio owners tell if their devices are properly programmed and helps broadcasters determine if their EAS equipment is functioning properly. NOAA has established programs in more than a dozen states to issue EAS tests using the real event codes for tornadoes or severe weather just before extreme weather season arrives in those states. SBE is very concerned about potential FCC blessing of this practice since "real" tests on the NOAA Weather Radio network also trigger "real" EAS events in the broadcasting world.

Several years ago a few emergency managers and law enforcement officials picked up the idea and pushed for their own "live" tests using real codes. The state of Alaska, for example, has even received an STA (Special Temporary Authority) from the FCC for

four annual statewide tests that used real event codes for tsunamis and AMBER Alerts.² Officials in other states have requested similar tests because they say it will let them know whether or not EAS equipment works for those codes.

As broadcast engineers, station managers, cable operators and EAS Committees have become more aware of the interest in "live" tests, some have raised strong objections to the use of warning codes for any purpose other than that intended in Part 113. SBE feels that "live" testing using real codes is a bad practice. Why? The FCC-mandated EAS protocol results in a "crawl" or scroll on local television stations and cable TV systems that indicates a real emergency is occurring. This can potentially confuse viewers who hear one message and see another. It is potentially more confusing for viewers who may have the audio turned down or are hearing-impaired, or who are watching TV's in public places such as bars and restaurants or shopping centers.

The Committee has also found that some EAS state and local committees are being left out of the "live" code test decision process. As a result, the Committee urges EAS Committees to develop a strong working relationship with their NWS staff and be aware that the stated NWS policy is that EAS committees must give permission for any NWS "live" code testing in their areas.

It will be more difficult to stop the use of non-weather event codes for tests in areas where state and local emergency managers have their own EAS equipment along with the responsibility for sending regular tests. Again, a good working relationship with these officials will be needed to educate them about the negative consequences of "live" code tests.

The current EAS has no way to visually display a message indicating that

a warning is a test when that message is sent with a real event code. This situation will be remedied when EAS messaging transitions to CAP, the Common Alerting Protocol, since CAP provides for a visual display or scroll of information that corresponds with the audio message. Until that time, "live" code tests will continue to display scrolls or crawls stating that a real emergency exists.

SBE notes that many broadcast managers initially supported EAS because it was billed as an adaptable, adjustable system that could be tailored to a station's specific community and audience. The promise was that EAS would be less intrusive to programming and put control of warning messages squarely in the hands of licensees. "Live" testing using real codes takes away that control.

As an alternative to "live" code testing, EAS Committees should become more involved in monitoring the network's credibility and reliability. EAS Committees may want to consider monthly audits of their stations for reception, audio clarity and rebroadcast of EAS activations. This could be done with an email or fax survey, or phone calls to the EAS representative at each station. Given the current trend of consolidation, this wouldn't involve as many calls or emails as you might think. EAS Committees could also enlist the assistance of their state broadcaster association in this process.

Another approach might be to tap into our own resources to help the NWS by publicizing the advantages of NOAA weather radios. Sometimes we tend to overlook our "bully pulpit". After the first weather activation of the year, broadcasters could run PSA's advising owners to make sure their NOAA weather radios received the message and where to go for assistance in programming their radios.

There are two advantages to this idea—it doesn't cost any money and it doesn't matter whether our radio or TV station broadcast the actual NOAA activation, we're just telling consumers to make sure their NOAA product worked properly.

With emergency messages now coming at us from virtually every electronic wireless device, there is a need to open up an ongoing dialog among all warning stakeholders as to whether the use of "live" codes will reinforce public confidence in EAS warnings or, worst case, create a latter day 1938

"War of the Worlds" panic.

There is an oft-repeated mantra in emergency management that all emergencies are local. While SBE has real concerns about this issue, we believe firmly that local areas must always have a lot of say in what their local policies are. The important thing is to open a dialog at the local level among all stakeholders, and keep it open. Broadcasters, and especially broadcast engineers, have traditionally been key stakeholders in the public warning process. Now is the time for the broadcast engineering

community to show leadership especially at the local level. The goal: To devise better policies in concert with other warning stakeholders for a wide range of emergency public information issues that can help save lives and property. ●

¹ Kansas Joe McCoy and Memphis Minnie 1929, Led Zeppelin, 1971

² Darlene Simono, Alaska Broadcasters Association, Western States EAS Summit, 4/16/07

PITTSBURGH from page 1

miles east of downtown Pittsburgh. The ExpoMart address is 105 Mall Boulevard which is just off Pennsylvania Business Route 22.

The schedule for the National Meeting includes the fall meeting of the Board of Directors from 6:00 pm to 10:00 pm on Wednesday, October 10. Activities on Thursday, October 11 will include the annual SBE Fellows Reunion. This year, it will be a luncheon, from 12 Noon to 1:00 pm. Also on Thursday will be the Annual Membership Meeting from 4:00 pm to 5:00 pm, followed by the National Awards

Reception from 5:00 pm to 6:00 pm. The SBE National Awards Dinner (ticket required) will highlight the evening beginning at 6:00 pm. A special guest speaker will be featured and, of course, the SBE National Awards will be presented.

Other meetings to be held include the National Certification Committee from 2:00 pm to 4:30 pm and the Frequency Coordination Committee from 1:00 pm to 4:00 pm, both on Wednesday.

The Equipment Expo schedule includes exhibits from 5:00 pm to 8:00 pm on Wednesday the 10th, followed by a reception. On Thursday, following a 7:30 am breakfast with speaker, the exhibit floor

will open again from 9:00 am to 5:00 pm and will feature more than 50 exhibitors displaying equipment and services for broadcasters and those in related fields. Technical papers will also be presented on Thursday from 9:00 am through 4:00 pm. A special panel consisting of past national SBE presidents is also in the works.

For more information about the SBE Chapter 20 Equipment Expo, visit their website, www.sbe20.org/expo.

Tickets for the SBE National Awards Dinner are just \$14 per person and can be ordered by contacting Debbie Hennessey at the SBE National Office at (317) 846-9000 or dhennessy@sbe.org. Please provide your name, address, the number of tickets you would like and credit card information. VISA, MasterCard and American Express are accepted.

<h1>ENNES</h1> <p>EDUCATIONAL FOUNDATION TRUST</p>	<p>thanks the following supporters for their contributions:</p>
<p>Harold Ennes Scholarship Fund John Lyons, New York, NY Ricky Faison, Tacoma, WA Richard Cassidy, Rockville, MD Michael Golchert, Pelham, AL David Stewart, Dallas, TX Chapter 20, Pittsburgh, PA</p>	<p>Robert Greenberg Scholarship Fund John Lyons, New York, NY David Stewart, Dallas, TX</p> <p>Youth Scholarship Fund John Lyons, New York, NY Thomas Hackett, Burke VA Christopher English, Orlando, FL</p>
<p>The Ennes Educational Foundation Trust offers scholarship, presents educational programming and provides grants for educational projects that benefits broadcast engineering and the broadcast engineer. To make a tax-deductible donation, make your check payable to the Ennes Educational Foundation Trust.</p> <p>Mail donations in care of the Society of Broadcast Engineers, 9102 North Meridian Street, Suite 150, Indianapolis, IN 46260. The Ennes Trust is a 501(c)3 non-profit, charitable organization, EIN# 35-1506445.</p>	

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

The digital and analog signals are combined in a high level HD Radio combined system by the:

- A) antenna
- B) exciter
- C) injector/coupler
- D) exporter

Question taken from SBE CertPreview. Turn to page 16 for the answer.

SBE Lifetime Achievement Award

Nominations are still open for the SBE Lifetime Achievement Award. This award recognizes and pays tribute to individuals for their dedication, lifelong achievement and outstanding contribution to the broadcast industry. Nominees must be age 55 or older, or have been active in the field for 25 years or more; preferably SBE members in good standing and have retired from active service to the broadcast industry or a closely allied field that benefits broadcast engineering. Nominations must come from SBE members in good standing, and will include the endorsement of three other SBE members in good standing. Nominations for this award can be made at any time, but no more than one recipient will be named in a

given year.

Awards are determined by a 3/4 majority vote of the SBE Board of Directors, based upon recommendations made by the SBE Awards Committee.

Nominations should include the nominee's city and state, career biography and a detailed written description of the nominee's contributions. Nominations to be considered by the SBE Board of Directors at their next meeting, Oct. 10, 2007 should be submitted to the SBE National Office by September 14, 2007. For additional information, please contact Larry Wilkins, CPBE, AMD, CBNT, Awards Committee Chair, at (334) 240-9274, larry.wilkins@cumulus.com or Whitney Allen at (317) 846-9000 or wallen@sbe.org.



John George was recently named Vice President of domestic sales at LBA Technology Inc. He was most recently a regional sales manager for Dielectric Communications in the Southeast.

Jim Skinner has recently accepted a position as staff engineer at Pappas Telecasting in Omaha, Nebraska. He was most recently employed by Back to the Bible in Lincoln.

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


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 May, 2007 through July, 2007

Coordinator	Location	Affiliation
J. Robert Keeler	Hixon, TX	Chapter 103



C. injector/coupler.
High-level combining of FM and HD Radio transmitters traditionally use a 10dB coupler.

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This basic guide to the fundamentals underlying all television and video systems is written for students and nontechnical professionals. Learn how the principal pieces of equipment work, what their functions are and how they are integrated to form a complex video system. This edition has been updated to reflect the industry shift to digital video and includes new information on compression, television standards, LCD displays, HD and equipment. Item #F-26 - Pub. 2005 - 208pp

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Broadcast Engineer's Reference Book

JOE TOZER

Compiled by leading international experts, this reference covers every aspect of broadcast technology from camera to transmitter - encompassing subjects from analog techniques to the latest digital compression and interactive technologies in a single source. Written with a minimum of math, it provides detailed coverage and quick access to key technologies, standards and practices for those with an audio, video, communications or computer background. Item #F-73 - Pub. 2004 - 1034pp

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ROBERT L. SHRADER

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Introduction to SNG and ENG Microwave

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JERRY WHITAKER, CPBE, AND BLAIR K. BENSON

With more than 70% all-new material, this handbook emphasizes practical applications, including design, production, installation, operation and maintenance of recording studios, broadcast centers and multimedia operations. It also offers a CD-ROM packed with diagrams, photos and more. Item# M-45 • Pub. 2001 • 896pp

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

NEW MEMBERS

Stephen R. Ambrose - York, PA
Dave Anderson - New Port Richey, FL
Anne V. Aurigue - Cypress, CA
Don Bennett - Medford, OR
John L. Bennett - Brooklyn, NY
John Bisang - Elmont, NY
George W. Blessing - Murray, NE
Robert E. Buie - Clinton, MS
Al Cherne - Park Ridge, IL
Sheila D. Cowley - Tampa, FL
Todd Creamer - Marion, IL
Kenneth L. Cummings - Bloomington, MN
Kyle C. DeOnier - Salt Lake City, UT
Tamara H. Ehle - San Jose, CA
Larry R. Eskridge - Chicago, IL
Frederick Fazekas - Middle Island, NY
Tony Fernandez - Sarasota, FL
Charles Fisher - Berwyn, IL
Ken Freed - Rehoboth, MA
Richard L. Garman - Yigo, GU
Mark Gleeson - Culver City, CA
Jim Grubbs - Springfield, IL
Matthew J. Harchick - Germantown, MD
Brendan C. Heddle - Bethpage, NY
Brad C. Hester - Oklahoma City, OK
Stephen P. Jensen - Oregon City, OR
Simon R. Ledbetter - Morrisville, NC
Richard E. Lee, Jr. - Williamsburg, VA
David A. Lemley - Kennesaw, GA
Jason D. MacDonald - Quail Valley, CA
Patrick C. Mahon - Roseville, MI
Michael M. Martinez - San Diego, CA
Robert W. Meister - Hamden, CT
Rashonna V. Moore - Oklahoma City, OK
Robert L. Morales - South Riding, VA
Larry D. Nunnery - Camden, TN
David M. Ochoa - Richmond, CA
Gabriel Ortega - Roseville, CA
Javier A. Ramos - San Antonio, TX
John C. Robson - Chicago, IL
Carlos Ruiz - Ontario, CA
Frederick W. Seibold - Sadorus, IL

David F. Senzig - Byron Center, MI
Matthew Shea - Amherst, NY
Joel Simon - Los Angeles, CA
Michael C. Snyder - Orange, TX
Fred L. Springer - Altadena, CA
Steven M. Szalay - Phoenix, AZ
Michael G. Tadros - Schaumburg, IL
Maki Tamura - Los Angeles, CA
Glen Tapley - Odenville, AL
Greg Teagarden - Palm Beach Gardens, FL
Pete Tridish - Philadelphia, PA
Dan Twomey - Daly City, CA
Timothy Woodard - Pago Pago, AS
Leonard Youngblood - Norman, OK

NEW STUDENT MEMBERS

Mark A. Benincosa, II - Clarksburg, WV
Alexander M. Bershadsky - Calgary, Alberta, Canada
Kamal Bhangle - Burnaby, British Columbia, CA
Ralph R. Brown - Seaside, CA
Russell G. Catt - Ottawa, Ontario, Canada
Billy Chan - Calgary, Alberta, Canada
Angus A. Cox - Calgary, Alberta, Canada
Jesse A. DeMarco - Brooklyn, NY
Ben G. Doing - Verona, WI
Rheal E. Dumais - Airdrie, Alberta, Canada
Teri D. Green - Chicago, IL
Andrew W. Havlovick - Oshkosh, WI
James R. Holloway - Mattawan, MI
Brian M. Mills - Napa, CA
Earial M. Petersen - Star, ID
Jon W. Petty - Alpena, MI
Anthony G. Prins - Red Deer, Alberta, Canada
John T. Ries - Lake Forest, IL
Giuseppe Scrozzo - Woodbridge, Ontario, Canada
Charles B. Scudder - Murfreesboro, TN
Cameron Thomson - Calgary, Alberta, Canada
Shawn Tompkins - Calgary, Alberta, Canada
Ryan M. Vanner - Cochrane, Alberta, Canada

NEW ASSOCIATE MEMBERS

Bradley M. Fisher - Portland, OR
Rolando C. Manuntag - Tamuning, GU

NEW YOUTH MEMBERS

Patrick N. Forman - New York, NY

REINSTATED MEMBERS

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Dale L. Andrus - Beaumont, CA
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David A. Berry - Apopka, FL
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David A. Dybas - Buffalo Grove, IL
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Scott Sheriff - Delta, CO
William R. Shrode - Athens, AL
Donald R. Vanderweit - Manhattan Beach, CA

2007 Member Drive comes to a close

The 2007 New Member Campaign has come to a successful close. The SBE National Office would like to thank the members who recruited new members. All participants are winners, earning \$5 off their 2008 dues for each new member they recruited (up to \$25).

Following is a complete list of winners drawn June 30 at the SBE Executive Committee Meeting held in Indianapolis, Ind.

2007 PRIZE WINNERS

GRAND PRIZE:

Norbert Young – Chapter 40, San Pablo, CA
Trip to the National Meeting from SBE

1st PRIZE:

John Humphrey – Chapter 20, Edgeworth, PA
Year Subscription to Broadcast Regulation Web Edition (\$375) from Pike & Fischer

2nd PRIZE:

Steven Bottkol – Chapter 85, Yukon, OK
30 GB Apple iPod from Middle Atlantic Products

Steve Rowell – Chapter 42, Lake Mary, FL
\$100 L.L. Bean gift certificate from Shively Labs

Larry Will – Chapter 18, Glen Mills, PA
\$100 Lands End gift certificate from Acrodyne

Rodney Zeigler – Chapter 3, Lexington, NE
Hat, Shirt, Screwdriver set from Broadcast Electronics

Randall Hisle – Chapter 54, Williamsburg, VA
Hat, Shirt, Screwdriver set from Broadcast Electronics

Charles Zarriello – Chapter 58, Voorheesville, NY
Hat, Shirt, Screwdriver set from Broadcast Electronics

John Goran – Chapter 110, Freeport, ME
Hat, Shirt, Screwdriver set from Broadcast Electronics

William Ruck – Chapter 40, San Francisco, CA
USB Hub/Port Extender from Rohde & Schwarz

Steven Bottkol – Chapter 85, Yukon, OK
USB Hub/Port Extender from Rohde & Schwarz

Thomas McNicholl – Chapter 22, Whitesboro, NY
USB Hub/Port Extender from Rohde & Schwarz

Larry Bloomfield – Chapter 76, Florence, OR
USB Hub/Port Extender from Rohde & Schwarz

Joseph Huk – Chapter 82, Adrian, MI
USB Hub/Port Extender from Rohde & Schwarz

Rem Roberti – Chapter 141, White City, OR
XL T-shirt from Telos Systems/Omnia/Axia

James Bernier – Chapter 5, Alpharetta, GA
XL T-shirt from Telos Systems/Omnia/Axia

William Ruck – Chapter 40, San Francisco, CA
XL T-shirt from Telos Systems/Omnia/Axia

Steven Bottkol – Chapter 85, Yukon, OK
XL T-shirt from Telos Systems/Omnia/Axia

Eugene Wilczak – Chapter 82, Howell, MI
XL T-shirt from Telos Systems/Omnia/Axia

Edward Schober – Chapter 18, Haddon Heights, NJ
XL T-shirt from Telos Systems/Omnia/Axia

Rick Carrara – Chapter 141, Medford, OR
XL T-shirt from Telos Systems/Omnia/Axia

Gary Stigall – Chapter 36, San Diego, CA
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Robert Kelley – Chapter 161, Agana, GU
XL Polo Shirt from Crispin Corporation

Kevin Kidd – Chapter 111, Lawrenceburg, TN
XL Polo Shirt from Crispin Corporation

Daniel Ryson – Chapter 37, Manassas, VA
XL Polo Shirt from Kathrein Scala Division

Richard Burden – Chapter 47, Canoga Park, CA
XL Polo Shirt from Kathrein Scala Division

Thomas May – Chapter 28, Milwaukee, WI
XL Polo Shirt from Kathrein Scala Division

Van Craft – Chapter 89, Anchorage, AK
XL Polo Shirt from Kathrein Scala Division

Steve Mankowski – Chapter 47, Los Angeles, CA
Polo Shirt from Moseley and Associates

Kenneth Sleeman – Chapter 37, Rockville, MD
Polo Shirt from Moseley and Associates

John Tway – Chapter 131, APO, AE
Polo Shirt from Moseley and Associates

Michael Erickson – Chapter 15, Holbrook, NY
Polo Shirt from Moseley and Associates

William Kennedy – Chapter 70, Canton, OH
Coffee Mug from Moseley and Associates



What's on your mind

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

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

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

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

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End to End Connectivity Solutions

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Test and Measurement Equipment Rentals

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(607) 215-0653
UHFF TV Broadcast Transmitters

AMERICAN TOWER CORPORATION • 2000

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Broadcast Tower Development/
Construction/Management

AMIKET • 2005

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Audio/Video Cable & Interconnect Products

ANTON/BAKER INC. • 2004

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Battery Solutions for ENG

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(305) 249-3110
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Remote Control Manufacturer

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

AVOCET • 2005

Matt Nelson
(256) 490-4000
KVM Switching for Broadcast

AXCERA • 1983

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

BELDEN ELECTRONIC DIVISION • 1991

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BEVERAGE CONSULTING, INC. • 2006

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BROADCAST ELECTRONICS, INC. • 1978

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or Tim Bealor - Studio
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Radio Equipment Manufacturer

BROADCAST ENGINEERING MAGAZINE • 1984

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Journal of the Broadcast Industry

BROADCAST MICROWAVE SERVICES, INC. • 1997

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or Jim Kubit - West
(540) 952-3660 or (805) 581-4566
or (800) 669-9667

Manufacturer, Transmitters,
Receivers, Antenna Systems

BROADCAST SUPPLY WORLDWIDE • 1986

Shannon Nichols
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Audio Broadcast Equipment Supplier

BROADCASTERS GENERAL STORE • 2004

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One Stop Broadcast Store

CANARE • 1991

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High Performance Broadcast
Engineering

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Broadcast Tower & Antenna Specialist

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DIGITAL ALERT SYSTEMS, LLC • 2005

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Television Transmitters, Translators
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Amps, TWITS

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ENVIRONMENTAL TECHNOLOGY INC. • 1997

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Antennas, Towers, Filters, Combiners

ETS-LANGENDIEN / HOLIDAY ENF MEASUREMENT • 2003

Dave Seabury
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RF Safety Instrumentation

EXCELSION COLLEGE • 2007

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Distance Education Degree Programs

FREELAND PRODUCTS • 1997

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(800) 624-7626
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Broadcasters One-Stop Supplier

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Michael Wm. Bach or Mike Johnson
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KPFF CONSULTING ENGINEERS • 2004

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Tower Engineering, Inspections Design

L-3 COMMUNICATIONS ELECTRON DEVICES • 2003

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

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AM/MW Antenna Equipment &
Systems

LEA INTERNATIONAL • 2004

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

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Don Shaw
704-374-3639

Media, Communications

LP TECHNOLOGIES, INC. • 2006

Samuel Lee
(316) 816-9696
Spectrum Analyzers

MAGLAK COMMUNICATION • 2002

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

MARKETVIEW VIDEO SUPPLY • 2002

Tom Moretti
(845) 246-3036
Audio, Video, Audio Visual Broadcast
Supply

MAXTEL 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

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(972) 422-7200
Coordination Services / Frequency
Planning

MICROWAVE FILTER COMPANY, INC. • 2003

Sherry Bell
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Passive Electronic Filters

MICROWAVE RADIO COMMUNICATIONS • 1991

Nadine Frchette
(978) 671-5700
Video Microwave Systems

MICROWAVE SERVICE CORPORATION • 1997

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Microwave Equipment
Rentals/Sales/Service

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Furniture

MINIM DESIGN INC. • 2005

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MOHAWK • 1995

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MOEROW TECHNOLOGIES, INC. • 2002

Tish Boyles
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MOSLEY ASSOCIATES, INC. • 1977

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RF & TT STLs

NATIONAL ASSOCIATION OF BROADCASTERS • 1981

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Industry Trade Association

NATIONAL FOOTBALL LEAGUE • 1999

Jay Gerber
Game Day Coordination Operations

MARTEL, INC. • 2002

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

NEURAL AUDIO • 2006

Mark Seigle
Surround Sound Technologies
NorthWest Tower Engineering,
PLLC • 2003
Steven Diamond, P.E.
(425) 258-4248
Tower Engineering, Structural Analysis

NOTI LTD. • 2002

Ron Not
(505) 327-5646
Folded Unipole Antennas; Detune
Systems; Lightning Prevention

NUCOM, INC. • 1996

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

NVISION, INC. • 1997

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

OLDCASTLE PRECAST, INC. • 2006

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

OMT TECHNOLOGIES INC. • 2001

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

PANASONIC BROADCAST & DIGITAL SYSTEMS COMPANY • 1985

Tom Moore
(201) 392-6176
Professional Broadcast Equipment
TV & FM Antennas & RF Components

PASTERNAK ENTERPRISES • 2001

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

PESA SWITCHING SYSTEMS, INC. • 1997

Robert McAlpine
(800) 328-1008
Routing Switcher Manufacturer

PAIZ & 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
(651) 549-5159
Automation, Routing & Infrastructure

PROPAGATION SYSTEMS, INC. (PSI) • 2005

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

PROPHET SYSTEMS INNOVATIONS • 2003

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

PROVIDEO SYSTEMS, INC. • 2000

Dave Goldstein
(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) 349-1412
RF Signal Management

RADIAN COMMUNICATION SERVICES INC. • 1986

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

RDL • 2004

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

RF CENTRAL, LLC • 2005

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

RICHARDSON MICROWAVE • 1987

Chris Chinchilla
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In the Circle...

a snapshot of an SBE Member

Annette Parks, CSRE

Director of Engineering
WPXI-TV, Inc.
Pittsburgh, PA
SBE Chapter 20, Pittsburgh



Best known for: I am currently serving a second term as Vice-Chair for the Pittsburgh Chapter; I am responsible for selecting guest speakers for our monthly meetings and securing seminars for our annual SBE Expo.

Focal Point: I love the networking environment that the SBE provides.

Getting Started: I became interested in broadcast engineering in college. I got a year-long internship at Cox Cable in Hampton Roads. Upon graduation, the internship led to a full-time position as a Headened Technician, which in turn opened the doors to television and the rest is history.

Job Satisfaction: I like to think of our daily newscasts as being a lot like Ravel's Bolero ... it takes quite a few instruments (departments) to make the final product. When something's missing, you notice it right away, but when it's done right, the result can be amazing. Good or bad, you get to see the out come of your efforts every day ... and so does everyone else!

When I'm not working: I am spending time with Zeus, my standard schnauzer. I'm attempting to train him to become an Agility champion. A friend gave me a plaque that says "my dog isn't spoiled, I'm just well trained." That should tell you all you need to know.

You may not know... My favorite sports are football and boxing. I am an overzealous Dallas Cowboys fan living amongst rabid Pittsburgh Steelers fans. My chances of being able to see the Cowboys play in person are limited so every season I am most thankful for my HD TV.

Favorite Gadget: I'm addicted to my Blackberry.

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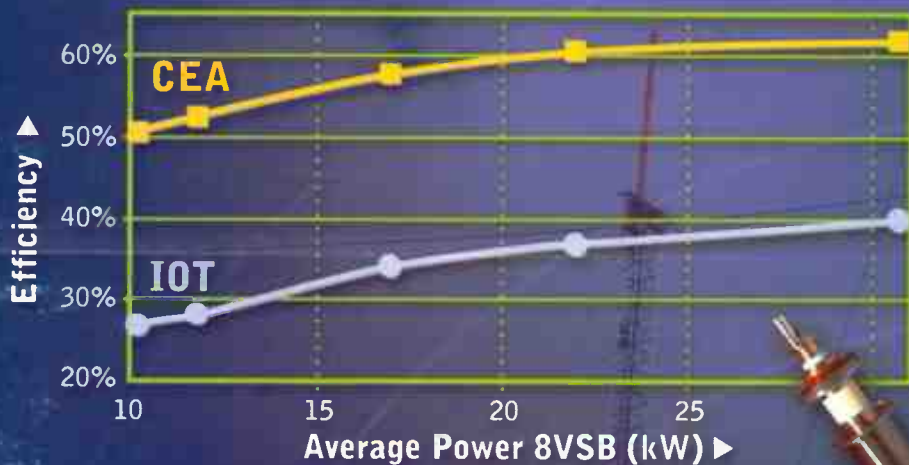
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