

SBE®

**JUNE
2010**

Volume 23, Number 3

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the

SIGNAL

BIMONTHLY PUBLICATION OF THE SOCIETY OF BROADCAST ENGINEERS

Baun, Davis, Locke receive major SBE awards

Terry Baun receives SBE Lifetime Achievement Award



**Terry Baun, CPBE,
AMD, CBNT**

Terrence M. Baun, CPBE, AMD, CBNT, Director of Engineering and Operations for the Wisconsin Educational Communications Board in Madison, was presented with the Society of Broadcast Engineers Lifetime Achievement Award during the 2010 SBE spring membership meeting. The meeting was held on April 13 at the Las Vegas Convention Center during the 2010 NAB Show.

The SBE Lifetime Achievement Award

Sterling Davis, Robert Locke, named SBE Fellows



Sterling E. Davis



**Robert Locke,
CPBE, CBNT**

Two members were recently elected by the Board of Directors to the rank of Fellow, the highest membership level in the Society of Broadcast Engineers.

Sterling E. Davis is Vice President, Technical Operations for Cox Media Group at its

*See **FELLOWS** on page 11*

Candidates announced for SBE Board of Directors

The SBE national Nominations Committee has submitted a slate of candidates for the upcoming national Board of Directors election. The committee is chaired by Board Member, Jim Leifer, CPBE of Boynton Beach, Fla. Serving on the committee with Jim are Leonard Charles, CPBE, Madison, Wis., William Ryall, Portland, Maine and James Schoedler, CBNT, Denver, Colo..

The slate of candidates was submitted by the Committee to the SBE National Office on May 1. The list follows. Qualified members

may still be nominated by a voting member if accompanied by the endorsement of at least nine additional members. Nominations from the membership must be received by the SBE National Office no later than 4:00 pm, EDT, July 12. Nominees must be voting members (Regular, Senior, Life or the official representative of a Sustaining Member) in good standing (dues paid through March 31, 2011) and hold a current SBE engineering

*See **ELECTION** on page 2*

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ELECTION from page 1

level certification (CBT or higher) by July 12, 2010 and all through Board service if elected.

All four officer positions will be on the ballot as will six of the 12 director seats. Officer terms are for one year while director terms are for two years. Election ballots will be mailed from the National Office to voting members in good standing by July 27 and are to be returned so they are received by the National Office by August 26. Votes will be tabulated on the evening of August 26. Those elected will take office during the SBE National Meeting on October 27 in Madison, Wis.. The National Meeting is being held in conjunction with the Wisconsin Broadcasters Clinic, presented by Chapter 24 of Madison and the Wisconsin Broadcasters Association.

The list of candidates as submitted by the Nominations Committee includes:



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Director of Engineering,
WSYT/WNYS TV
Syracuse, NY



Vice President

Ralph Hogan, CPBE, DRB, CBNT

Director of Engineering
KJZZ-FM/KBAQ-FM
Tempe, AZ



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Ted Hand, CPBE, 8-VSB, AMD

Chief Engineer
WSOC-TV, WAXN-TV
Charlotte, NC



Treasurer

Andrea B. Cummis, CBT, CTO

Technology and Operations
Consultant
Roseland, NJ

Director Candidates



Tim Anderson, CSRE, DRB, CBNT
Manager, Strategic Radio
Harris Corporation
Covington, KY



Ralph Beaver, CBT
President, CEO
Media Alert, LLC
Tampa, FL



Paul J. Burnham, CSTE, CBT
Field Support Manager,
Communications
e2v Inc.
Poughkeepsie, NY



Dale Gehman, CPBE, CBNT
Gehman Compliance and
Consulting
Akron, PA



Ched Keiler, CPBE, 8-VSB, CBNT
Director of Engineering
Reach Communications
Ft. Lauderdale, FL



Gary Kline, CBNT
Vice President of
Engineering & IT
Cumulus Media
Atlanta, GA



Gary Liebisch, CPBE
Regional Sales Manager –
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Nautel, Inc.
Milford, OH



Scott Mason, CPBE
CBS Radio
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Marcelo Sanchez, CPBE
Director Broadcast
Operations and Engineering
WFOR-TV/WBFS-TV
Miami, FL



Jeff Smith, CSRE, CBNT
Supervisor of Studio Systems
Clear Channel Radio –
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If you have not yet renewed your SBE membership, you risk losing valuable member benefits, such as member access to JobsOnline, insurance coverage and discounts on workshops, seminars, certification and books. Membership renewals were due on April 1, 2010. If you have not yet renewed your membership renew online before June 30, 2010 at www.sbe.org or contact the National Office at (317) 846-9000.

Society of Broadcast Engineers BOARD OF DIRECTORS

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Andrea B. Cummis, CBT, CTO Treasurer
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Jerry Massey, CPBE, 8-VSB, AMD, DRB, CBNT
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David Priester, CPBE Ithaca College
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Overland Park, Kans. • cscherer@sbe.org

Mark T. Simpson, CPBE, AMD, CBNT
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Jeffrey Smith, CSRE, CBNT Clear Channel Radio
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Barry Thomas, CPBE, CBNT Lincoln Financial Media
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By-law changes approved

At the April 11, 2010 meeting of the SBE Board of Directors, the Finance Committee recommended a new policy that would provide for reimbursement of national Board and Executive Committee members for travel costs to attend certain meetings of the Board and Executive Committee. The Board approved the policy, which required two changes to the SBE By-laws so that the new provisions could be carried out. The Board also approved a third By-law change, related to Officer reimbursement of expenses. The old and new By-law language is provided below for each of the three changes.

Board Member Reimbursement

PREVIOUS Article III, Section 10

Section 10. No member of the Board of Directors shall be reimbursed from the Treasury of the Society for expenses in attending any Board of Directors or Committee meeting. Members of the Board of Directors may be reimbursed for reasonable out-of-pocket expenses necessarily incurred in pursuing Society business by any Chapter, should that Chapter so desire.

APPROVED Article III, Section 10 on April 11, 2010

Section 10. Members of the Board of Directors may be reimbursed for travel and lodging expense to attend meetings of the Board, as designated by the Board of Directors. Members of the Board of Directors may also be reimbursed for reasonable out-of-pocket expenses necessarily incurred in pursuing Society business by any Chapter, should that Chapter so desire.

Executive Committee member Reimbursement

PREVIOUS Article IV, Section 4

Section 4. The Executive Committee shall consist of the elected Officers and the Immediate Past President, and two Directors as appointed by the President.

APPROVED Article IV, Section 4 on April 11, 2010

Section 4. The Executive Committee shall consist of the elected Officers and the Immediate Past President, and two Directors as appointed by the President. Members of the Executive Committee may be reimbursed for travel and lodging expense to attend meetings of the Executive Committee, as designated by the Board of Directors.

Article IV, Section 3, also has to do with expense reimbursement of officers. Currently, it provides that any officer has the right to be reimbursed for any reasonable expense in carrying out his or her duties, on demand, simply by presenting receipts. Changing the word, "shall" to "may," was recommended and approved by the Board. This would keep it from being an obligation on the Society without a specific Board policy in place. Below are the old and new texts.

PREVIOUS Article IV. Section 3

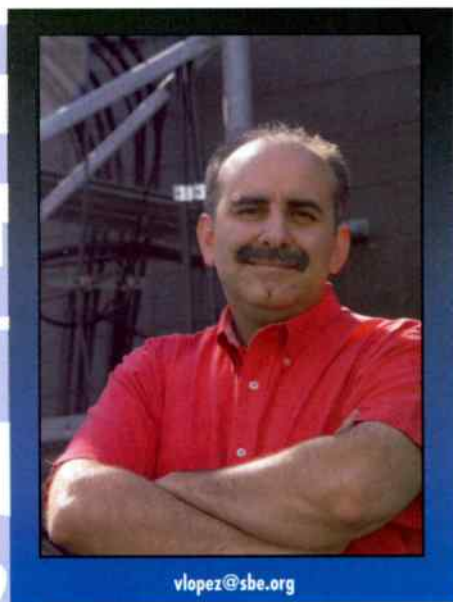
No officer shall receive any compensation from the Society for services performed in his official capacity, but Officers shall be reimbursed for reasonable expenses in the performance of official duties upon presentation and verification of such expenses.

APPROVED Article IV. Section 3 on April 11, 2010

No officer shall receive any compensation from the Society for services performed in his official capacity, but Officers may be reimbursed for reasonable expenses in the performance of official duties upon presentation and verification of such expenses.

If you have any questions about these changes or the By-laws in general, contact By-laws committee chairman, Gary Liebisch, gary.liebisch@nautel.com or executive director, John Poray, jporay@sbe.org.

Out of Site, Out of Mind



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

Moving on, I want to personally congratulate the two newest SBE Fellows, Robert Locke, Chief Engineer for KPTS in Maize, KS, and Sterling Davis VP of Engineering for Cox Media Group in Atlanta, GA. The SBE Fellow Award recognizes members who have rendered conspicuous service, or who have made valuable contributions to the advancement of broadcast engineering or its allied professions, the dissemination of knowledge thereof or the promotion of its application in practice. Both of you are well deserving of this honor.

Have you ever thought about running for an elected office in SBE but just didn't have the resources to pull it together? A change is looming on the horizon. At the April Board of Directors meetings the Board voted to start to provide financial assistance to SBE Directors and Officers for attending SBE Board meetings. This will begin in 2012, so that it will be a new Board with new individuals, and little ties to the board that approved it. An initial amount of up to \$300 per meeting has been approved, and the appropriate By-law changes made to allow it.

The goal here was to make it easier for

those talented individuals in the SBE ranks to serve on the Society's governing body. We think it will be a big step forward.

A reminder to all of you, if you haven't contacted your senators and congressmen yet about S2881/HR4809, the "FCC Commissioners Technical Resource Act", we at SBE encourage you to do so. For more information, visit www.sbe.org.

Lastly, a reminder about my newsletter article title contest. If you discover the commonality between the titles of my *Signal* articles you could land something nice. We'll solicit responses in the fall, and award some prizes.

NAB is over, hopefully it was a good show for all, I know it was for me. We must look ahead and realize that summer is fast approaching, and like some SBE chapters, you may be taking the summer off. I know here in upstate NY, we do not have regularly scheduled meetings in July or August. Even with the lack of meetings, we try to send at least one e-newsletter out to the chapter to keep them in the loop about future meetings and SBE happenings so when September rolls around, we can hit the ground running. My best advice to chapter chairs is if you are taking the summer off, be sure to communicate with your members at least one time to keep SBE top of mind.

Maybe if your chapter is looking for something to do this summer, how about a webinar? We have scheduled Maximizing HD and 1080p/60 Cable Performance on June 15 (www.sbe.org/MaximizingHDand1080p60CablePerformance.php), and Human Factors in Broadcasting on July 13 (www.sbe.org/HumanFactorsinBroadcasting.php). Both webinars begin at 2:00 p.m. Eastern and last for two hours.



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The perfect storm

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

There is a hilarious scene in one of the Marx Brothers movies (I forget which one, so I obviously have to watch them all again soon) in which, as the plot develops, there are far too many

people crowded into a very small stateroom on a trans-Atlantic cruise ship. Groucho has called for room service, and when the attendant arrives, knocks on the door and opens it, everyone falls out in a big heap. Low-brow humor, but screaming funny anyway, and timeless.

The core TV channels are getting like that. The purpose of SBE's frequency coordination program is to maximize efficiency in the use of a scarce resource. However, any efficient channel assignment program fails if the amount of available spectrum falls below the minimum necessary to accomplish the task, given the volume of users, the total bandwidth available, the total bandwidth required, the duty cycles of the users, and a few other factors (power, antenna directionality, etc.). There is a very real danger of falling below that minimum in the near term in the core television channels.

It is easy to see a bunch of trees and overlook the forest in tallying up the effect of FCC actions and proposals for overlays in the television channels. Let's look at the list as it stands now. With the DTV conversion completed in 2009, and the reallocation of the 698-806 MHz band for public safety and commercial broadband (with all BAS operation migrating below 698 MHz by June of this year), this leaves Channels 2-51 available. These channels must accommodate DTV, LPTV, Class A TV, Part 74 BAS Low-Power Auxiliary, unlicensed wireless mics, and TV "White Spaces" devices (remember them?) all clustered in the same residual spectrum. Crowded, right? We can't really coordinate the unlicensed wireless mics or the white spaces devices very effectively, so the bands become a donnybrook. Factor in the land mobile use of several of the channels, including the "T-band" at 470-512 MHz in many markets, and the fact that Channel 37 is unusable, and what is left available for broadcasters is even more tenuous.

Then comes the National Broadband Plan (NBP) released to Congress in March. It calls for 500 MHz to be made available within ten years for broadband, of which 300 MHz should be within the segment 225 MHz to 3.7 GHz, and made available within five years. Recommendation 5.8.5 of the NBP is especially alarming: the FCC should institute a rulemaking to reallocate 120 megahertz from the broadcast television service, for mobile broadband due to propagation characteristics of that

spectrum. FCC says that this will have limited effect on the over-the-air broadcasters.

The number crunchers take over the argument at this point. They say in the NBP that there is a "value of spectrum" gap: mobile broadband in a 6 MHz channel is worth ten times the value of a television channel on average. The demand for mobile broadband is escalating at a tremendous rate, says the Commission, while the demand for over-the-air TV is "challenging" in longer term trends. FCC noted a 26% revenue decline since 2005. The NBP says that over-the-air TV is an "inefficient spectrum use" because repacking of channels is possible; the auctioning of TV spectrum and permitting "voluntary channel sharing" is possible. The FCC is considering overlay license auctions or "more extensive channel sharing." This, supposedly, will take into account LPTV, wireless mics, and white spaces devices. The FCC Chairman recently described the NBP as it affects broadcasters as a "well-balanced plan designed to be a "win-win" for broadcasters (and mobile internet providers and the American people). Voluntary incentive auctions would, he says, permit sharing with broadcasters "a meaningful part" of the billions of dollars of value that would be unlocked if "some broadcast spectrum" was converted to mobile broadband. This would give broadcasters a "choice" to contribute their licensed spectrum and participate in the "upside". Channel sharing would be optional, and would allow cost (and spectrum) sharing between or among broadcasters in a market (thus signaling the demise of over-the-air HDTV. While much has been touted by FCC about the "upside" of these options to broadcasters, and the voluntary nature of the plan, what is unstated is what will happen if too few broadcasters in some markets decide to participate. The Chairman says that he thinks it will not come to that. Well, what if it does come to that? Does the "voluntariness" go away, and the "taking" begin?

The Perfect Storm has started already. In mid-April, while the NAB convention was going on, Congress was passing H.R. 3125, the Radio Spectrum Inventory Act, which provides for an inventory of spectrum between 225 MHz and 3.7 GHz within one year of passage, including assessment of the spectrum efficiency of each incumbent user in that segment. If anyone can't see the writing on the wall here, please reread the previous four paragraphs.

What can broadcast engineers do about this? Well, big things, and small things as well. SBE will, with its strategic partners, NAB and MSTV, be noting to both Congress and the FCC that there are technical limits here-- overlays and reallocations beyond which free television and the production

SBE. CERT preview

The anticipated release of the NEW SBE CertPreview is here at last!

by **Jim Bernier, CPBE®, CBNT®**

SBE Certification Committee Chair



For the last 8 months the SBE has been working on creating a new version of CertPreview, the software which provides a sample view of SBE Certification exams. This version of CertPreview can be downloaded from the SBE website after it is purchased for immediate use. Alternatively, if you cannot use an Internet connection, you may have a CD version of the program mailed to you.

This new version of CertPreview will allow you to go through the testing process, change any answers before you have scored your sample exam and then once the exam is scored, allow you to go back and review the correct answer. Also, when you score your exam, you will be given a breakdown of categories that make up the certification test. Here you will be able to find out where your strengths and weaknesses are and then study appropriately.

An important reminder is that the majority of SBE Certifications are open book exams. Only the Operator exams and the essay portion of the Senior exams are closed book. The CertPreview questions are comprised of questions that are very similar to the ones you may find on an actual exam. This does not mean that every question contained on an actual exam will appear in the CertPreview questions. The CertPreview was designed to give you an idea of what to expect on the

actual exam and to show you how questions and answers may be phrased. You can purchase the new CertPreview software on the SBE website at www.sbe.org/certpreview.

At NAB this year, SBE also debuted the SBE Certified logo. This is a new way for you to show your SBE Certifications. The suggestion was made by a Tucson SBE member who wanted a way to show off his certifications on his business cards. Please visit the SBE website for more information on how this should be used.

Also at NAB, we recognized a number of Chapter Certification Chairmen with service anniversaries this year. Over 170 years of service contributed by these individuals help make the Certification Program work for those in our industry. SBE relies heavily on its member-volunteers to make Certification, as well as other SBE programs, work. If you haven't had an opportunity to serve your chapter, please consider it the next time chapter elections come up or the chapter is looking for someone to help out. And to all of you who either have helped or are helping – THANKS!

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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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Edmund Barry, Glendale, AZ – Chapter 9
Jeffrey Browne, Shingle Springs, CA – Chapter 43
Barry Erick, Dallas, PA – Chapter 2
Kevin Ruppert, Madison, WI – Chapter 24
B.G. Williams, Knoxville, TN – Chapter 113

CERTIFIED BROADCAST NETWORKING TECHNOLOGIST® (CBNT®)

Jeffrey Browne, Shingle Springs, CA – Chapter 43
Kevin Ruppert, Madison, WI – Chapter 24

CERTIFIED BROADCAST TECHNOLOGIST® (CBT®)

Alan Inkpen, Halifax, Nova Scotia, Canada
Charles Ritchie, Elk Mound, WI – Chapter 112

NEWLY CERTIFIED CPBE

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Robert Russell, Provo, UT – Chapter 63

SBE CERTIFIED SCHOOL COURSE COMPLETION

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Devin Smith, Leeds, AL – Chapter 68

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Christopher Brown
Mitchell Disbro
Eric Johnson
Jeremy Lazzuri
Christopher Tilzer

CLEVELAND INSTITUTE OF ELECTRONICS

Christopher Frazier, Houston, TX – Chapter 105

DEFENSE INFORMATION SCHOOL

Christopher Ernst – Chapter 131
Michael Martinez – Chapter 132
Ranjeet Sridhar, Fort Bragg, NC – Chapter 93

NAPA VALLEY COLLEGE

Jeffrey Hogg, Napa, CA – Chapter 42

FEBRUARY EXAMS

"Thank You" to the CERTIFICATION CHAIRS FOR YOUR ASSISTANCE.

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Joseph Kirby, Hartselle, AL – Chapter 111
Timothy Williams, Kearney, NE – Chapter 87

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Mark Clem, North Little Rock, AR
Chris Thomas, Bremerton, WA – Chapter 16

CERTIFIED BROADCAST NETWORKING TECHNOLOGIST® (CBNT®)

James Malone, Jefferson City, MO – Chapter 55

SBE EXAMS AT NAB

CERTIFIED SENIOR TELEVISION ENGINEER™ (CSTE™)

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CERTIFIED BROADCAST TELEVISION ENGINEER™ (CBTE™)

Rem Roberti, White City, OR – Chapter 141

AM DIRECTIONAL SPECIALIST™ (AMD™)

James Moore, Madera, CA – Chapter 66
Robert Stroupe, Jr., Missouri City, TX – Chapter 105

8-VSB SPECIALIST™ (8-VSB™)

Jerald Rathbun, Mesa, AZ – Chapter 9
Timothy Stoffel, Reno, NV – Chapter 139

CERTIFIED BROADCAST NETWORKING TECHNOLOGIST® (CBNT®)

David Bayliss, Singapore – Chapter 126
Jesse Edberg, White Bear Lake, MN – Chapter 17
Veronica Mazuca, San Marcos, TX – Chapter 79
Richard Reyes, Las Vegas, NV – Chapter 128
Kevin Rodgers, Stillwater Lake, Nova Scotia, Canada
Michael Simonds, White Bear Lake, MN – Chapter 17

CERTIFIED TELEVISION OPERATOR® (CTO®)

Gary Cox, Lansing, MI
Jim Moyer, Los Angeles, CA

SPECIAL PROCTORED EXAMS

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Paul Boykin, Green Cove Springs, FL – Chapter 42
Anthony Stokes, FPO, AE

CERTIFIED BY LICENSE

CERTIFIED BROADCAST TECHNOLOGIST® (CBT®)

Paul Boykin, Green Cove Springs, FL – Chapter 42
Steven Donnell, New Market, NH – Chapter 110
Donald Horton, Shenandoah, IA – Chapter 74
David Lankinen, Roseville, MN – Chapter 17
James Walker, San Bernardino, CA – Chapter 47
Ronald Yurman, Short Hills, NJ – Chapter 15

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CERTIFIED RADIO OPERATOR® (CRO™)

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Kevin Schatz, Lomita, CA

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Dominik Rodriguez, Chesapeake, VA

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Sam McGlellan, Columbus, IN
Terry Spring, Carnation, WA
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Roberto Rico, Falls Church, VA
Luis Vasquez, Los Angeles, CA

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James Bruggemeier
Kaitlyn Connors
Patrick Cooper
Kyle Garn
Christopher Kullik
David Kusinski
Myranda Owca
Torey Sinclair

RECERTIFICATION

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

CERTIFIED PROFESSIONAL BROADCAST ENGINEER® (CPBE®)

Larry Beavers, Fall River, MA – Chapter 11
Thomas Daniels, Houston, TX – Chapter 105
Paul Kempter, Palm Harbor, FL – Chapter 39
David Pritchard, Gurnee, IL – Chapter 28

CERTIFIED SENIOR RADIO ENGINEER® (CSRE®) AM DIRECTIONAL SPECIALIST™ (AMD™) DIGITAL RADIO BROADCAST SPECIALIST™ (DRB™)

Alan Jurison, Syracuse, NY – Chapter 22

CERTIFIED SENIOR RADIO ENGINEER® (CSRE®)

Ashley Wallen, Inglewood, CA – Chapter 47

CERTIFIED BROADCAST RADIO ENGINEER® (CBRE®)

Ted Foster, Gallup, NM – Chapter 34

CERTIFIED BROADCAST TELEVISION ENGINEER™ (CBTE™)

Ian Owens, West Palm Beach, FL – Chapter 88

CERTIFIED BROADCAST NETWORKING TECHNOLOGIST® (CBNT®)

Thomas Beck, Cape Girardeau, MO – Chapter 55
Brian Flynn, Johns Creek, GA – Chapter 5
Richard Humphrey, Carmichael, CA – Chapter 43
Alan Jurison, Syracuse, NY – Chapter 22
John Mazza, Prosser, WA – Chapter 51
David Pritchard, Gurnee, IL – Chapter 28

CERTIFIED BROADCAST TECHNOLOGIST® (CBT®)

Christopher Castro, Kansas City, MO – Chapter 59
Glen Graham, Riverside, CA – Chapter 131
Blaine Hackbarth, South Milwaukee, WI – Chapter 28
Stephen Hendrix, St. Joseph, MO – Chapter 59
Nita Leighton-Graham, Riverside, CA – Chapter 131
Richard Humphrey, Carmichael, CA – Chapter 43
Amanda Kjersem, Vancouver, British Columbia
John Sage, Phoenix, CA – Chapter 9
Chad Thielen, Schaumburg, IL – Chapter 26
Charles Thomason, Woodstock, GA – Chapter 5

CERTIFIED TELEVISION OPERATOR® (CTO®)

Roberto Alcaraz, Fallbrook, CA
Nick Grbac, South San Francisco, CA – Chapter 40
Rebecca Jacobs, Moreno Valley, CA
Adam Loyd, Cleveland, OH – Chapter 70
Thomas Riggins, Jacksonville, FL – Chapter 7

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What's your
Certification Quotient?

In an IPv4 packet, the actual data being sent is contained in which field?

- The field immediately following the header length field.
- The first field following the address field.
- The field before the header checksum field.
- The last field.

answer on page 12

SBE Certification 2010 Exam Schedule

Dates

June 4-14, 2010
August 6-16, 2010
World November 5-15, 2010

Location

Local Chapters
Local Chapters
Local Chapters

Application Deadline

CLOSED
June 4, 2010
September 17, 2010



Above: President Vinny Lopez, CEV, CBNT recognizes the National Certification Committee Chairman James T. Bernier, CPBE, CBNT for his 15 years of service on the Certification Committee.

Left: President Vinny Lopez, CEV, CBNT presents the SBE Lifetime Achievement Award to Terrence M. Baun, CPBE, AMD, CBNT.



This year four SBE Sustaining Members celebrated their 25th anniversary with the Society. President Vinny Lopez, CEV, CBNT honored the companies during the Membership Meeting. Top Left: Michael Bach of Kathrein Inc. Scala Division. Top Right: Alan Lewis of Canon USA, Inc. Bottom Left: Steve Mahrer of Panasonic Broadcast and Digital Systems Company. Bottom Right: Bob DuTreil Jr. of du Treil, Lundin and Rackley, Inc.



Above: President Vinny Lopez, CEV, CBNT recognized members of the NAB Broadcast Engineering Conference Committee (L-R) Fred Baumgartner, CPBE, CBNT; Joe Snelson, CPBE, 8-VSB; Dom Bordonaro and Jeff Smith, CSRE, CBNT.



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World Radio History

SBE at the 2010 NAB Show



Left: Many 2010 NAB Show attendees visited the SBE Booth located in the Las Vegas Convention Center South Hall, lobby booth L29.



Top Left: David Priester, CPBE receives a plaque for five years of service as Certification Committee Chairman for Chapter 140, Ithaca, NY, presented by Certification Committee member Terrence M. Baun, CPBE, AMD, CBNT.

Top Right: Gary L. Stigall, CPBE receives a pin recognizing his first year of service as Certification Committee Chairman for Chapter 36, San Diego, presented by Certification Committee member Christopher H. Scherer, CPBE, CBNT.

Bottom Left: J. Eric Hoehn, CSRE, CBNT receives a plaque for 10 years of service as Certification Committee Chairman for Chapter 37, District of Columbia, presented by Certification Committee member Ralph Hogan, CPBE, DR3, CBNT.

Bottom Right: Christopher H. Scherer, CPBE, CBNT presented Larry W. Rixman, CBTE, CBNT with a plaque recognizing 20 years of service as Certification Committee Chairman for Chapter 35 Kentucky.



Left: The new and improved SBE CertPreview™ software was available to try at the SBE Booth.



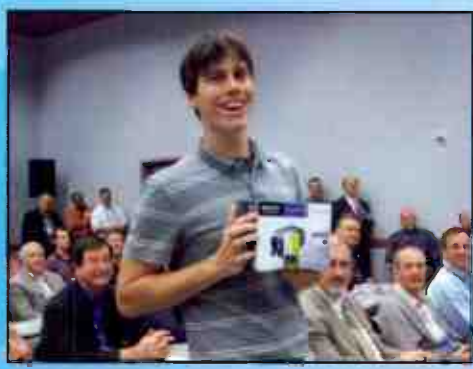
Above: The SBE Spring Membership Meeting was held on Tuesday, April 13 at 5:00 pm. Close to 150 members and friends were in attendance.



Left: The SBE Ennes Workshop "Continuing the Digital Transition" was the first of many SBE events during the 2010 NAB Show. The Ennes Workshop was held Saturday, April 10 from 8:00 am - 5:00 pm in the Las Vegas Convention Center room S219.



Thanks to our meeting sponsor:
Vislink News & Entertainment.



Left: Christopher Kelley, CBT won a SONY camcorder during the prize giveaway. Door prize tickets were given at the beginning of the meeting and Christopher Kelley, CBT had the winning number.



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Computer Networking for Broadcast Engineers

New course on SBE University - On-line. On-Demand.

All courses available to
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The purpose of this course is to give the student an introduction to the fundamental concepts of computer networking. The course covers computer topologies (both physical and logical), media types, the OSI model and local area networking. Some legacy material is reviewed, but the primary focus is on Ethernet, TCP/IP and other current computer networking protocols. Hardware, such as switches and routers, will be covered and software such as VLAN, VPN, and NAT as well. Some basic troubleshooting, security and administrative procedures will also be reviewed. Overall, the course is meant as an introduction, covering many subjects at a high level in order to assist the broadcaster in passing the SBE Certified Broadcast Networking Technologist exam.

This course was written for SBE by Paul Claxton, CPBE, CBNT. Mr. Claxton is a retired US Navy Master Chief Petty Officer and has been an SBE member for more than ten years. He is active in the Society as current and past SBE Chapter 131 chair and certification chair. *The completion of a course through SBE University qualifies for one credit, identified under Category 1 of the Recertification Schedule for SBE Certifications.*

Other SBE University courses available: AM Antenna Systems, Voice Telco Networks and Studio Interface Systems, 8-VSB, AM Antenna Computer Modeling, FM Transmission Systems and Matching Networks and Phasing. For more information on any of the courses on SBE University, visit SBE's website at <http://www.sbe.org/SBEUniversity.php>.

ENNES

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The Ennes Educational Foundation Trust offers scholarships, 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.

STORM from page 5

of informational programming cannot continue. It is apparent that replacement spectrum is not available. But for the near term, let's police our own yards. Spectrum inefficient uses have to be eliminated, consolidated or modified to increase spectrum re-use in the core TV channels. Short-range devices should not use wireless unless the circumstances dictate it, and in those cases, time division multiplexing is called for. Broadcasters should expect, as pressure on the TV channels increases, that there will be an increase in unlicensed and uncoordinated operations. It will be necessary to work more closely with market coordinators, and the coordinators must keep their databases as current as possible to maximize broadcast and BAS frequency re-use.

But batten down the hatches; the perfect storm is on the way.

MARK YOUR CALENDAR

Webinars by SBE - www.sbe.org/WebinarsbySBE.php

June 15 - Maximizing MD and 1080p/60

Cable Performance

Instructed by Steve Lampen, CBRE

July 13 - Human Factors in Broadcasting

Instructed by Jim McTigue

On-Demand - Leadership Development Series

Instructed by Rodney Vandever

On-Demand - RF Safety Course

Instructed by Richard Strickland

On-Demand - Event Frequency Coordination

Instructed by Ralph Beaver, CBT

August 3-5 - SBE Leadership Development Course

Instructed by Rodney Vandever

Where: Atlanta, Georgia

Cost: \$580 / person

www.sbe.org/SBELeadershipCourse.php

August 20 - Nashville Ennes Workshop

Hosted by SBE Chapter 103 and the Tennessee Association of Broadcasters

In conjunction with the TAB Summer Convention

When: 9:00 a.m.-5:00 p.m.

Where: Embassy Suites Murfreesboro, Murfreesboro, TN

Cost: SBE or TAB Members - \$25

Non-Members - \$35

www.sbe.org/ennes_workshops.php#Nashville

September 25 - Dallas, Texas Ennes Workshop

Hosted by SBE Chapter 67

October 16 - San Diego, California Ennes Workshop

Hosted by SBE Chapter 36

November 10 - New England Ennes Workshop

Hosted by SBE Chapter 11, In conjunction with the New England Broadcast & Cable Expo

When: 9:00 a.m.-5:00 p.m.

Where: DCU Center, Worcester, MA

Cost: SBE Members - \$25 / Non-Members - \$35

www.sbe.org/ennes_workshops.php#Boston

LIFETIME from page 1

recognizes outstanding contributions and achievements by an individual throughout his or her professional life. Terry's record is a combination of industry and SBE accomplishment. He is a 34-year member of the SBE, having joined in 1976. Within the SBE, he is in his twelfth year as a member of the National Certification Committee, serving as chairman for three of those years. He also served as a director, vice president and was elected the SBE national president in 1995. Terry was named the SBE Broadcast Engineer of the Year in 1991, the inaugural year of that award. He was named an SBE Fellow in 1999 and in 2003 was named the SBE Educator of the Year.

Terry began his broadcasting career in 1967 at Milwaukee's classical music station, WFMR-FM and later began a series of moves into corporate engineering while also forming his own consulting firm, Crite-

tion Broadcast Services.

Through the years he has worked for Sudbrink Broadcasting, Multimedia Broadcasting and Cumulus Broadcasting. In his current role with the Wisconsin Educational Communications Board, he oversees the engineering and operations of the delivery system for Wisconsin Public Radio & Television throughout the state of Wisconsin.

Among his industry and SBE achievements include being the primary author of the SBE's Certified Broadcast Networking Technologist (CBNT) certification program. He was also an instrumental developer of the station self-inspection program within the broadcast industry and served as the Wisconsin Broadcasters Association's chief inspector for more than ten years.

SBE President Vinny Lopez, who made the presentation, said, "Terry's dedication to SBE and its mission, as

well as his passion for broadcast engineering, are exceptional. His contributions to the industry and the SBE have been tremendous and we are honored to recognize him with this award."

Terry is a member of Chapter 28 in Milwaukee and resides in Janesville, Wisconsin.

FELLOWS from page 1

headquarters in Atlanta. His career in broadcasting spans 43 years and includes service in the U.S. Navy as well as several industry companies. His responsibility with Cox includes corporate level engineering for 86 radio stations and 15 television stations.

He has been an active leader in the broadcast industry having played major roles in several industry initiatives. Among them, the coordination of the DTV transition with cable and satellite service providers and the 2GHz Broadcast Auxiliary Service (BAS) conversion from analog to digital. He chaired the broadcast industry group responsible for the technical aspects in support of ATSC selection of technology for, and documentation of, a mobile handheld transmission system.

Sterling served five years as chairman of the Engineering Committee of the Association for Maximum Service Television (MSTV) and on the National Radio Systems Committee (NRSC) for iBiquity HD radio standards. He is a member of SBE

Chapter 5 in Atlanta.

The career of Robert Locke, CPBE, CBNT began in 1964 at KARD TV/FM in Wichita, Kansas, following his graduation from Wichita Technical Institute and a stint in the military. He progressed through many positions at KARD and in 2001 moved to KPTS as Chief Engineer, the local PBS member station in Wichita.

Bob oversaw the installation and operation of a twelve channel, eleven meter uplink system with the Kansas State Network. Bob was an early member of SBE Chapter 3 of Kansas, and recently served as the chapter's chairman. He has served as the chapter's Certification Chairman for almost 30 years and has always shown an interest in educating others. He has instructed young engineers, given his time with local technical schools and served on advisory boards that coordinate school curriculum.

Those who nominated Robert all spoke of his dedication, friendliness and willingness to help others at any time; a true gentleman of the broadcast industry.

Society of Broadcast Engineers, Inc. 2009 Audited Financial Statements

Combined Statement of Assets, Liabilities and Net Assets - December 31, 2009

ASSETS

Cash and cash equivalents	\$300,014
Investments	791,695
Office Equipment	40,669
Intangible Assets	9,050
Total Assets:	\$1,141,428

LIABILITIES and NET ASSETS

LIABILITIES	\$0
NET ASSETS:	\$1,141,428
TOTAL LIABILITIES & NET ASSETS	\$1,141,428

2009 SBE Audited Revenue & Expense Statement*

INCOME:

Membership Fees & Support	\$342,967
National Meeting	32,780
Certification	69,393
Publications	52,994
Education Services	34,938
Interest & Dividend Income	34,532
Net Realized/Unrealized Gain from Investments	100,695
Miscellaneous Income	21,905
Total Income:	\$690,204

EXPENSES:

Member Services	\$265,347
Chapter Rebates	36,678
National Meeting	24,777
Publications/Communications	106,897
Certification	74,130
Education	31,891
Frequency Coordination	11,860
Administration	79,289
Depreciation/Amortization	6,178
Total Expenses:	\$637,047

CHANGE IN NET ASSETS:	\$53,157
NET ASSETS 12/31/2008:	\$1,088,271

NET ASSETS 12/31/2009:	\$1,141,428
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* Audited statement reflects modified cash accounting method. Investments are listed at market value.

Recognition of distinguished members was highlight for SBE during NAB Show

BY **John Poray, CAE**

SBE Executive Director

This year's NAB Show had a number of memorable moments for SBE. The annual spring membership meeting held on Tuesday, April 13 at the Show was attended by close to 150 members and friends of the Society and was sponsored by Vislink News and Entertainment. The highpoint came with the announcement and presentation of the SBE Lifetime Achievement Award to Terry Baun, CPBE, AMD, CBNT. By all accounts, Terry was quite surprised, despite the presence of a number of friends that Terry's wife Linda managed to arrange to be there without giving the surprise away. There is more about the presentation elsewhere in this issue of the Signal.

Also memorable was the election by the Board of two very deserving members to the rank of Fellow. Sterling Davis of Cox Broadcasting in Atlanta and Robert Locke, CPBE, CBNT of KPTS-TV in Wichita, will receive their Fellow awards at this October's National Meeting in Madison. They become the 61st and 62nd Fellows in SBE's 46 year history.

The national Board of Directors met on Sunday morning of NAB week for the regular spring meeting. There was 100% attendance by the 17 members of the Board and we all owe a great deal of gratitude to them for making the commitment to attend and actively participate.

There were several items of note discussed and approved during the meeting. Among them was the acceptance of three invitations to host future SBE National Meetings. In 2011, the National Meeting will be held in conjunction with the Ohio Association of Broadcasters and their annual Engineering Conference held in Columbus. In 2012, the SBE National Meeting will be in Denver and will be held with the Engineering Boot Camp, an

educational program conducted jointly by SBE Chapter 48 of Denver and the Rocky Mountain Section of SMPTE, as well as with the "Video Expo" trade show. In 2013, we'll head back to the Midwest and be hosted by the Indiana Broadcasters Association and their Engineering Conference, held in Indianapolis.

An item that has been discussed for some time has been the opportunity of the average member to be able to serve as a director or officer of the national board of directors. For many years, employers were willing to pick up the travel costs for an employee who was serving on the SBE Board as a way of showing their support to the employee as well as the SBE. But many are not able to do that now, meaning that more often, those elected to serve must cover the travel costs out of their own pocket. With air travel and hotel, that can come to as much as \$700 to \$1,000 per trip with two meetings per year for most Board members. This has kept a number of qualified members from making the commitment to run and hold office.

So that more members might be willing to serve, the Board approved a funding plan recommended by the SBE Finance Committee, chaired by Jerry Massey, which will provide partial reimbursement for travel costs to those who need it. Beginning with meetings held in 2012, a member of the Board will be able to request reimbursement of up to \$300 in qualifying travel expenses to help offset their overall travel costs. In 2013, the program will expand to include those Board members who also serve on the Executive Committee (the four officers, immediate past president and two directors appointed by the president) who are required to attend two additional meetings each year.

The year 2012 was purposely chosen to implement the program to avoid an

appearance of conflict of interest with current members of the Board, all of

whom will be up for election prior to the program's implementation. To establish the program, changes to the SBE By-laws were necessary and the By-laws Committee, chaired by Gary Liebisich, presented recommended changes to the Board that would enable the reimbursement program to be established. The Board approved those changes and you'll find specifics about them in this issue of the Signal. The result of these actions we hope will be the continued availability of interested, capable members to serve on the national Board, the body that has the responsibility of determining the policies and programs of the Society.

Finally, I'd like to note the passing of a Charter, Lief and Fellow Member of SBE, former member of the national board and past national secretary. Martin "Sandy" Sandberg, of Dallas, Texas, an active member of Chapter 67, North Texas, served on the national board for five years, from 1992 through 1996 and later as chairman of the SBE Fellows Committee. He held many leadership positions locally over the years and was the founder of Chapter 7 in Jacksonville, Florida. Sandy's colorful presence always filled a room. He spent much of his career with ABC Sports, loved broadcasting and the people who worked in it. He will be missed by many in the industry and we express our condolences to his family and many friends.



Answer:

(D) The last field. There are 12 required fields and one optional field in an IPv4 packet header. The last field, data field, is not considered part of the header.

question on page 7

Chapter Spotlight

20-Pittsburgh, Pa.

www.sbe20.org

Chairman John Luff describes their successful meeting on March 17, 2010

"Chapter 20 started a process to reinvigorate the chapter and engage all parts of the broadcast and technology communities in Western Pennsylvania. Meeting attendance had dwindled and chapter membership was static or decreasing. Under our renewed approach we held an exciting meeting March 17th at NEP Productions on "3D Production and Display" and included a tour of SS-3D, one of very few full capability 3D production trucks in existence prior to their departure to Augusta for the Masters 3D production for CBS. George Hoover, NEP, CTO, provided a great program to an audience of over 70 people, almost a six fold increase over recent chapter meetings.

George described the mechanics of 3D camera rigs and how the signal is processed and moved to the home display and showed examples of football and basketball broadcasts produced using SS-3D. We interacted with the technical support personnel from PACE, who supply the camera rigs to NEP.

Later this year we hope to hold a summit for all stations in the region, advertising agencies, and production companies on file based delivery of commercials. The chapter has revamped communications and instituted a new web based portal to support better bidirectional communication with members and others interested in the chapter's work."



SBE Chapter 20 held a meeting at the NEP Productions on March 17, 2010 covering "3D Production and Display."



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

Steve Davis, CPBE Senior Vice President, Engineering & Capital Management, Clear Channel Radio, Inc.

Joined SBE in 1982, Chapter 56, Tulsa

Best Known for: At this point I'm best known as the "Chief Engineer" for Clear Channel Radio. I started with Clear Channel before they incorporated back when they had only six stations, as a station chief engineer. As the company grew I became known for developing a capital budgeting and management system used throughout what ultimately became a fairly large enterprise.

Focal Point: When I began my career as a Chief Engineer, I soon realized how much I DIDN'T know. Without the friendship and mentorship of fellow engineers through the SBE back in the early 1980's, I believe I would have been unable to hold the job. I looked forward to the monthly meetings and seek their help. As I grew in my skills, thankfully I was eventually able to help others as well.

Job Satisfaction: The chance to work with and learn from people who are passionate about broadcast engineering. I love hearing new solutions, ideas, points of view and just plain "war stories." And truth be told I think some would say I've been known to tell one or two of those myself.

Accredited SBE 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.

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Kevin Faris **Plattsmouth, NE** **Chapter 74**



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- In Memoriam -



Martin "Sandy" Sandberg, CPBE

Member #107

Charter, Fellow and Life Member

Former national Secretary and Board Member

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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

AVCOM of Virginia, Inc. • 2010
Warren "Buck" McElfresh (804)
794-2500
Spectrum Analyzers

AXCERA • 1983
Mike Rosso (800) 215-2614
Television Transmitters & Equipment

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 and Audio Consoles

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 - EAST
Jim Kubit (805) 581-4566 - WEST
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 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
Ed Czamecki (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 Hemlinway (585) 765-2254
ext. 108
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

DSI RF Systems, Inc. • 2010
Judy Mueller (732) 563-1144
RF Service/Installations/Products

DTS • 2009
Mark Seigle (425) 814-3200
Surround Sound Technologies

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

Elettronika America Inc. • 2010
Maria Quintero (305) 592-4506
Television Transmitter & Exciters

Empower RF Systems • 2008
Jon Jacobs (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 Bemd (847) 795-9555
Audio, Video Cable Products

Grass Valley • 2000
Andy Jackson (404) 929-5000
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
Dave Russell (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

Lincoln Financial Media • 2007
Barry Thomas (404) 261-2970
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

MAYAH Communications • 2010
Daniel Loeffler (360) 618-1474
Audio CODECS: Mobile/ 1/21 RUrack

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

Polyphaser/Transector Systems • 2005
Carol Rasser (208) 762-6121
Power Quality Products & Services

Preferred Tank & Tower, Inc. • 2010
Vie Majors (270) 826-7950 ext 227
Communication Tower Maintenance/
repair

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

Propagation Systems Inc. • PSI • 2010
Doug Ross (814) 472-5540
Quality Broadcast Antenna Systems

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 Equip-
ment 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 Staetec Media Group • 2009
Russel Waite (888) 782-4391
Professional Audio Solutions

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

Screen Service America • 2010
Graziano Casale (212) 695-8341
Broadcast Transmitter & ATSC Mobile

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

Sencore, 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

Staco Energy Products Co. • 2010
Paul Heiligenberg (937) 253-1191 ext 128
Manufacturer Voltage Regulators, UPS

Stainless LLC/Doty-Moore • 2004
Ed Deetscreek (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
Richard Duvall (503) 627-3700
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

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

TV Magic • 2008
Gus Allmann (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
Travis Donahue (951) 371-4900
Broadcast System Integration Services

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