SBE Elevates Alexander, Hogan to Fellow

The Society of Broadcast Engineers Board of Directors elevated Cris Alexander, CPBE, AMD, DRB, of Aurora, CO, and Ralph Hogan, CPBE, DRB, CBNE, of Tempe, AZ, to the member grade of fellow at its meeting held during the 2015 NAB Show.

Cris Alexander is director of engineering for Crawford Broadcasting; a position he has held since 1984. He first joined the SBE in 1985. He has served on the SBE Board of Directors, and currently is a member of the Certification and Education Committees. In 2007, Alexander received the Robert W. Flanders SBE Engineer of the Year award.

Ralph Hogan is the associate general manager and engineering and technology services for Rio Salado College, which operates KJZZ-FM, KBAQ-FM, Spot 127 and Sun Sounds. An SBE member since 1990, he has served on the Board of Directors and several national committees. He was president of the SBE from 2011 to 2013. He currently serves as chairman of the SBE Certification Committee. His professional activities include work on various boards and committees for the IEEE, NPR, PBS, NRSC, ATSC, and founding president of the Association of Public Radio Engineers.

"I’m proud to have worked with both Cris and Ralph in the SBE," said Joe Snelson, CPBE, 8-VSB, president of the Society of Broadcast Engineers. "They both possess the skill, attitude, professionalism and dedication to broadcast engineering that is the signature of an SBE Fellow."

The Fellow honor is the highest membership level in the SBE. Members must have made significant contributions to the broadcast engineering field or the SBE. Candidates are nominated by their peers. Since the Society’s founding, 75 members have been honored with the Fellow rank.

The two recipients will be recognized for their election to Fellow during the SBE National Awards Dinner on October 14, 2015, in Madison, WI, during the annual SBE National Meeting, which will be held in conjunction with the Wisconsin Broadcasters Association Broadcasters Clinic.

Wisconsin Broadcasters Clinic Hosts SBE National Meeting

The Society of Broadcast Engineers will stage its 51st annual national meeting, October 13-14, 2015 in Madison, WI. Serving as event host is the Wisconsin Broadcasters Clinic (Oct. 13-15), which for more than 60 years has served as a must-attend educational event for broadcast engineers in the Upper Midwest. The three-day Clinic is produced by the Wisconsin Broadcasters Association in cooperation with the SBE chapters of Wisconsin. The Clinic features a broadcast and media equipment and services tradeshow and three days of technical presentations spanning TV, radio, broadcast IT and related media topics.

The SBE National Meeting begins on Oct. 13 with the fall meeting of the national SBE Certification Committee from 2 to 4 p.m. The fall meeting of the SBE Board of Directors will take place from 6 to 10 p.m. On Wednesday, activities begin with the annual SBE Fellows Breakfast. In the afternoon, the SBE Annual Membership Meeting will be held from 4 to 5 p.m. CT, with a live webcast available to members around the world.

The SBE Annual Awards Reception and Dinner will take place on Wednesday, beginning at 5 p.m. CT. The dinner will feature a guest speaker and the presentation of the society’s major awards, including the James C. Wulliman SBE Educator of the Year and Robert L. Flanders SBE Engineer of the Year awards. The dinner program will conclude with the presentation of the Fellow honor to Alexander and Hogan. Awards recognizing individual member and chapter achievement will also be presented.

Attendance at SBE National Meeting events are included in Clinic registration, except for the SBE National Awards Reception and Dinner. Tickets ($15) will be available online and by telephone through the SBE National Office. All events will be held at the Madison Marriott West Hotel in Middleton, WI. Complete details will be available in the coming weeks.
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SBE Officer, Director Candidates Announced

Each year the SBE membership elects members to serve on the national Board of Directors; the governing body of the society. This includes all four officers for one-year terms and half the 12 directors for two-year terms. The slate of candidates assembled by the Nominations Committee includes:

**Officers:**
- President - Jerry Massey, CPBE, 8-VSB, AMD, DRB, CBNT; Chapter 86, Greenville, SC
- Vice President - James Leifer, CPBE; Chapter 33, South Florida
- Secretary - Ted Hand, CPBE, 8-VSB, AMD, DRB; Chapter 45, Charlotte, NC
- Treasurer - Andrea Cummis, CBT, CTO; Chapter 15, New York, NY

**Directors:**
- (top six vote getters will be elected):
  - Mark Fehlig, PE, CPBE, 8-VSB, CBNT; Chapter 5, Atlanta
  - Kirk Harnack, CBRE, CBNE; Chapter 103, Nashville, TN
  - Mike Hendrickson, CPBE, CBNT; Chapter 17, Minnesota
  - Ched Keiler, CPBE, 8-VSB, CBNE; Chapter 93, Raleigh, NC
  - Kevin Plumb, CPBE; Chapter 14, Connecticut
  - RJ Russell, CPBE; Chapter 32, Tucson, AZ

Additional candidates may be nominated by the membership. Any eligible member proposed by at least ten members to the national Secretary by July 6 will be added to the ballot. The election will take place July 17 through August 20. Balloting will be via the election website, except for those members who have opted out of electronic voting this year or who have not provided the SBE national office with their email address. They will receive their ballots through the mail.

For more information about candidacy, contact Ted Hand at thand@sbe.org or Executive Director John Poray at jporay@sbe.org or 317-846-9000.

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**Certification Question**

Self-supporting or guyed towers are designed for structural integrity following the guidelines stated in the:

A. Engineering Standards by Perry.
B. Reference Data for Engineers by ITT.
C. ANSI/EIA/TIA Standard.
D. FCC Rules, Part 73.
LETTER FROM THE PRESIDENT

By Joe Snelson, CPBE, 8-VSB
SBE President
jsnelson@sbe.org

And What a Show It Was

The major event that occurred since the last edition of The Signal was, of course, the NAB Show. It was an action-packed week, and especially so for the SBE. It kicked off Saturday morning with the all-day Ennes Workshop. When I was there about 8:30 Saturday morning, it was already almost standing room only. SBE board member and Education Committee Chair Wayne Pacena gave a tutorial on IP. The workshop was so well attended, a video camera was brought in to extend the presentation to another room for the overflow crowd. Many thanks are extended to Fred Baumgartner for putting together another successful all-day workshop with a slate of excellent presenters. During a brief break, Radio World presented Wayne with a plaque to recognize his receipt of the publication’s Engineering Excellence Award last year.

Later Saturday afternoon, I had the privilege of discussing the SBE to students participating in the NAB Technical Apprentice Program. I have done this twice, and both times I am reminded of when I was breaking into this industry. It’s always exciting to see the exuberance and thirst for knowledge that accompany the newcomers.

On Sunday morning the SBE Board of Directors convened. This is one of the two face-to-face meetings the board conducts during the year. Our meeting is not only a time of reflection on what the society has accomplished since we previously met, but it’s also an opportunity to share thoughts and ideas for the future. At our meeting we review the financials of the society, membership statistics, updates on regulatory issues facing our members, review reports from the various committees and discuss future activities affecting our industry and, ultimately, our membership.

On Tuesday afternoon our annual membership meeting convened. We presented to the membership reports from the Finance, Government Relations, Membership, Education and Certification Committees. At our meeting we also announced the elevation of two members, Ralph Hogan and Cris Alexander, to the membership grade of Fellow. You will find photos and other information on some of our activities in this edition of The Signal.

We also repeated an event we started last year during our 50th anniversary celebration: We held a reception following the Membership Meeting. There was plenty of fellowship and snacks. Both the meeting and reception were sponsored events that included some very cool prizes. We appreciate our sponsors and thank them for supporting the SBE. And I thank all of you who stopped by the SBE booth to say hello and to visit for a few minutes.

Time is Everything

Between the number of SBE and NAB activities I was committed to I didn’t get much time out on the exhibit floor. Of course, the exhibit floor is much larger than when I started in this industry when I could cover the entire exhibit floor in two or three days. There were a couple of things that particularly caught my attention this year.

There were a number of unmanned aircraft systems (UAS, also known as drones) on display. It will be interesting to see how these devices are ultimately used in the production and news environments. A lot will hinge on the ultimate rules and associated limitations put in place by the FAA.

There was a plethora of 4K cameras on display. While these cameras can certainly be used in the production environment we still have the issue of not being able to broadcast 4K today over-the-air using the current ATSC 1.0 transmission system. That, however, will change once ATSC 3.0 is adopted and stations can begin that migration.

On the transmitter front, it looks like the days of the high-power tube television transmitter may be numbered. Several manufacturers were showing their solid-state transmitters with efficiencies approaching that of the tube versions.

Overall, it was a good NAB Show loaded with a number of SBE activities. We now begin to look forward to our next major event, which will be our national meeting to be held in Madison, WI, at the Wisconsin Broadcasters Association Broadcasters Clinic.

I have to comment on something posted in my April letter, which had a photo of a display I have in my office of imaging devices. The photo was captioned, “Various solid-state imaging devices.” A long-time SBE member submitted a comment asking if this was an April fool’s gag for that edition. Well, it wasn’t meant to be a gag but it somewhat turned out that way. The picture was of various camera tubes that have been used through the history of television. The only one that was solid-state was the very small rectangular imager (a charge coupled device, CCD) at the lower center on the wall display. The caption below the picture should have read “Eighty years of imaging technology.”

Missed Colleagues

Finally, I want to pause and pay respect to two prominent SBE members who passed in March and April.

Peter Onnigian passed away on March 13 at the age of 93. Peter founded Jampro Antennas in 1959. He was a charter member of the SBE, joining on April 8, 1968, and carried member number 60. He was a member of Chapter 43 Sacramento and life certified as a CSBE.

On April 19, Scott Mason passed away after a long battle with health issues. Scott was regional engineering director, CBS Radio West Coast. He had been a part of CBS for 36 years. Scott was also very active in the SBE as a member of Chapter 47 Los Angeles, and held CPBE and CBNT certifications. Scott served three terms on the SBE Board of Directors and was a former chair of the SBE EAS Education Committee. I, like many of you, had the privilege of working closely with Scott, and I know his contributions to the SBE and CBS Radio will be missed.

We continue to remember the family and friends of Peter and Scott in this time of bereavement.

SBE President Snelson speaks at the annual Membership Meeting.
Broadcast Engineers and IT Engineers Living Together

You must agree that the broadcast industry is well engrained with information technology in the technical facility, whether it’s radio or TV. Like it or not, we as broadcast engineers live in an IT technology environment. The simplest evidence: It is difficult to flip through any industry publication without a mention of the engagement of information technology in the broadcast technical facility.

Characteristics of the Broadcast Engineer

The broadcast industry is characterized as a “live” environment with precise measurements with respect to time. TV expects events occurring at frame accuracy and radio program segments end precisely at the top of the hour to cross-fade into the next program. The broadcast technical facility is often one comprised of single-function appliances, chained together by endless multi-conductor and coaxial cabling. Redundant designs and a focus upon maintaining the air-chain on-the-air at all cost is the performance metric. The broadcast engineer is focused on a fix-it-now mentality.

But, can the broadcast engineer and the IT engineer co-exist? This is an ongoing area of conflict. One approach to getting along in the technical sandbox is to understand some of the mindset and environmental differences between the broadcast engineer and the IT engineer. Both professions are often occupied by what a normal person often describes as a “pocket protector-wearing geek”. Both professionals are molded by their environment in which they function on a daily basis.

A first step to a livable environment of the broadcast and IT professional is to understand each other’s environment, recognize the different mindsets, and accept different approaches. The broadcast engineering approach of never down, no dropped frames utilizing 24x7 all-hands-on deck swap-out repair approach is in sharp contrast to the traditional IT approach of planned downtime, acceptable buffering, and a problem queue of continuous software patches and bug fixes between major software based feature upgrades.

Communication is also often identified as a barrier between the two professionals. Each must understand the language of the other to communicate effectively. The broadcast engineer needs to speak IT with ease and confidence just as the IT engineer must speak broadcast engineering. Each must be able to speak and understand the language of the other in order to be successful. The individual bridging both fields is the technology professional of the future.

Characteristics of the IT Engineer

The IT industry is often characterized as an on-demand environment with statistical metrics utilized as the benchmark for performance (i.e. 99.99% reliability). The IT technical facility utilizes multi-function virtualized platforms, a development environment described as agile, with a re-boot as a common and accepted approach to resolution of many problems. The IT engineer often sees system outages as acceptable downtime as defined by a performance service-level agreement (SLA).

A final thought is to mention an enjoyable book I recently picked up at the NAB Store during the convention in Las Vegas. “The Tower Builder” by author Vicky Kas-eorg is billed as an Amazon # 1 Best Seller. This is an interesting book that blends the engineering challenges and triumphs of re-building the iconic WBT-AM Blaw-Knox towers following devastating destruction by hurricane Hugo. You will find a blend of engineering facts, dedication of those often found in broadcasting, some WWII mystery, a bit of aviation, and even a love story like those in a book that is hard to put down at night. I will save all the details for your own discovery and reading enjoyment.

A special thanks to Blake White, broadcast consulting partner, Cognizant Technology Solutions, for his insight in noting the differences between the broadcast and IT engineer during the PBS 2015 TechCon Conference held prior to the 2015 NAB Show. Background image: Vector Open Stock

UPCOMING SBE EDUCATION EVENTS

Webinar: Transmitter Maintenance Checklist
June 18, 2015
SBE Regional Ennes Workshop
New York, NY
June 23, 2015
SBE Leadership Development Course
w/ Purdue Professor Rodney Vandeveer
Atlanta
August 4-6

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For more information on any SBE education program, contact Education Director Kristin Owens: kowens@sbe.org or 317-848-9000.
CERTIFICATION UPDATE
By Ralph Hogan, CPBE, DRB, CBNE
Chairman, SBE Certification Committee
rhogan@sbe.org

Keys to Success: National, Local Volunteers
2015 marks the 40th anniversary of the SBE Program of Certification

You may have heard or read recently that the SBE Program of Certification will turn 40 this year. During the Membership Meeting at the 2015 NAB Show, President Joe Snelson said a few words about the program. At one point, President Snelson asked for those in the audience to stand up if they currently hold an SBE certification. It was amazing to see that approximately 90% of the individuals in the room stood to be recognized.

It made me think about how our Society and specifically the Certification Program work to support our industry certification efforts. There are two full-time staff people that work in the Indianapolis office: Certification Director Megan Clappe and Certification Assistant Carol Waite. They perform the day-to-day certification support functions. The rest of the program relies on volunteers to carry out its various tasks.

The National Certification committee is a group currently comprised of 12 broadcast engineers whose experience spans more than 360 years in radio, television and multimedia broadcasting. The committee meets formally in-person twice a year: once in the spring at the NAB Show and again in the fall at the SBE National Meeting. Throughout the year the committee grades essay exams, reviews the question database for relevance, revises the question pool for it to remain current with changing technologies, reviews certification applications to assign essays as needed, and a myriad of other tasks in support of the program.

We also have volunteer chapter certification chairmen at most of the 114 current SBE chapters throughout the world. These individuals promote the program of certification, proctor exams, and review recertification applications throughout the year.

In addition to national Certification Committee members and local chapter certification chairs who have specifically chosen to volunteer their time to the certification program, there are individuals who help to proctor exams and promote the benefits of being certified. Those efforts have made their way into the US military and a number of high schools and colleges.

SBE Certification is the only certification program focused at the broadcast/multimedia engineer. Since its inception, the Society of Broadcast Engineers has issued more than 18,500 certifications. Thank you to everyone who has generously given his or her time to the SBE and certification program. Without you, the certification program would not have thrived over the past 40 years.

CQ Answer from page 3

C. ANSI/EIA/TIA Standard

Tower standard TIA-222-G went into effect on Jan. 1, 2006. It updated the previous version (TIA-222-F). Revision H is currently in review and is expected to be released in 2016.

Certification Program Recognition

Every year at the annual membership meeting during the NAB Show, the SBE recognizes the local certification chairmen and national committee members who devote volunteer time to the Program of Certification. These SBE members receive a plaque on their recurring five-year anniversaries. The following were recognized in April. The SBE thanks the volunteers who devote so many hours to the SBE and the certification program.

20 YEARS
National Certification Committee
James T. Bernier, Jr., CPBE, CBNE
20 YEARS
Frederick W. Hoffman, CPBE Chapter 29
Michael P. Scott, CPBE Chapter 16
35 YEARS
William J. Kozel, II, CSRTAVE, CBNT Chapter 70
20 YEARS
Eric Hoehn, CSRE, CBNT Chapter 37
Larry W. Rixman, CBTE, CBNT Chapter 35
15 YEARS
H. Fred Stone, CPBE, CBNT Chapter 33
1 YEAR
David W. Davis, CPBE, CBNT Chapter 67
Kishore Persaud, CPBE, CBNT Chapter 46
Michael Graziano, CEV, CBNT Chapter 14
Charles “Buc” Fitch, CPBE, AMD Chapter 14
SBE Certification Achievements

CONGRATULATIONS

LIFE CERTIFICATION

Certified Professional Broadcast Engineer® (CPBE®)
Noel Richardson, South Charleston, WV - Chapter 116

Certified Professional Broadcast Engineer® and certified senior broadcast engineers who have maintained SBE certification continuously for 20 years, are at least 59½ years old and are current members of the SBE may be granted Life Certification if so requested. All certified who have retired from regular full-time employment and are at least 59½ years old may be granted Life Certification if they so request. If the request is approved, the person will continue in his/her current level of certification for life.

CERTIFIED PROFESSIONAL BROADCAST ENGINEER® (CPBE®)

James Stitt, Cincinnati, OH - Chapter 33

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 as a Certified Senior Broadcast Engineer®.

FEBRUARY EXAMS

Certified Senior Television Engineer® (CSTE®)
Stephen Boll, White Plains, NY - Chapter 15
Robin Cole, Spokane, WA - Chapter 21
Michael Graves, Grass Valley, CA - Chapter 43

Certified Senior Radio Engineer® (CSRE®)
Thomas Gray, Humble, TX - Chapter 105
Joseph Kruse, Dothan, AL - Chapter 116

Certified Broadcast Networking Technology® (CBNT®)
John Flickley, Norwood, MA - Chapter 11

Certified Broadcast Networking Technologist® (CBNT®)
Robert Armstrong, Salt Lake City, UT - Chapter 16

Certified Broadcast Networking Engineer® (CBNE®)
Dean Williams, Birmingham, AL - Chapter 16

Certified Broadcast Technology Engineer® (CBTE®)
Brien Laufer, Riverside, CA - Chapter 47

Certified Broadcast Networking Engineer® (CBNE®)
Dennis Granath, New York, NY - Chapter 15
Kim Hamrock, Salem, OR - Chapter 103
Alan Pressett, Rochester, NY - Chapter 57
Adrian Washington, Riverside, CA - Chapter 131

Certified Broadcast Networking Technology® (CBNT®)
Josh Smith, East Longmeadow, MA - Chapter 16

Certified Broadcast Networking Technologist® (CBNT®)
Tom Bolo, Las Vegas, NV - Chapter 128

Certified Broadcast Operator® (CBO®)
Dennis Baltimore, El Segundo, CA

Certified Broadcast Operator® (CBO®)
Ken Jacobus, Culver City, CA

Certified Broadcast Television Engineer®
Christopher Howard, Columbus, MS
Robert Williams, Abilene, AL - Chapter 68

Certified Broadcast Television Operator® (CBO®)
Dennis Baltimore, El Segundo, CA

Certified Broadcast Television Operator® (CBO®)
Ken Jacobus, Culver City, CA

Certified Broadcast Television Operator® (CBO®)
Robert Williams, Abilene, AL - Chapter 68

NAB SHOW EXAMS

Special-Proceted Exams

rated Broadcast Networking Technologist® (CBNT®)
Kevin White, Lakewood, WA - Chapter 16

Certified Broadcast Networking Technologist® (CBNT®)
Eric Jorg, Toledo, OH - Chapter 104
Michael Stocke, Falls Church, VA - Chapter 78

Certified Broadcast Networking Technologist® (CBNT®)
Tom Bolo, Las Vegas, NV - Chapter 128

Certified Broadcast Operator® (CBO®)
Dennis Baltimore, El Segundo, CA

Certified Broadcast Technician®
Erik Jensen, Naples, FL - Chapter 128
Michael Stocke, Falls Church, VA - Chapter 78

Certified Broadcast Operator®
Robert Williams, Abilene, AL - Chapter 68

Certified Broadcast Television Operator® (CBO®)
Dennis Baltimore, El Segundo, CA

Certified Broadcast Television Operator® (CBO®)
Ken Jacobus, Culver City, CA

Certified Broadcast Television Operator® (CBO®)
Robert Williams, Abilene, AL - Chapter 68

SPECIAL-PROCOTED EXAMS

Certified Broadcast Networking Technologist® (CBNT®)
Kevin White, Lakewood, WA - Chapter 16

Certified Broadcast Networking Technologist® (CBNT®)
Eric Jorg, Toledo, OH - Chapter 104
Michael Stocke, Falls Church, VA - Chapter 78

Certified Broadcast Networking Technician® (CBNT®)
Tom Bolo, Las Vegas, NV - Chapter 128

Certified Broadcast Technician® (CBT®)
Bates Technical College (cont.)

Certified Broadcast Television Operator® (CBO®)
Dennis Baltimore, El Segundo, CA

Certified Broadcast Television Operator® (CBO®)
Ken Jacobus, Culver City, CA

SBE CERTIFIED SCHOOL COURSE COMPLETION

Certified Personnel Broadcast Engineer®
James Alexander, Wilton, CA - Chapter 131
Roger Bishop, Carmel, IN - Chapter 25
Kevin Plumb, Trumbull, CT - Chapter 19

Certified Professional Broadcast Engineer®
James Alexander, Wildomar, CA - Chapter 131
Roger Bishop, Carmel, IN - Chapter 25
Kevin Plumb, Trumbull, CT - Chapter 19

Certified Broadcast Networking Engineer® (CBNE®)
Paul Wan, Culver City, CA - Chapter 47

Certified Broadcast Technician®
Jared Scott, Olathe, KS - Chapter 49
Paul Wan, Culver City, CA - Chapter 47

Certified Broadcast Television Operator® (CBTO®)
Allan Boudreaux, Scappoose, OR

Certified Broadcast Television Engineer® (CBTE®)
Jared Scott, Olathe, KS - Chapter 49
Paul Wan, Culver City, CA - Chapter 47

Certified Broadcast Television Engineer®
James Alexander, Wildomar, CA - Chapter 131
Roger Bishop, Carmel, IN - Chapter 25

Certified Broadcast Television Engineer® (CBTE®)
Frank Bell, Clifton, NJ - Chapter 15

Certified Broadcast Television Engineer®
James Alexander, Wilton, CA - Chapter 131
Roger Bishop, Carmel, IN - Chapter 25

Certified Broadcast Television Operator® (CBTO®)
Allan Boudreaux, Scappoose, OR

Certified Broadcast Television Operator® (CBTO®)
Larry Flagg, Blairsville, GA

Certified Broadcast Television Operator® (CBTO®)
Vince Hamilton, Houston, TX

Applications 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.

Cox Media Honors Two SBE Members

At the 2015 NAB Show, Cox Media Group held its annual engineering/IT dinner on April 12. Part of the event was a recognition of Cox engineering employees across the company. This year, two SBE members received the Engineer of the Year award honors for radio and TV.

Ted Hand, CPBE, B-VSBI, AMD, DRB, director of engineering/operations for CMG in Charlotte, NC, took the TV honor. He has worked for Cox since 2006. Hand is a past secretary of the SBE and currently serves on the Board of Directors.

The CMG Radio Engineer of the Year award was presented to Jack Conway, IT manager of CMG Tulsa, OK. Conway has worked for Cox since 2000.

Ted Hand with his award at the Cox Media Group engineering/IT dinner.
A: The annual Membership Meeting on Tuesday attracted a full house.

B: Fred Baumgartner moderates the Ennes Workshop on Saturday.

C: Jim Bernier, CPBE, CBNE, (right) receives a plaque to commemorate his 20 years of service on the National Certification Committee.

D: Students in the NAB’s Technical Apprentice Program attend the Membership Meeting.

E: Member reception prize winners with their prizes.

F: The Ennes Workshop attracted a record crowd.

G: Bob Caniglia of Blackmagic Design, Joe Snelson and Jerry Massey draw for prizes at the Membership Meeting.

H: The SBE booth was a place to meet, get info and buy books and logo items.

I: President Joe Snelson draws a daily booth prize winner.

J: Jim Keightley won the Blackmagic Design Studio Camera at the Membership Meeting.

K: The Membership Reception on Tuesday was a chance to meet, greet and eat.

L: SBE and AMITRA leaders meet at the SBE booth.
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Spectrum Enforcement In the Broadcast Service

In an internal memo leaked from an FCC field office, FCC Managing Director Jon Wilkins and Enforcement Bureau Chief Travis LeBlanc announced in March a plan to close all but 8 of the 24 FCC field offices and to reduce its field office staff from 63 to 33. In the March 10 memorandum, LeBlanc and Wilkins cited the need to take “a fresh look” at the Bureau’s 20-year-old operating model in light of technology changes and tighter budgets.

Under its Phase I field modernization scheme the primary focus of its reduced field office is RF spectrum enforcement. The proposed “Tiger Team” of agents based at the Commission’s Columbia, MD, monitoring station would be “flexible enough to support other high-priority initiatives.” Under the plan, all field agents would have electrical engineering backgrounds “to support the primary focus on RF spectrum enforcement.” The Bureau also proposes standardizing its investigatory and sanctioning processes.

The EB field organization chart would shrink from 21 to 5 director positions, and from 10 to 3 administrative support positions. The 8 remaining field offices would remain in place, but the EB would “pre-position” equipment in several other locations. Offices slated to stay would be New York City; Columbia; Atlanta; Miami; Dallas; Los Angeles, and San Francisco. Equipment would be stashed in or near Kansas City; Salt Lake City; Phoenix; Seattle; San Juan; Anchorage; Honolulu; and Billings, MT.

Part of the plan involves privatization with “beneficial partnerships between the field and other organizations that may support increasing our effectiveness.”

Situation Analysis

There are numerous problems with this plan. There is no sense of urgency in the FCC’s enforcement activities targeting spectrum polluters, such as noisy power lines, RF grow lights, and pirate broadcasting, all of which plague broadcasters. The field offices are already stretched thin due to hiring freezes and attrition from retirement of veteran FCC staff. At the same time, broadcasters are critical of the fact that the FCC field offices are forced to spend limited staff time with tasks that are unrelated to the core function of interference resolution. For example, spot broadcast station inspections appear to some broadcasters to be unrelated to interference resolution.

The FCC website identifies the mission of the field offices: “The Enforcement Bureau’s Regional and Field Offices are our ‘eyes and ears’ on the ground. Nearly half of EB’s staff is deployed in the three Regional Offices and 24 Field Offices around the country. This ubiquitous presence uniquely positions EB to assist the Commission and other government agencies in resolving interference and unauthorized radio transmission cases. The Field also conducts routine on-site investigations, facilities inspections, audits of radio facilities, cable systems, and antenna structures, provides disaster recovery support, and assists in carrying out special priorities of the Commission. Field agents also help the Department of Justice pursue in rem seizures of equipment used by unauthorized operators.”

So what will happen when the “ubiquitous presence” of the FCC’s “eyes and ears” disappears from most of the markets? How could the FCC respond immediately to interference to public safety, or interference to air-to-ground communications? The FCC’s basic charge is to prevent interference between and among users of the RF spectrum, something the FCC hasn’t done well of late. This proposal bodes ill for the situation improving. Pirate broadcasting is epidemic, and the longer the pirates are allowed to continue, the more there will be. A rule violation quickly addressed in a visible manner deters others from the same activity. Conversely, invisibility of FCC enforcement and allowing rule violations to fester for long periods encourages other rule violators.

The EB’s deputy chief was recently quoted as saying that the $21 million it costs to keep the field offices and employees and equipment is too expensive, and field office staffers have “too little staff when asked to perform some RF investigation. The offices’ staffs are spread so thin as it is that they don’t have time to do anything but high-priority spectrum-enforcement field work.

Surely there are tasks the field offices are doing that they shouldn’t be wasting time doing, such as random station inspections. But there are far more things that they aren’t doing that they shouldn’t be wasting time doing, such as random station inspections.

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©2015 Liberty Mutual Insurance
Professional Liability Coverage Coming This Summer

I have another update on the progress of providing a professional liability insurance program at a reasonable cost for SBE members. In early May we were reviewing the draft policy designed for broadcast contract and consulting engineers. By the time you read this, we hope to have the new program available. Check the SBE website or watch for announcements in the semi-monthly SBE-news email newsletter for its availability.

During the April NAB Show, the SBE was very active with meetings, events and the NAB Broadcast Engineering Conference. SBE Member Communications Director Chriss Scherer captured some of the SBE activity in a short video that’s linked from the SBE website and posted on our YouTube channel. If you were at the convention, you might catch a glimpse of yourself.

April 1 was the deadline for members to renew their SBE membership on time. Thanks to the several thousand members who did. If you’ve not taken a moment to renew your membership, please do so today. You can use our secure online renewal form, or use the printed renewal form mailed to you in February. The grace period for member renewal ends on June 30. After that, if you have not renewed you will be dropped from membership.

If you find yourself out of broadcast engineering work due to no fault of your own, you may be eligible for a one-year waiver of your dues. Send a brief message to me explaining your circumstances.

We’ve included in this issue memorials to two SBE members who recently passed. President Snelson has paid tribute to them in this issue’s President’s Letter, and I would like to briefly as well. I have great respect for those who were a part of the beginning of the SBE. In the mid-1960s, not everyone was rushing to join the upstart group of radio and television engineers. Peter Onnigian, CSBE, of Sacramento, CA, Charter Member #60 and SBE Fellow, was a forward thinker his entire career, eventually founding the antenna manufacturing company Jampro. We’re glad he was there at the beginning of the SBE, and a strong supporter all through his career.

Sadly, we also lost Scott Mason, CPBE, CBNT, in April. Scott had a long, notable and respected career with CBS Radio in Los Angeles. I was privileged to work with Scott during his six years on the national SBE Board of Directors. He provided leadership, first to the society’s membership committee, and later to the EAS Education Committee. He also served on the society’s Executive Committee. His contributions during Board discussions were always insightful and reflected the respect and admiration he had for other members and broadcast engineers in general. We join the many family, friends and coworkers of Peter and Scott in mourning their loss.

FOCUS ON SBE
By John L. Poray, CAE
SBE Executive Director
jporay@sbe.org

June 2015

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Update on ATSC 3.0, Part 2

In the last issue we looked at the upcoming changes with ATSC 3.0, including details on the physical layer. We continue with the management/protocol layer.

The Management and Protocols Layer is the plumbing connection between the Physical Layer and Presentation Layer, supporting service delivery and synchronization, service announcement and personalization, and interactive services and companion-screen services. A consensus has been reached on the use of Internet Protocol (IP) transport for broadcast delivery of both streaming and file content. The use of IP transport (instead of MPEG-2 transport as used in the current DTV system) provides a large degree of commonality with other delivery mechanisms. Streaming content (for example, live TV) will be delivered in chunks (using ISOBMFF as a content format), rather than a continuous stream of bits. Again, this provides commonality with other delivery mechanisms, as well as making things such as localized or personalized ad insertion relatively simple.

ATSC 3.0 is being designed to allow the seamless use of broadcast combined with broadband to deliver services and components of services. One example of this might be delivering video and one audio language (which might be expected to be used by a majority of viewers) in the broadcast, with alternate language audio streams delivered via broadband – allowing the viewer to select among a number of options. One enabling technology for hybrid delivery is the use of UTC (or some other form of “absolute” time) for synchronization and buffer management.

In a number of situations, the receiver may only have access to uncompressed audio and video; e.g., via an HDMI cable connected to a set-top box. For ATSC 3.0, additional components and services are desired that may not make it all the way to the receiver in the main delivery path. Automatic Content Recognition (ACR) can enable the receiver to identify what is being viewed. ACR methods include fingerprinting and watermarking. ACR-aware receivers with a broadband connection could request and retrieve additional content via broadband.

Application/Presentation Layer

The Applications and Presentation Layer represents essentially the elements the viewer experiences, including video coding, audio coding and the runtime environment. The service model for ATSC 3.0 allows for more complex services to allow broadcasters to evolve their business. Major elements include:

- Enhanced linear TV, plus on-demand support
- Subscription and pay-per-view (PPV) support
- Conditional access and digital rights management (DRM) capabilities
- Mobile and fixed device, plus companion device support
- Hybrid delivery (broadcast and broadband), combined with pushed content

For video coding, UHD and HD enhancements are a key initial goal, with 4K support at the start and 8k possible later via extensibility. HEVC (H.265) has been selected as core video codec. Portable, handheld, vehicular, and fixed devices in both indoor and outdoor settings are all targeted. Physical Layer pipes may enable the flexible trade-off of robustness vs. throughput for each component. Layered (scalable) coding is under consideration, possibly on multiple PLPs. The latter situation may allow delivery of an HD version for core service over a robust pipe and an enhancement layer over a higher bitrate pipe to bring the video up to UHD.

For audio coding, new personalization features are envisioned that include control of dialog, alternate audio tracks and assistive audio services, other language dialog, special commentary, and music and effects. Furthermore, normalization of content loudness and contouring of dynamic range, based on the specific capabilities of a user’s device and unique sound environment, is expected. An enhanced immersive experience is envisioned, with high spatial resolution in sound source localization (in azimuth, elevation, and distance), for an increased sense of sound envelopment. Features will include targeted services to various devices and speaker setups, support for hybrid broadcast/broadband delivery, and support for audio-only content as well as audio/video content.

The runtime (or application) environment will likely be based on HbbTV 2.0, with modifications as needed to accommodate differing needs and requirements. Some aspects from the ATSC 2.0 application environment may be used as well.

Extensibility

Because technology continues to advance and consumer demands evolve, methods are being included in the ATSC 3.0 standard to facilitate a graceful evolution from the initial technologies to newer, more advanced technologies that may be developed in the future. Signaling will permit new receivers to take advantage of new technologies when they are available. This signaling begins at the Physical Layer and extends through to the application/presentation layer. The Physical Layer will have a very basic, highly robust form of signaling that can indicate what technology is used for the physical layer itself. At a minimum, each layer will have the ability to signal what technologies are used in the layer above. Signaling and announcement information will include the ability to indicate the capabilities necessary to successfully render services (with a distinction between those considered essential (by the content creator) and those considered optional).

MORE ONLINE

Want to know more? Access the SBE on-demand webinar on ATSC 3.0 at sbe.org/webinars.
In Memoriam

Peter Onnigian, CSBE
Charter Member #60
1921 - 2015
Life Member

The trust offers scholarship and educational programming and other grants that benefit broadcast engineering and the broadcast industry. Submit tax-deductible donations payable to the Ennes Educational Foundation Trust, to the Society of Broadcast Engineers, 9102 N. Meridian St., Suite 150, Indianapolis, IN 46206.

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Kenneth C. Andrews - Tacoma, WA

Thank you to the following supporters for their contributions:

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Life Member

In Memoriam

Scott Mason, CPBE, CBNT
Member #15085
1959 - 2015
Senior Member
Board of Directors 2008 - 2014

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Member Spotlight: Tom Weber

Member Stats
First Joined the SBE: 1979
Certifications: CPBE, CBNT
Chapter: 25, Indianapolis
Employer: WISH-TV and WNDY-TV
Position: Engineering Manager
Supervisor
Location: Indianapolis, IN
I'm Best Known For: Working really hard to get the job done, with a sense of humor.

Q. What do you enjoy or value most about your involvement with the SBE?
A. The SBE has been instrumental in allowing me to meet other excellent broadcast engineers, learn from them and excel at my profession, and return the favor in getting other engineers to do the same.

Q. What got you interested or started in broadcast engineering?
A. We had a family friend who was in broadcasting. I enjoyed engineering, so I started at the student radio station at college.

Q. What do you find most satisfying in your job?
A. I really like it when people say that they turn to my station to find out vital news and weather information that they need to know.

Q. When I’m not working I...
A. ...will often be out bicycling. Many weekends I’ll ride 30-50 miles.

Q. Tell us something others may not know about you.
A. I once managed souvenir sales at an N'Sync concert. We sold $200,000 gross, and at the end of the night we were off only $20 on the count. I have also helped my son repo cars and motor homes.

Q. What’s your favorite gadget?
A. Right now, it’s my FLIR One thermographic camera clip-on to my iPhone 5.

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MEMBERS ON THE MOVE

Kirk Harnack, CBRE, CBNE, is now director of multimedia marketing at the Telos Alliance.

Huascar Sousa is now CEO at Global 760 AM, Santo Domingo, Dominican Republic.

Jason Ornellas, CRO, is now director of engineering for CBS Radio, Sacramento, CA.

Larry Wilson is now chief engineer at Cumulus Media in Oxnard/Ventura, CA.

Bill Hayes has become a partnership board member for the International Broadcasting Convention (IBC).

Michael Maville, CBT, is now chief engineer at WPEC-TV, West Palm Beach, FL.

Matthew Agnesi has been promoted to director of engineering and IT for CBS Radio Orlando.

Fred Baumgartner, CPBE, CBNT, has been named TV product manager at Nautel.

Have a new job? Received a promotion? Let your fellow SBE members know. Send your news to Chriss Scherer at cscherer@sbe.org.

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