

**Meeting Notice****Thursday, September 9, *Primedia Business*****9800 Metcalf; Overland Park, KS; 913-341-1300****Gather at 11:30 a.m.; meeting at 12 noon**

*All About SBE Certification.* The SBE Program of Certification was created in 1975 in response to the changing FCC operator licenses. The SBE Program of Certification has grown to achieve industry acceptance as an indication of an individual's knowledge in broadcast engineering. Industry salary surveys have shown that holding SBE Certification usually results in a higher average wage.

The presentation will outline the SBE Program of Certification and explain the various levels that are offered, as well as the requirements to become certified. Steve Epstein, CPBE CBNT, Chapter 59 chairman, has set a chapter goal for every chapter member to become certified. In addition, anyone who registers to become certified from attending this meeting will be eligible to win a copy of CertPreview, the new Certification preparation software, courtesy of the SBE National Office. A pizza lunch will be provided by the chapter. ☺

Certification Exam Dates		
Exam Date	Location	App. Deadline
Nov 12-22, 2004	Local Chapter	Sep 24, 2004
Feb 4-14, 2005	Local Chapter	Dec 27, 2004
Apr 19, 2005	NAB	Mar 1, 2005

**Last Month's Meeting**

The August 12 meeting was held at Zarda Barbecue in Lenxa. Steve Epstein presided over the meeting.

Chapter Committee reports were brief, citing little new activity over the past month. Steve reminded the members that the ballots for the national officer and board elections were mailed to all members, and that they were due back in the National Office by Sept. 9 to be counted in the election. The election results will be announced on Sept 10. Watch the chapter remainder for news of the election results.

The program was presented by Richard Hinkle, director of RF engineering for Broadcast Electronics. Hinkle presented an overview of the IBOC digital radio technology that is being deployed across the U.S. His presentation covered the various methods of creating the hybrid analog/digital signal. It was clear that while information about IBOC is available through trade publications, seminars, conventions and manufacturer's websites, there is a great deal of information that is not widely known. Just as there has been a learning curve for DTV, there is a learning curve for IBOC.

Thanks to Chris Kreger of RF Specialties of Missouri for arranging the program, and thanks to Broadcast Electronics for providing lunch.

**Chairman's Chat**

*By Steve Epstein, CPBE CBNT*

**Why Certify?**

The SBE's Certification Program has three main objectives, which I have paraphrased:

- Raise the status of broadcast engineers by providing competence standards.
- Recognize individuals that meet those standards.
- Encourage professional development.

This month's meeting is about SBE Certification, and I strongly encourage you to attend and consider obtaining SBE Certification. When I started in television, First Class Licenses were not required for operators. However, there were enough people with them that there was no reason to even consider an applicant without one. That license did not guarantee any real level of competence, but it did demonstrate that the individual had enough drive and perseverance to obtain it.

This year, the SBE hit a record-high in certifications being held. It is now much more likely that next time you apply for that dream job that another applicant may be better certified than you. Just like the First Class scenario mentioned above, the hiring manager may simply reduce the applicant list to only those with SBE Certification. Don't take that chance; get certified.

Looking at it from another perspective, when was the last time you went all day without touching a device with an IP address? Do you have your CBNT? Why not? Many of us have specialized in studio equipment or transmitters, but today, networked devices are everywhere. If you do not know how to work on them or set them up, your replacement will.

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This month is the final installment in my CBNT tutorial. These six quick lessons will not teach you everything you need to know to design and build a multi-node network running different operating systems, but they will provide a firm foundation of the basics. They should also contain plenty of information you need to obtain your CBNT.

SBE Certification is inexpensive, relevant to our employers and, with the necessary skills and experience, fairly easy to obtain. If you are not certified, isn't it time for a change?

### New Sponsor for the Communicator

The Communicator welcomes Stark Raving Solutions as a newsletter sponsor. This newsletter is made possible because of the support of all our sponsors. Be sure to tell them that you appreciate their support as well.

### Radio Engineer Electrocuted in Colorado

The Associated Press reports that a Wyoming broadcast engineer was electrocuted while working at a transmitter site in Colorado. Robin Bradley Thomas of Cheyenne, WY, was killed while working alone at a transmitter site in near Red Feather Lakes, CO.

Thomas was found Aug. 24, but an autopsy shows that he probably died on Aug. 23. He apparently came in contact with a high-voltage source.

Thomas was a contract engineer and a partner in Radio Frontier Broadcasting and Blue Moose Broadcasting.

### FCC Releases Details of EAS NPRM

On Aug. 4, the FCC adopted EB Docket No. 04-296, which is a Notice of Proposed Rulemaking for changes to the Emergency Alert System. The text of the NPRM was released on Aug. 12. Once posted in the Federal Register, reply comments will be due in 60 days and reply to comments will be due in 90 days.

The NPRM reviews the Emergency Alert System (EAS), and seeks comment on whether EAS in its present form is the most effective mechanism for warning the public of an emergency. If the EAS is not effective, the FCC wants to know how it can be improved. The text of the NPRM is available online at [hraunfoss.fcc.gov/edocs\\_public/attachmatch/FCC-04-189A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-04-189A1.pdf).

The NPRM notes that EAS use as part of such a public warning system at the state and local levels is voluntary, and while federal, state and local governments, and the consumer electronics industry have taken steps to ensure that alert and warning messages are delivered by a

responsive, robust and redundant system, the permissive nature of EAS at the state and local level has resulted in an inconsistent application of EAS as an effective component of the overall public alert and warning system. The FCC is evaluating if permissive state and local EAS participation is appropriate today.

The FCC states that the EAS relies on terrestrial analog broadcast stations to relay information. While this is one way to distribute EAS information, this statement shows that the EAS is not as completely defined as it should have been from the start. Some areas have made EAS an effective system through the use of background communications for information distribution. In the successful applications, the broadcast element is a last link to the public and not a primary information channel for distribution. The NPRM seeks ideas on EAS distribution through more modern communications means, such as cell phones.

One inquiry relates to establishing uniform national guidelines are preferred over the "disparate manner in which states and localities implement EAS." This item alone will likely generate the most input from broadcasters.

#### FCC Reinstates EEO Form 395-B

The FCC has reinstated the Annual Employment Reports (FCC Form 395-B), on which broadcasters must report data on the race, ethnicity and gender of their workforce. The FCC suspended the use of Form 395-B in January 2001 when the EEO rules in effect at the time were rejected by the D.C. Circuit Court of Appeals.

In reinstating the reports, the FCC rejected the arguments of certain broadcasters that collection of the Form 395-B data will unlawfully pressure broadcasters to adopt race or gender-based hiring practices. However, the FCC states that it will not use the reported data to access individual stations' EEO compliance, but instead only use the data to monitor industry aggregate hiring trends.

The FCC requires the reports to be filed by all stations with at least five full-time employees by Sept. 30 of each year, but for 2004, a grace period will be provided until a deadline is announced in a later FCC order.

More info on MM Docket No. 98-204 is available at [hraunfoss.fcc.gov/edocs\\_public/attachmatch/FCC-04-103A1.doc](http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-04-103A1.doc).

**Next EAS Required Monthly Test: September 28**  
The RMT is sent on the last Tuesday of the month



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### KCSN Begins Testing IBOC Booster

KCSN-FM began testing an IBOC booster in West Los Angeles to fill in its 1mV/m contour. The California State University station in Northridge, CA, received experimental authorization from the FCC to conduct testing of a main and booster IBOC system operating in hybrid mode.

FCC authorization followed KCSN's eligibility for a Corporation for Public Broadcasting (CPB) grant as part of a seed market campaign establishing HD Radio transmissions in 13 major markets. The station agreed to convert to IBOC only if it could convert the main and a proposed booster site that would fill in part of its licensed coverage area heretofore unreachable because of the Santa Monica mountain range blocking its main signal.

The station was initially reluctant to commence IBOC transmissions because it estimates that one-third of its listenership is from this new booster site. The station felt that converting only the main signal to IBOC would reduce the aural experience for the classical/eclectic station.

### Localism Comment Date Extended

On June 7 the FCC issued a Notice of Inquiry (MB Docket No. 04-233) to solicit comments on the role that broadcasters play in meeting the needs of their local communities.

The original comment and reply comment dates were Sept. 1, 2004, and Oct. 1, 2004. An additional 61 days have been granted to file comments and replies. Comments are now due by Nov. 1, 2004. Reply comments are due by Dec. 1, 2004.

### SBE Certification Program Hits All-Time High

The SBE has conducted a certification program available to members and non-members since 1975. What started as a program that struggled to gain acceptance in the industry now boasts 5,400 current certifications on record. This marks the association's highpoint in the 29 years since the first certification was granted.

The SBE grants technical and operator certifications in 11 levels and broadcasting disciplines. All require recertification every five years to ensure that the individuals who hold them keep up with changes in technology, accepted practices and regulations. Newer certification levels that the society has unveiled over the last 10 years have addressed the changes in technology and station operation, as well as the need to provide a standard for individuals working in master control. These have included the Certified Broadcast Networking Technologist, Certified Radio Operator and Certified Television Operator.

### Computer Connection

*By Steve Epstein, CPBE CBNT*

#### **CBNT Review, Part 6: Wrap Up**

In parts 1 and 2 we looked at getting a PC running. This month we will cover some more items of interest when trying to remedy an ailing system. Although many of us have worked on machines without paying close attention to ESD (electrostatic discharge), I have been reminded that it is always a good idea to use a properly constructed ground strap (not one made from wire and duct tape). It only takes 100V to damage CMOS, and most static discharges are easily 10 to 100 times that. Proper tools are also a good idea, and these include IC removal tools and Torx drivers. Today's zero-insertion force (ZIF) sockets reduce the need for IC removal tools, but they are sometimes needed as are Torx drivers. Many of the newer cases use Torx screws because of their high-tech appearance and ability to resist damage.

When troubleshooting a system, talk to the operator and check on recent changes including software installs. Back up any critical files and parameters. Before changing any file, make your own backup copy with the extension .BU, .OLD or your initials. If the system refuses to boot, try a clean boot—one without any drivers. You may need to load a driver for the disk or the monitor, but usually that is not needed. Document your changes, and keep them on file

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for the next time. If you have IRQ or hardware conflicts, check the automatic plug-and-play cards as well as any older sound cards (commonly on IRQ 5) or look to the COM ports, which normally use IRQ 3 and 4. Unless you have an older system with ISA cards in it, you are unlikely to see any hardware conflicts at boot. Newer systems simply refuse to load conflicting hardware and software.

Viruses used to attack the hard drive, typically installing themselves in the master boot record (MBR). Newer variations simply plug in to Windows registry in the autorun section. Others that work with Internet Explorer install themselves as browser helper objects. There is an excellent piece on removing spyware at [www.michaelhorowitz.com/removespyware.html](http://www.michaelhorowitz.com/removespyware.html). Whenever you are working on a machine that may have a virus or malware installed, remove it from the network and troubleshoot it in a standalone mode. If you need to get files into it, use a CD or something that cannot be written on. That way you can ensure that anything on the machine's hard drive does not find its way to another machine.

When troubleshooting a machine for network problems, the first place to start is with the loopback address 127.0.0.1. If the network client is running, ping 127.0.0.1. The result should be a reply. If there is no reply, something in the machine, either the network client or the NIC, is not working properly. Once the card is running and you can ping the loopback address try to ping nearby machines. Normally you will not need to do any extensive routing, but you can manipulate the routing table on a Windows machine with route. Use route print to see the current table. Routers and the machine's internal router table are used to send packets across the Internet to their destination. Today, nearly all networks use the low-level protocol TCP/IP. IPX/SPX (Novell) and NetBEUI (Microsoft) are also low-level protocols. TCP/IP and IPX/SPX are routable, but NetBEUI is not.

Normally each local network has one or more network gateways that allow access to a wider network (the entire Internet). Gateways strip off the local information and package the packet for transmission across the Internet. Many small home routers provide this functionality by converting all local addresses to a single address (from the telco or cable provider). When packets return they are repackaged and sent to the correct local machine.

One other item of note on troubleshooting network issues is pinging addresses vs. names. If you can ping a machine by IP address, but not by name there is a problem in the DNS service. You may not be hitting a DNS server

or the local machine's hosts file is incomplete. Either way, the network is working, but DNS is not.

Despite the apparent complexity of today's computers, nearly all the troubleshooting basics you have learned over the years still apply. Check the basics; loose connections, power, power supply, startup sequence. After that, divide and conquer: is the problem local or network related? On NT-class multi-user machines is the problem restricted to one or two operators? You get the idea. The world of computer networks requires different tools and procedures, but in the end it is still as simple as getting a signal from here to there. ☺



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**Upcoming Meetings and Events**

**September 9 - All About SBE Certification**

The details of the industry benchmark

**October 10 to 12 - KAB Convention**

Overland Park Sheraton

**October 14 - Annual Picnic**

The chapter's annual social gathering

**November 11 - No Program Slated Yet**

Contact Matt Kinnan or Mike Rogers today

**December 9 - Media Asset Management**

EMC

Do you have a suggestion for a program topic?  
Please share it with Matt Kinnan or Mike Rogers.

**Prepare to be Certified**

The SBE introduced newly designed certification sample-test software at NAB2004. The new software runs on Windows and replaces the previous DOS-based software.



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