



Meeting Notice

Thursday, February 14, Entercom Radio

7000 Squibb Rd., Room 100; Mission, KS; 913-593-7182

Gather at 11:30 a.m., lunch served at 11:45, meeting at noon

Chapter Elections and Engineers' Appreciation Lunch. The chapter elects its leaders annually, and the elections will be held at the February meeting. All chapter officers are eligible for re-election and have an expressed interest in serving again, but candidate volunteers are always accepted. Take an active role in guiding your chapter by attending this meeting.

RF Specialties will provide lunch with its annual Engineers' Appreciation Lunch. The Kansas City barbecue meal will include smoked brisket, ribs, pulled pork and turkey with all the barbecue fixings. Many manufacturers have provided door prizes ranging from logo wear to gift certificates to restaurants and big box stores. An RSVP is appreciated (although not required to attend) so the appropriate amount of food can be prepared. Call Chris or John at 816-628-5959 or e-mail rfmo@uniteone.net to RSVP by Feb. 8 if possible.

The Entercom studios are located on the NE corner of Shawnee-Mission Pkwy and Metcalf. If you arrive via Metcalf, turn east on W 61st Street in front of Target. Drive southwest through the Target parking lot and proceed to the Entercom Parking Lot. If you arrive via Shawnee Mission Pkwy, turn north onto Squibb, which is about 1/2 mile east of Metcalf. Enter the building using the west entrance closest to Metcalf. ●

Last Month's Meeting

By Ben Weiss, CPBE

The January meeting of Chapter 59 of the Society of Broadcast Engineers was held January 10, 2008 at the studios of KCUR radio station, 4825 Troost, Kansas City, Missouri. Pizza was provided through the courtesy of KCUR. There were nine in attendance. Robin Cross, chapter chairman, called the business meeting to order at 12:05 p.m. and asked for all those present to introduce themselves.

Ben Weiss read the minutes of the December meeting. The motion to approve the minutes was made by Chriss Scherer and seconded by Ed Treese; passed.

Kirk Chestnut, Kansas City EAS chairman, reported that the new EAS handbook from the FCC is now available. Links to it will be posted on the chapter website soon. Kirk stated that new EAS protocols are being developed by Homeland Security and FEMA but a box to decode them has not been developed yet.

Chris Castro, chapter frequency coordinator, sent a report stating that he is working on some changes for next year's NFL football season. He also notes that the SBE on the national level is looking into an increased effort with event coordination. Finally, he is still working on making a database of all frequencies so that it can be viewed on the chapter's website.

Chriss Scherer brought us up to date regarding certification exams. He told us that the next local exam opportunity is the week of Feb. 8, but the application deadline has closed. Exams will be offered at the 2008 NAB Show and the application deadline is Feb. 29. Also, he noted that he can be available for special proctoring at almost any time. On the newsletter side, Chriss stated that he believes all but one sponsor renewal checks have been received.

Regarding future programs, Dave Buell told us that the February meeting will be the annual RF Specialties appreciation barbecue lunch. The meeting location will be the Entercom broadcast center. The March meeting program and location have not been determined yet.

Robin told us that he has obtained a copy of the *Audio Measurement Handbook*. It will be placed in the chapter's reference library.

There was a brief discussion about having more evening meetings. The thinking is that perhaps evening meetings

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Certification Exam Dates		
<i>Exam Date</i>	<i>Location</i>	<i>App. Deadline</i>
Apr 15, 2008	NAB2008	Feb 29, 2008
Jun 6 - 16, 2008	Local Chapter	Apr 18, 2008
Aug 8 - 18	Local Chapter	Jun 6, 2008




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will be easier for TV members to attend as well as some of the chapter's radio members.

The motion to adjourn was made by Darrell Nickolaus and seconded by Ben Weiss; passed.

The program consisted of a tour of the Marr Sound Archives at the Miller Nichols Library on the UMKC campus. Our tour host was Chuck Haddix, Sound Recording Specialist for the archives.

The archive houses nearly 300,000 archival sound recordings that represent the American experience through recorded sound. The collection is in formats that include LPs, 78s, 45s, wax cylinders, wire recordings, transcription discs, instantaneous cut discs and open-reel tapes. The Archives preserves material stored in modern and obsolete formats, and its digitizing and Web-publishing capabilities allow worldwide access to sound originally recorded on almost any device.



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Chairman's Chat

Make a Difference—Get Involved

By Robin Cross

As you have just read, the February meeting will be at Entercom. This is usually our most-attended event, and Chris Kreger and John Sims of RF Specialties of Missouri do an outstanding job of thanking everyone attending for being customers. If you have not been to one, it is a treat. I certainly hope that this is not the only reason you attend this meeting.




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I have been a member of several SBE chapters. I was a member of a smaller market chapter (100 to 150) that had *much* more support from the engineers and stations. Ownership and engineering management supported the local chapter. Programs were good and very well attended. The SBE provides the same services and support now that it did then. I know that this was nearly 20 years ago and economics have changed a little (a lot). If you think the SBE has changed then maybe it is because your attitude has changed—because *you* are the SBE. It exists for its members. Pony up to the bar and let us know what you would like your SBE chapter to do or be.



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And contrary to what your past experience has been, if you provide a suggestion I will not appoint you to spearhead that suggestion unless you also volunteer. (Boy, am I leaving myself open on that one.) I want to hear from you and understand what your suggestions or desires are.

I can be reached at 816-235-2880 or crossr@umkc.edu.

Ethernet Hubs, Switches and Routers

By Steve Epstein, CPBE CBNT

Last month we looked at IP addressing and how to setup a small network using a subnet mask. The network address, combined with the subnet mask define the size of the network and the usable addresses. The network address is a string of 0s and 1s followed by a continuous block of 0s. The subnet mask is a continuous string of 1s followed by a continuous block of 0s. The block of 0s in the network address and the subnet mask must be same size. Focusing on that continuous block of 0s, the first address (all 0s) is the network address, and should not be used on a machine (host). The last address (all 1s) is the broadcast address, which should not be used on a host, but instead is used to reach all hosts on the network. All other addresses in that range can be used as addresses for individual hosts.

Connecting hosts can be done simply by using a cross-over cable (receive pins to transmit pins). A better way, and one that allows for additional distance and additional connections, is to use a hub. Hubs create a common bus. Anything on one port is given to all ports. If four hosts are connected to each other through a hub, when one host transmits all other hosts must receive, even though only one of the hosts will actually use the packet. This limits the overall amount of traffic that can pass through the network, but can be handy for troubleshooting.

Switches are a bit smarter. Each Ethernet NIC (network interface card) has a unique MAC (Media Access Control) address. Switches maintain a table of MAC addresses and port numbers. Packets traversing the network contain addressing information and user data. The switch reads the address and remembers from which port it came. It then checks its table to see where to send it. If the destination MAC address is not in the table, the packet is sent to all ports. When the packet arrives at the destination, a receipt packet is returned to the sender, which allows the destination address to be added to the internal table. In very short order, the switch knows the address of every host on the network and which port it is connected to. Packets can then be switched directly from one port to another without affecting the rest of the network. In the four-machine example, this would nearly double the available bandwidth, as two pairs of machines could communicate simultaneously.

Routers do more than simply switch, they are designed to move traffic between networks. Routers are capable of looking deeper into packets and then applying sophisticated rules to the traffic as it moves through the network.

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For example, a host (192.168.1.1) on the 192.168.1.0/29 network has no way to get to a host (192.168.1.1) on the 192.168.1.8/29 network, even though they may be connected to the same switch. This is because the only way to get from one network to another is through a router that has known routes to/from both networks. Within the router is a route table that defines what traffic can be accepted and where it can be forwarded to. Routes must be established in both directions to establish communications, but the routes do not have to be symmetrical. Typically, one host on each network is a router that serves as a gateway to all non-network addresses. The router address is normally stored as the default gateway address in the host. The router has rules that might allow http (port 80) traffic between the two networks above, but to prevent non-http file transfers, ftp (ports 20 and 21) may be disallowed. Most routers have some firewall capability so that unauthorized traffic can be dumped. For instance, if the 192.168.1.1/29 address above was the gateway for that network and it received a packet from the 192.168.1.x network, but the packet showed an address of 192.168.2.24, it could be dumped because that address is obviously being spoofed from inside the network.

Careful network design can prevent heavy traffic (media files) from disrupting business operations (accounting and payroll). It can also be used to improve security across the network by limiting traffic on network segments to only the traffic that needs to be there.

NAB: Consumers More Aware of DTV Transition
According to the National Association of Broadcasters, consumer awareness of the mandated transition to DTV has grown substantially over the past year, reaching 79 percent as per an NAB survey conducted in January.

The survey includes a national sample of television households including those that rely solely on over-the-air television signals. Seventy-nine percent of respondents reported that they have "seen, read or heard something about the Feb. 17, 2009 transition to digital television."

Awareness was even greater among exclusively over-the-air households, where 83 percent of respondents reported they are aware of the transition. Overall, consumer awareness has more than doubled since January 2007 when an NAB survey asking the same question found that only 38 percent of consumers were aware of the transition.

Next EAS Required Monthly Test: February 26
The RMT is sent on the last Tuesday of the month

The NAB states that more than 34 million households that rely on over-the-air television signals will be affected by the transition to digital television, which will be completed on Feb. 17, 2009. Broadcast networks and nearly 1,500 television stations nationwide are participating in the NAB's consumer education campaign.

The next phase of the consumer education campaign will focus on the converter box coupon program and other options that consumers have as a means to upgrade to digital. The campaign will include on-air advertisements, a 30-minute educational TV program about DTV, and other initiatives.

SBE Launches SBE-News

As part of its ongoing effort to better communicate with its members, the Society of Broadcast Engineers has launched the SBE-News e-mail newsletter. Distributed twice each month, the newsletter provides information about SBE programs and activities to its members.

The SBE has published a print newsletter called *The Signal* for many years. *The Signal* is published every other month and is mailed to all of the society's more than 5,500 members. In 2007, the SBE launched the SBE Roundtable, an e-mail forum for SBE members to discuss technical issues, provide technical support through the society's professional networking, and discuss general SBE matters.

SBE members with a current e-mail address on file at the SBE national office are already receiving the newsletter. SBE members who are not receiving it but would like to should contact the national office.

FCC Updates EAS Handbooks

In December, the Federal Communications Commission released the 2007 Emergency Alert System (EAS) Handbooks for EAS participants. The handbooks include newly developed guidance for satellite digital audio radio, direct broadcast satellite and wireline video service providers, and updated analog and digital television and radio station information.

FCC Rules require copies of the handbooks to be located at normal duty positions or EAS equipment locations when an operator is required to be on duty and be immediately available to staff responsible for authenticating messages and initiating actions.

Download the handbooks www.fcc.gov/pshs/services/eas/handbooks.html.

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Upcoming Chapter Meetings and Events
February 14 <i>Chapter Elections and Engineers' Appreciation Lunch</i> SBE59 and RF Specialties <i>Entercom Radio</i>
March 13
April 10
May 8
June 12
July 10
August 14
Do you have a suggestion for a program topic? Please share it with Dave Buell.

SBE Events at 2008 NAB Show

The SBE booth (L-28) will be in the LVCC 2nd floor con-course again. Several national committees will hold meet-ings, including the Certification committee. The board of directors will meet on April 13 from 8:30 a.m. to noon in LV Hilton conference room 1.

The annual SBE Membership meeting will be held April 15 from 5 p.m. to 6 p.m. in one of the Broadcast Engi-neering Conference session rooms.

Also, SBE members can register for the convention at the NAB partner rate, which is a savings of \$200 from the NAB non-member rate.

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