

Meeting Notice**Thursday, January 8, Don Chilitos Restaurant**

7017 Johnson Drive; Mission, KS; 913-432-4615

Gather at 11:30 a.m.; meeting at 12:00 noon



Audio over IP Networks. PCs are everywhere in broadcast facilities. Not only do they handle office productivity, they handle audio as well, replacing many of the audio sources that were common a few years ago. Because so much audio is being sent and received with computers, it's natural that audio routing functions will move to data networks. By using the PC advantage of low-cost, high-volume manufacturing, there are many interesting possibilities in addition to basic audio. The program will investigate how Ethernet and IP can be used for this purpose.

The presentation will address the problems inherent in real-time, low-latency audio over IP and how to overcome them, as well as what actual implementations look like.

Telos will provide lunch. When you arrive, go through the line and order your lunch. Tell the cashier that you are with the SBE meeting. Bring your lunch to the banquet room on the east side of the building. A map to the restaurant is available at the SBE59 website. ☺

Certification Exam Dates		
Exam Date	Location	App. Deadline
Feb 6-16, 2004	Local Chapter	CLOSED
Apr 20, 2004	NAB	Mar 2, 2004
Jun 4-14, 2004	Local Chapter	Apr 23, 2004
Aug 13-23, 2004	Local Chapter	Jun 11, 2004

Last Month's Meeting

The December meeting was held at Don Chilitos Restaurant. The program, arranged by RF Specialties of Missouri, featured Jay Tyler of Wheatstone. Tyler's presentation outlined the best practices for installing and maintaining a digital audio infrastructure. He provided an overview of traditional consoles and the integrated console/router systems that use distributed digital audio and control-mix engines. In addition, he covered input and output requirements for studios and rack rooms, as well as signal definitions, wiring requirements and wire-termination needs. Lunch was provided by Wheatstone.

Chairman's Chat

By Kirk Chestnut, CSRE

Milestones

Road trips with Dad were always a highlight in my life. To while away the time, Dad would hand me a notepad and stopwatch as we'd count the seconds between mile markers determining our speed. Who in the world came up with the idea that 5,280 feet constituted a mile anyway? Why not just 5,000 or maybe 10,000? Then it wouldn't seem as far to our destination. No, someone somewhere had to set a standard and there it stands after all these years.

Milestones tell us where we are in the world and perhaps where we are going. Am I getting any closer to the state line or just farther away? Mr. Ohm, Faraday and Henry tell us the characteristics of a circuit based on a set of predetermined criteria. The IEEE, AES and NTSC tell us that if we transmit a series of electrical pulses of specific voltage and frequency that someone down line will interpret it as video, audio or data.

The beginning of a new year calls us to reflect on the goals we set and whether we made it to our destination or just stuck in traffic. Last January, I laid out some goals for SBE59 and me. So how did we do?

Resolution #1: Create a single bi-state relay frequency for EAS where all who monitor can receive Kansas, Missouri, and Metro area civil alerts.

Instead of an RF solution, we came up with a Web solution. That system was to go online at the first of December but due to changes at Kansas City Missouri Police we've postponed until this month.

Resolution #2: Convert and update the SBE 59 Frequency Database to be user friendly, accurate and helpful.

One tool none of us can do without is a current, accurate and user friendly Frequency Database. Well how did we do? Steve Epstein converted the old DOS database to Microsoft Access. We're a ways to go before completing the first wave of corrections but I believe it is within reach.

Rumblings from SBE national indicate that new database software is under development. This new system will in-

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corporate the File Make Pro database program. To bring our database up to speed will require more work than one person can handle. If four or five members divide the data set up, the conversion process could be done over the course of an evening or two. Phase two will involve every member to help update authorizations relevant to their particular station(s).

Resolution #3: Secure discounted tuition rates at local colleges, universities and tech schools for SBE59 members.

This has been a project close to my heart. I hope that this next year we can see this to fruition. Has time or money been holding you back from completing that degree? Perhaps you've been itching to learn to program in Java or hone those management skills. As a value added service of SBE to you, I'd like to establish working relationships with our area educators. I am interested in pursuing group discount rates. I think it is very important to build dynamic relationships with those who are training the next generation of broadcasters. If you have contacts within the education community, please let me know. We are interested in making contact with Registrars, Recruiters and Technical department heads.

What are your personal goals this year? To build a new studio or transmitter site, expand your knowledge of digital processing or simply to survive the next wave of cutbacks? Whatever your pursuit this next year, I want SBE 59 to be more than just an entry on your job application form, I want it to be an indispensable service to you year round.

Surround Sound Seminar Comes to KC

The Kansas City section of the Audio Engineering Society has arranged to host Fits and Starts Productions in presenting a seminar that will focus on multichannel surround audio, especially the DTS and SRS Circle surround encoding processes. The presenter is Mike Sokol The presentation will cover production techniques including speaker positioning, laser alignment, bass-management crossover points, SPL calibration and 5.1/7.1 microphone and mixing techniques.

The seminar will be held on Feb. 18 at 6 p.m. at the Performing Arts Center at Kansas City Kansas Community College. The address is 7250 State Ave.

The Performing Arts Center is on the north end of the main building. When parking in the campus lots, park head in or you will be ticketed by the campus police.

Special thanks to the Kansas City AES for arranging this seminar and inviting the SBE.

TV Meeting Topics Needed

If you have ideas for a TV meeting program, please share it with Mike Douthat. We cater to both radio and TV interests, but securing TV topics has been a challenge lately. Contact Mike at 816-235-2880 or douthatm@umkc.edu.

FCC Releases Data on High-Speed Services For Internet Access

The FCC has released summary statistics of its latest data on the deployment of high-speed connections to the Internet in the United States. Facilities-based service providers file data with the FCC on the amount of high-speed connections in service twice a year.

For reporting purposes, high-speed lines are defined as those that provide services at speeds exceeding 200kb/s in at least one direction, while advanced services lines are those that provide services at speeds exceeding 200kb/s in both directions.

High-Speed Lines

High-speed lines connecting homes and businesses to the Internet increased by 18 percent during the first half of 2003, from 19.9 million to 23.5 million lines, compared to a 23 percent increase, from 16.2 million to 19.9 million lines, during the second half of 2002. For the full 12 month period ending June 30, 2003, high-speed lines increased by 45 percent.

Of the 23.5 million high-speed lines in service, 20.6 million served residential and small business subscribers, a 19 percent increase from the 17.4 million residential and small business high-speed lines reported six months earlier. For the full 12 month period ending June 30, 2003, high-speed lines for residential and small business subscribers increased by 48 percent.

Advanced Services Lines

Of the 23.5 million high-speed lines, 16.3 million provided advanced services, i.e., services at speeds exceeding 200kb/s in both directions. Advanced services lines increased 32 percent during the first half of 2003, from 12.4 million to 16.3 million lines. For the full 12 month period ending June 30, 2003, advanced services lines of all technology types increased by 56 percent.

About 14.3 million of the 16.3 million advanced services lines served residential and small business subscribers.

Technology Type

High-speed connections in service over asymmetric digital subscriber line (ADSL) technologies increased by 19 percent during the first half of 2003, from 6.5 million to 7.7



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million lines, compared to a 27 percent increase, from over 5.1 million to 6.5 million lines, during the preceding six months. For the full 12 month period ending June 30, 2003, high-speed ADSL increased by 50 percent.

High-speed coaxial cable connections (cable modem service) increased by 20 percent during the first six months of 2003, from 11.4 million to 13.7 million lines, compared to a 24 percent increase, from 9.2 million to 11.4 million lines, during the second half of 2002. For the full 12 month period ending June 30, 2003, high-speed cable modem connections increased by 49 percent.

Among advanced services lines, ADSL lines increased by 16 percent during the first six months of 2003, compared to a 43 percent increase for cable modem service. During the preceding six-month period, the rate of growth of ADSL (18%) was slightly lower than cable modem service (22%). For the full 12 month period ending June 30, 2003, advanced services lines—service lines provided in excess of 200 kb/s in both directions - for ADSL increased by 37 percent and cable modem connections increased by 75 percent.

Conclusion

The summary statistics released also include state-by-state, population density, and household income information, ranked by zip codes. As additional information becomes available, it will be routinely posted on the Commission's website. The report can be downloaded from the FCC-State Link website at www.fcc.gov/wcb/stats.

Computer Connection

By Steve Epstein, CPBE CBNT

Choosing the Proper PATH

I am always amazed at how many users (both novice and experienced) have trouble with the path through a computer's directory structure. Before you jump to the conclusion that Windows has eliminated the need to understand this structure, remember that HTML is essentially based on command lines. Images, files and even URLs are all referenced using the path. Microsoft uses the backslash (\) to distinguish directories, while Unix uses the forward slash (/). For the most part, what follows applies to both OSs as long as the proper slash (front or back) is substituted.

The base, or root, of the directory tree is the /. Type the command "prompt \$p\$g" to display the current drive and path (\$p) followed by the > symbol (\$g) on an MS-DOS machine. The command "cd /" will take you to the root directory from anywhere on the drive. Typing "dir" will show all the directories and files in the current directory. All directories except the root will show a ".." directory, which is the parent directory of current directory. Typing "cd .." will take you one directory closer to the root (/). For instance if you were in the /shop/plans/assets/images directory and you typed "cd .." it would take you

to the /shop/plans/assets directory. Typing it three more times would take you all the way to the root. If the assets directory mentioned above contained an images directory as well as a sounds directory, typing "cd ../sounds" would move you from the images directory to the sounds directory.

Commands used on the command line can vary based on location in the directory structure. The following commands all move the test.txt file from the images directory to the sounds directory. The first uses a full path and works from anywhere on the drive:

```
copy /shop/plans/assets/images/test.txt /shop/plans/assets/sounds
```

The next command works from the images directory:

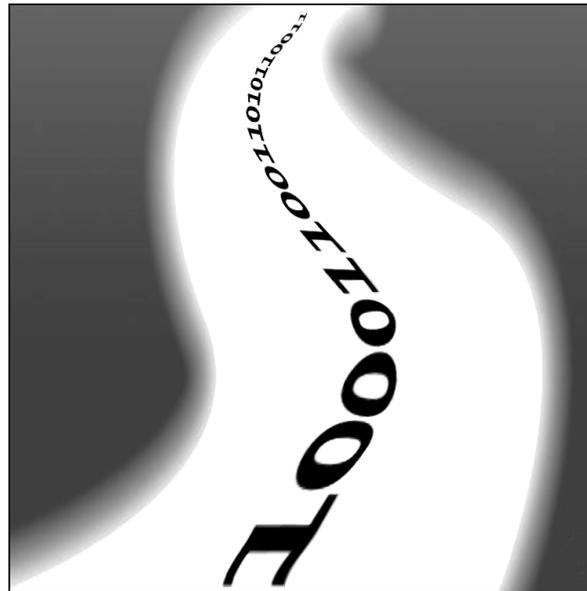
```
copy test.txt ../sounds
```

This command works from the sounds directory:

```
copy ../images/test.txt
```

The previous command assumes the destination to be the current directory, while the second command assumes the file to be copied is in the current directory.

Although similar, *nix machines have a few gotchas to be aware of. With DOS, if you cd to a directory, you can start any program in that directory simply by typing the program name and pressing enter. With *nix, only programs found in the path will start. To start a program that is not in the path, either type the full path (starting with the "/") or type ./programname. If you have a lot of programs in a directory outside of the path, consider adding that directory to the path. For safety, never make "." (the current



directory) path of the system administrator's (root's) path. Something else to be aware of on a *nix machine is the lack of drive letters. Everything is located on a single directory tree. Individual drives or partitions are mapped to directories through the "mount" command, which will be covered in an upcoming column.

Gaining a good understanding of the drive structure and using the command line can typically make troubleshooting easier and faster on any computer-based system.

FCC Seeks Comment on Separate IBOC Antennas

On July 24, 2003, the National Association of Broadcasters (NAB) submitted a report to the FCC regarding the use of separate antennas for the analog and digital components of a hybrid FM IBOC signal. The report includes field tests prepared by an ad hoc technical group, and recommends that the Commission permit certain FM stations implementing IBOC transmissions to use separate antennas for analog and digital signals. The NAB report is available electronically at www.fcc.gov/cgb/ecf under MM Docket No. 99-325. The FCC seeks comments on the conclusions and recommendations made by the NAB report.

The initial grant of interim IBOC authority restricted stations to use of facilities similar to those evaluated by the National Radio Systems Committee. As a result, stations are currently restricted to transmission systems that combine the digital and analog signals into one antenna. Many broadcasters, however, have expressed interest in using separate antennas for the analog and digital signals. Separate antenna configurations can be more efficient and less expensive than single-antenna designs. Consequently, the NAB convened the technical group to determine whether this approach would cause interference to the host station's analog signal or to other FM stations.

Based on the completed field tests, the NAB report proposes that the FCC permit FM stations implementing IBOC operations to use separate antennas for digital transmissions provided the following criteria are met: the digital transmission must use a licensed auxiliary antenna; the auxiliary antenna must be within three seconds of latitude and longitude of the main antenna; the height above average terrain of the auxiliary antennas must be between 70 and 100 percent of the height above average terrain of the main antenna.

The report also recommends that the Commission authorize use of antennas specially designed with interleaved or stacked elements for analog and digital signals. Comments are due on or before Jan. 8, 2004, and reply comments on or before Jan. 23, 2004. 

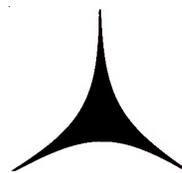
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Upcoming Meetings and Events

January 8 *Telos - Audio over IP*

February 12 *BGS - Program TBA*

February 18 *Surround Sound Seminar*

Arranged by the Kansas City section of the
Audio Engineering Society

March 11 *RF Specialties Barbecue*

Wanted: Your News and Information

The SBE59 newsletter, *The Communicator*, is published every month as a service to the members, sponsors and guests of SBE Chapter 59. We are always looking for information on what is happening at stations and facilities around Kansas City. Have you hired someone new? Have you received a promotion? Have you installed some new equipment? Tell us about it and share it with your engineering colleagues. Send any of your stories or ideas to a chapter officer or e-mail them to sbe59@broadcast.net. Articles published in *The Communicator* will qualify for SBE recertification points.



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