



CHAPTER TWENTY NEWS

society of broadcast engineers
pittsburgh chapter

September 2007

Volume 15 Number 7

SBE 20 Regional Conference & Equipment Expo 2007 & SBE National Meeting

**October 10 - 11
Pittsburgh ExpoMart, Monroeville, PA**

*Free Admission * Free Cocktail Reception * Free Breakfast * Free Info*
Register at www.sbe20.org.



Last Meeting

Henry Lassaige, Jr.
KDKA-TV

The June meeting was held on the 21st at Gaetano's Restaurant. We had seventeen attendees. John Humphrey was the presiding officer.

We had received our rebate from the national SBE. We voted to donate it to the Ennis Scholarship fund. Bob Hoffman continues to work on the mailing database. He would like everyone's help on revising it. You can look at it on line at our web site, sbe20.org/db. You can log in as member and the password is sbe20. If you see any errors, click on the entry and make the correction. Then submit a change request.

Nick Capp gave a run down of speakers he lined up for the Expo while he was at NAB. They include people from Grass Valley, Cannon and Panasonic. The Expo will be held October tenth and eleventh at the Monroeville Expo Mart. The details are available on our web site, sbe20.org.

The program part of the meeting was the annual NAB review. John Humphrey, John Luff and Karl Paulsen led a very informative discussion of innovative products and highlights of this years NAB. Among other thing discussed were the Sony XD Cam EX, Final Cut Studio 2, Adobe Creative Suite 3, the Omneon Media Deck and the Red One camera.

Next Meeting

The September meeting, first meeting of the fall season, will be held September 20. The location for this month will again be Gaetano's restaurant on Banksville Rd. at 7 p.m. Come at 6:30 to shoot the breeze or we may get an IT discussion going. Expo preparations will be discussed.

Karl Paulsen, right, is Chief Technology Officer for AZCAR Technologies. He will update the group on recent advances in HDTV for broadcast and production.

The presentation will include a discussion on the difficulties in obtaining multi-channel audio consistency, the impacts on what the various delivery carriers are doing to your signal, an update on the 'new' time code standard, and a look at what the Active Format Descriptor means to the multi-format, multi-aspect ratio signals here today, and coming tomorrow.

Paulsen joined the company in November 2000 as part of the acquisition of Synergistic Technologies Incorporated, where he was their Director of Engineering. During his tenure, Paulsen has been the company's Vice President of Engineering and a principal consultant for the company.

Continued on page 3



Next Meeting

September 20 @ 7:00 PM

**Come @ 6:30 to shoot the breeze
Recent Advances & Some
Problems in HD**
by Karl Paulsen
Azcar

**No Meal Fee
Gaetano's**

1617 Banksville Rd., Pittsburgh



Chairman's Corner

John J. Humphrey, CPBE
john.humphrey@azcar.com

The summer is now officially over with the passing of Labor Day. Vacations are over, school has begun, the SBE newsletters and meetings are back on again. It is also almost time for the annual Expo.

I was not able to slow down this summer and I think it has been busy for many of the SBE members. HD conversion, BAS relocation, power systems and new facilities have kept many of us working hard through the summer so we could be ready for the fall season, rating sweeps and the holidays.

On the consumer side, the HD flood gates have finally burst open. Consumer acceptance of flat panels and their lower prices for (somewhat) High Definition displays has really accelerated. When you see Walmart advertising a 42" Widescreen Plasma or LCD HDTV with NTSC and ATSC tuners for less than a thousand dollars, you know HD is here. The "Consumer acceptance curve" has turned sharply upward and sales have taken off for HD television displays. Unfortunately, the vast majority of viewers never see terrestrial TV stations directly. Most watch TV stations via DBS or Cable. Worse, the viewer may not be seeing "real" HD because the source is upconverted or is overly compressed or the consumer's display is not really HD resolution. But... that's a topic for another discussion and John Luff will be talking about that in his presentation at the SBE Expo.

Speaking of the Expo (what a great segue) the National SBE has selected our chapter as the location for the 2007 SBE National meeting. The

SBE National meeting will take place on Wednesday, October 10th along with the Expo set up day. For the first time in a long while, evening exhibits and a cocktail reception will be open Wednesday evening from 5 PM until 8 PM. We have as many vendors as we had last year and we expect a good (and profitable) show. Please make every effort to show up at the Expo and support the vendors that support us.

Thursday the 11th is the normal full day of Expo exhibits and technical presentations at the Expo Mart in Monroeville. The keynote breakfast features Larry Thorpe beginning at 7:30 AM. Larry designed cameras for RCA and Sony before joining Canon. While at Sony, Larry pioneered the 24P HD video camera used in the making of Star Wars. ...and now Larry will tell you any camera is only as good as its lens. Larry's subject is; "What's next for HDTV?" He is always entertaining and brings a wealth of information to any subject.

The John Lennon Bus will be at the Expo both days. It should be very interesting and will attract many of the younger people to see it. These younger people are needed to ensure the future of Broadcast engineering.

All the details of the Expo can be found on our web site at www.SBE20.org. Gary and Jean Stewart have worked hard to keep the membership informed with both the newsletter and the web site. Part of the web site upgrade is our on-line mailing database for the Expo. Bob Hoffman has put the database up on the web site. Take a look at it and help us make it as accurate as possible.
[www.sbe.org/db username: member, password: sbe20]

As usual, I am always open to any suggestions to make this SBE Chapter work better for its members and for radio and TV broadcasting. I look forward to see all of you at the Expo and the monthly meetings. I would like to hear your opinion about any subject by phone (888) 873-0800 or by e-mail to: john.humphrey@azcar.com.

Position Wanted

Seeking employment: Certified Audio Engineer, SBE member, FCC licensed, Nature Sound Recordist, Ph.D. Candidate in Music, outstanding academic record / multiple scholarship recipient. Extensive academic, performance, music ministry, and teaching experience. Seeks position in music production, audio engineering/recording, music broadcast, live sound reinforcement, or broadcast/music research and programming.

Ray Barley, 412-527-5834, scholarmusician@aol.com,
www.virtualmusicclassroom.com



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Next Meeting - Paulsen

Continued from page 1

Prior to his role at AZCAR and Synergistic Technologies, Paulsen served as the Vice President and General Manager, and VP Engineering, for Digital Post & Graphics (Seattle) from 1989 to 1995. He spent the prior six years as the Director of Engineering for Alden Television, Inc., a Los Angeles based television licensee for KTZZ-TV, KTDZ-TV, KTZO-TV and other television properties.

Paulsen is a published author on engineering and technical matters pertaining to the television and media industries, a feature columnist for TV Technology magazine and the author of the book *Video and Media Server Technologies (2nd edition)*. He is currently writing his third book about international technical terminologies for the broadcasting medium.

Paulsen is a fellow of the Society of Motion Picture and Television Engineers (SMPTE), as well as a Life Member and Certified Professional Broadcast Engineer (CPBE) in the Society of Broadcast Engineers (SBE); and a member of the Institute of Electrical and Electronics Engineers (IEEE).

Next Meeting - The Details

When: Thursday, September 20

Time: 7 PM

Come at 6:30 to shoot the breeze

or possibly take part in an IT discussion

No meal fee.

Where: Gaetano's

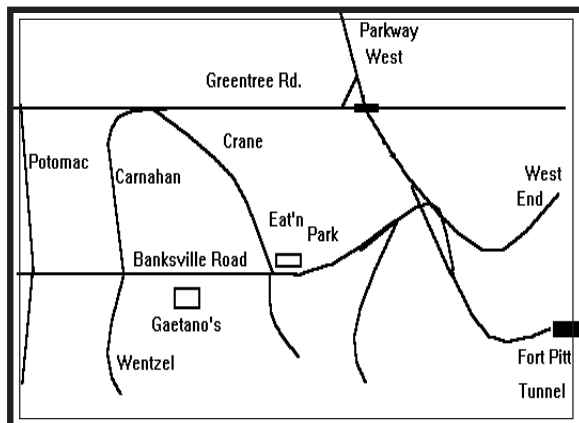
1617 Banksville Rd.

Pittsburgh, PA

Use the Rt.19 South (Banksville Rd.) exit when coming out of town.

Use the Greentree exit and Carnahan down to Banksville Rd. when coming in.

Map to Gaetano's



RF Safety Seminar

Paul Byers

pbyers@wqed.org

On July 25th, WQED hosted the RF Radiation Safety for Broadcasters webinar. The event was sponsored by the SBE and presented by Richard Strickland. Mr. Strickland is the former Director of Business Development for Narda, the world's leading supplier of RF safety monitoring and measurement products. Today he provides services to major corporations and other organizations that desire to implement "industry best" practices in the area of RF radiation safety. 17 engineers from local television and radio stations attended the seminar.

The seminar covered six major topics:

- " Sources of RF Radiation such as antennas and transmission lines and the difference between ionizing and non-ionizing radiation.
- " Biological Effects such as Specific Absorption Rates (SAR), penetration depth, time averaging, spatial averaging and partial body heating.
- " Standards and Regulations including FCC compliance requirements, tower climber safety and occupational limits.
- " Potential Hazards such as broadcast antennas, AM stations, waveguide leaks, shock and burns, ENG & SNG trucks, building rooftops and safe distance analysis.
- " RF Hazard Protection Equipment such as personal monitors and protective garments.
- " RF Safety Signs including Notice, Caution and Warning signs.

For more information contact Richard Strickland at www.RFSafetySolutions.com.

Attendees

Chuck Leavens, Duquesne University - WDUQ,
John Johnson, Duquesne University - WDUQ,
Mike Lauer, WQED Multimedia,
Chris Hood, WQED Multimedia,
Paul Byers, WQED Multimedia,
Kurt Haase, WTAE TV-DT,
David Kasperek, WTAE TV-DT,
Ben Neuhart, Cox, WPXI-TV,
Eric Hirschberger, WPXI-TV,
Francis Bobro, WPXI-TV,
Richard Minutello, WPXI-TV,
Ronald Zborowski, Self Employed,
Erich Hess, Cornerstone Television,
Roger Wilson, Cornerstone Television,
Steve Johnson, Cornerstone Television,
Michael Nudi, Harmonic, Inc.,
Scott Hanley, Duquesne University - WDUQ

WPCB Upgrades

Gary Stewart
gstewart@ctvn.org

This summer was a time of last minute construction at Cornerstone Television's WPCB-TV40. A plan to change from a mix of VTR and video-server playback to a video-server-only, on-air playback



Master Control Operator Krista Handley works around the construction chaos.

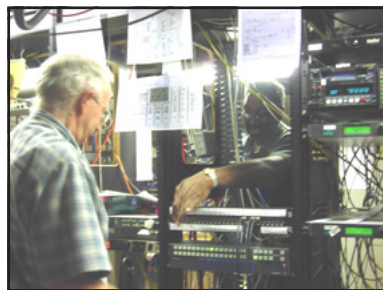
system was rushed into final planing, ordering and construction in just a few weeks. The plan had been in the "searching for a server" stage for many months, but when an MC Operator resigned, the "make it happen" stage went into effect.

Racks from a little used linear editing suite were moved right into the middle of the work space in the existing Master Control. The MC Operators had to literally work around the new racks for several weeks. There was an evolution (a word usually only heard on the "Origins" program at Cornerstone Television) of temporary arrangements of racks and

equipment as construction went through a series of changes.

When the servers arrived operations were quickly moved from the tape machines and the obsolete 1998 server in the old racks to the new Rushworksmedia MasterPlay servers in the new racks. Dismantling of the old MC racks began as soon as each piece of old equipment was taken out of service. As more VTR's, switchers, DA's and many Digital to Analog Converter and Analog to Digital Converters were removed from service there was more room to accommodate the new system.

Once we were totally operating on the new servers the pace of change slowed down in favor of fine tuning the new operation. The first couple of weeks had some strange freeze ups on one of the two redundant channels caused by a character generator board and some occasional strange audio tones that came and went so fast that we couldn't figure out where they were coming from. Finally one day the tone came and stayed on long enough to realize the new on air switcher was putting out the tone in the digital embedded audio. That was fixed by doing an input timing setup on the switcher.



Gary Stewart and Armand Roberts trace cables to the only patch panel in the new system. The new master control switcher is just below the patch panel.

The new system did away with the traditional big Grass Valley M2100 Master Control switcher and is now using a little one rack unit high Leitch Panacea switcher which the operators should never have to touch. There are two servers. One feeds WPCB, channel 40, and the other feeds Cornerstone Television Network on satellite. The programs are played redundantly on both, the interstitials are different for each service. Each channel uses three inputs, the server and two encoders for live studio or satellite programs (or even tape playback in emergency).

There are no keyers in the switcher. Keys and logos all come out of in-line CG's located in the same computer chassis as the servers. The switcher features "clean" SDI video switching (no glitches) and "quiet" embedded audio switching (no clicks and pops). All audio is embedded except for one small section where AES is used to allow insertion of Compressor/Limiters and EAS audio for the broadcast service.

Construction began at the end of July and the first partially unmanned shift took place the second week of September.

Construction is not done but has slowed way down, so it will be a

while before the new Master Control looks really finished. This was a Master Control upgrade only. At this time the production area remains in legacy systems.



The new master control was built in the middle of the old one as the old one was being dismantled.

Expo Promotions

A 2007 Expo promotional flyer was mailed to several thousand names in PA, OH, WV and the extreme western part of NY on September 17. If you should receive more than one copy, please use the inside part as a poster and put it up at your station or facility. Also pass any extra copies to your friends who may have an interest in the Expo.

A mass emailing was also done earlier in the month. Please forward that email to everyone at your place of employment encouraging them to attend the Expo.