CHAPTER TWENTY NEWS

society of broadcast engineers
pittsburgh chapter

SBE — CHAPTER 20 PITTSBURGH — ESTABLISHED 1968

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Last Meeting

Ennes Workshops — Presented by the Society of Broadcast Engineers

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The Ennes Workshop was held at WPXI Television on Tuesday, June 7th from 9:00 until 5:00 p.m. The Workshop was sponsored by ProVideo Sales, Pittsburgh's full-line video dealer.

A total of 35 SBE members and non-members attended. In addition to staying up on the latest technology, the Workshop was worth SBE Credits toward Recertification. A good catered breakfast and lunch was provided in the WPXI Community Room.

Ennes Workshop presentations included:
· Loudness Control and the CALM act.
· Steve Lampen, CBRE, Belden made a convincing case that Cat 5, 6 cable works for audio and video applications.
· SNMP Protocol and its Integration for Broadcast monitoring.
· Dave Davies from CEI provided case studies and pictures showing how most broadcast towers fall due to neglect and carelessness.
· Ross Video presented openGear; it is an open processing frame standard.
· News Backhaul issues by Joe Stack from DSI RF Systems.
· Rich Schwartz from Axcera talked about ATSC Mobile DTV (M/H) as an important new distribution possibility for broadcasters.

The National SBE was pleased with the Workshop turnout and support from John Humphrey, John Luff, Greg Abel, Otto Schellin and Chapter 20 for helping put together the first-ever Ennes Workshop in western PA. Chapter 20 would like to thank ProVideo Sales for their financial support.

Kim Kissel, SBE National Education Director, talks about new SBE University Courses at the Ennes Workshop. More pix on pages 3, 4, 6, and 7.

Our New Secretary Off to a Rough Start!

SBE Chapter 20 Secretary Bill Bennett broke his tibia and fibula during a hockey scrimmage. He turned ... but the skate did not. This happened about 5 weeks ago and Bill is recovering from surgery. This was a major injury and he is currently on crutches and in physical therapy. We wish Bill a complete recovery and hope he is is back on his feet soon (so to speak). This is a picture of Bill in the St. Clair Hospital ER the evening of the injury.

SBE20 has a new member. Please welcome Nicholas Simcic!

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Chairman's Corner

Momentum Continues

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Summer has arrived again, and with it a slower pace of activities in our industry. We just hosted our first Ennes Workshop, at WPXI...thanks Otto!..., which was all-in-all a decent first effort. Though the attendance was not enough to make it a break even event, it was well worth doing. I think we need to be more organized about doing active publicity for events like Ennes in the future if we expect it to be well attended. Food for thought.

If you are not aware, the National SBE meeting is being held in Columbus this Fall in conjunction with the Ohio Broadcast Engineering Conference. I have been asked to represent Chapter 20 at a planning meeting in Columbus this month, and of course will do so. Please save the dates, September 27-28 at the Crown Plaza Hotel, Columbus Ohio. On line registration is available on the national SBE website, or at http://www.oab.org/events/26-9th-annual-ohio-broadcast-engineering-conference. It would be nice to get several Chapter 20 members to attend.

Speaking of calendar events brings up a question John Humphrey and I have struggled to find an appropriate way to respond to requests from manufacturers who wish to publicize events they are hosting in this area. Our concern is fairness to all comers, and a sincere desire to follow the expressed wishes of members not to have SBE sanctioned meetings which might be characterized as "sales opportunities." We realize that there is value to many involved in the local production and broadcast community in such events, and want to find a middle ground between hosting commercially targeted meetings and avoiding all contact with manufacturer-authored events. Starting with the next issue we are offering two vehicles for a broader calendar.

First, in each issue we will have an "Upcoming Calendar" section on which we will list all events we know of. If you are aware of an event that should be listed please send me the particulars and I will make sure it is included. We'll put the national meetings for SMPTE and SBE on the list, so you don't have to worry about them.

Second, if a manufacturer has an event they wish to publicize we can put an item in the newsletter for a donation to the chapter. We are not offering to sell ad space "exactly," but if manufacturers supply finished art ready for inclusion in the newsletter we will include it. A suggested donation is $50 for a 1/4 page insert, and $200 for a full page. By handling the calendar this way we will make it easy for all to recognize that SBE20 is not sanctioning events, but still is acting as a clearing house for relevant information.

Lastly, we need meeting ideas for upcoming sessions. We want to hold one more event during the summer and at least 4 between now and the end of the year. Please send your best ideas along and we will put out a new survey in the next few weeks to prioritize all submissions.

Stereographic 3D Production Experiences

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Part 1 – The Panasonic AG-3DA1 Camera

Last year at NAB 2010, while walking through Panasonic-world, my colleagues and I happened across a technology showing of "the first integrated twin-lens stereographic 3D camcorder", the AG-3DA1. (I am just going to use the label "3D" for the word "stereographic" for the rest of this article.) The odd-looking camera was not due for delivery until fall of 2010, but Panasonic was taking pre-orders for the camera for $1000 down, so as soon as we returned home, we reserved a place in line. Why not? We could always cancel the order, if we decided the camera was not for us.

Over the summer our production crew studied shooting practices for 3D and attended a 3D workshop. We also evaluated monitors and 3D SDI signal adapters. Our Avid DS finishing systems were already capable of handling stereo signals, but we upgraded to the latest release to take full advantage of the tools Avid offers. The thought of actually working in 3D was starting to get very interesting.

Stereographic 3D Production Experiences

So, our camera finally arrived in November, the day before Light-Up Night in Pittsburgh, which we were planning to document in 3D. We actually ended up with TWO 3DA1 cameras that weekend, as Panasonic had shipped in their demo model, along with a 24" 3D monitor. So, we were set to capture all kinds of great demo material, which we are still using for demonstrating 3D to our clients.

The 3DA1 camera contains two complete imaging systems in order to capture the separate Left and Right eye images. These two systems have their own synchronized optics, imagers and processing electronics. The advantage of this arrangement is that sophisticated alignments normally associated with stereo camera rigs are not needed, or even possible. Size, rotation, horizontal and vertical alignment and intraocular distance (the distance between the two sensors) are precisely aligned at the factory. The only adjustment needed (or possible) is the convergence angle, which adjusts the point where views from the two imagers are aligned, which occurs at a certain calculated distance from the front of the camera.

While Panasonic's ¼" "3MOS" image sensors limit the eventual image quality, I must say that the HD pictures from this camera look pretty good. This imaging technology combines the quality and light sensitivity of the CCD pickup with the low-power consumption of CMOS imagers. The highest level of AVCHD compression is used and the camera captures the files onto dual SDHC memory cards; one for each channel (180-minutes on 32GB cards). The camera also has dual HD-SDI outputs and an HDMI 1.3 output, so a 3D monitor can be connected to the live or playback output.

Each camera take is recorded to identical length files, numbered exactly the same, except the first digit. This makes matching the two views in Post very easy. We can edit using one eye-view and then easily conform the other channel quickly and easily, but more about post in the next issue.

The camera viewfinder has some handy tools to assist in shooting proper 3D video. A difference mode (L minus R) makes setting the convergence point very easy. Other guides assist in properly setting this distance, depending on the size of the display on which the image will eventually be shown. The camera also shoots in all of the popular HD modes; 1080i, 720p, 1080p24, etc.

We have been pretty impressed with this little camera. And the most exciting aspect is that when the images are properly shot and viewed on a 3D monitor, the stereographic effect is simply amazing. It just works!

Next time, I will write about some of the projects we have done with our new capability, the post-production process, displaying 3D in a large venue and some of the challenges we have discovered along the way.

Anchor Element:

The perceptual loudness reference or element around which other elements are balanced in producing the final mix of the content or that a reasonable viewer would focus on when setting the volume control.
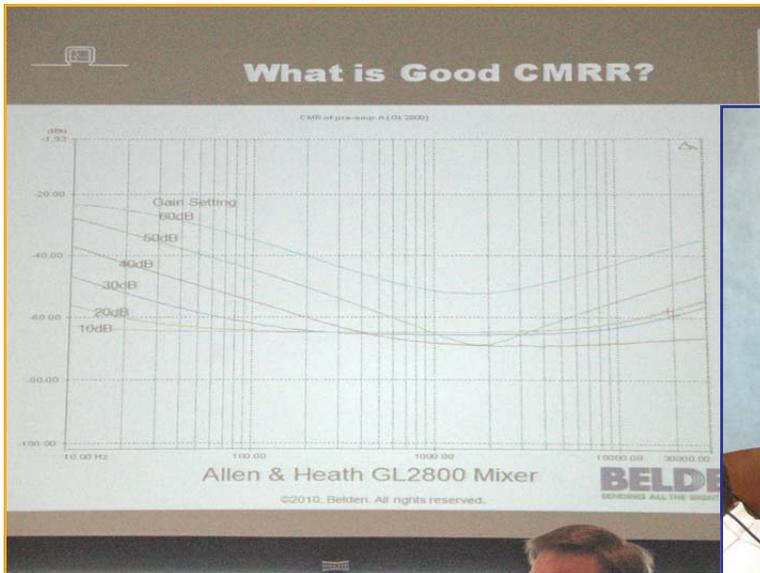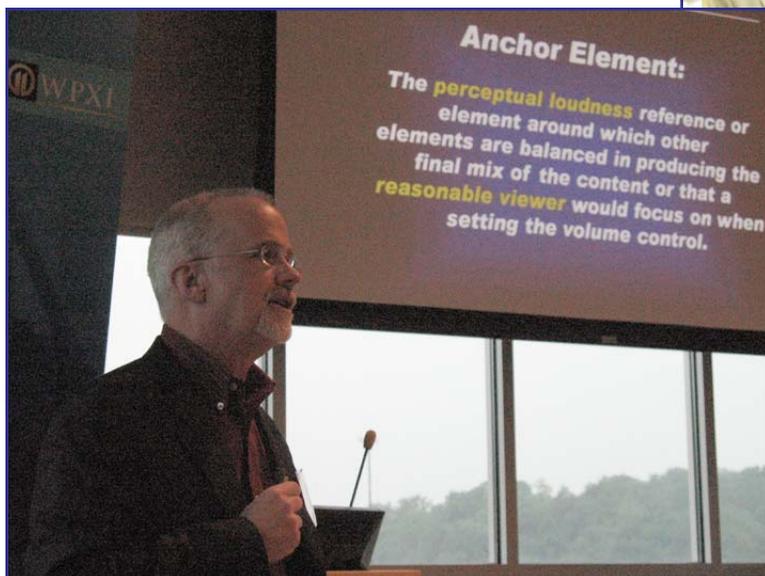
FCC Update

Towers vs Birds

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WASHINGTON: The debate over whether towers kill migratory birds has been a contentious issue at the commission for at least eight years and has taken another twist. The FCC has drafted rules and procedures designed to ensure that environmental effects of proposed towers—including their impact on migratory birds—are considered before a tower is built or substantially changed; and it has been taking comments on those proposed rules.

After conservation groups opposed the FCC's tower siting approval process three years ago, a federal appeals court said the commission had to offer the public "a meaningful opportunity" to ask for an environmental assessment study for proposed towers.

The new draft procedures parallel an understanding reached in 2010 by communication providers, including the National Association of Broadcasters, the Wireless Association, tower companies and conservation groups. Under the draft, the public would be able to comment on environmental effects of a proposed tower. The FCC staff would consider those comments and determine whether an environmental assessment is required.

If needed, the environmental assessment would have to be completed before tower registration; those now are filed concurrently. The commission initially would require an EA for requests to register towers of more than 450 feet. However, the FCC said it may modify this requirement after further study. Towers between 351 and 450 feet would be reviewed for a possible EA requirement on a case-by-case basis. These requirements will apply not only to new towers but also to construction that makes a "substantial increase in size" of a structure. That includes not only height but also tower width or the area excavated around the tower base. Substantial changes in tower lighting also would trigger these requirements.

Comments to WT Dockets 08-61 and 03-187 were due May 5. Here are a couple of the comments that had been filed as of April:

American Bird Conservancy, Defenders of Wildlife & National Audubon Society:

"Millions of migratory and other bird species are killed at communications towers and related structures every year. [S]tudies corroborate that there are population level impacts on many bird species and harm to endangered species caused by communications towers and related structures such as television and radio stations. Tower height, tower lighting, tower support structures (i.e. guy wires), location and lighting of related structures are all key factors in these bird kills. Each of these variables must be evaluated in terms of direct, indirect and cumulative impacts.

"Alternatives for constructing and managing communication towers can save birds without compromising the commission's wireless communications mission or aviation safety. Reasonable alternatives to be studied include requiring changes in lighting schemes to less impactful alternatives (e.g., turning off steady burning lights or at a minimum synchronizing blinking lights) whenever permitted by the Federal Aviation Administration; promoting collocation of antennas and shorter towers without guy wires; requiring heightened scrutiny for proposed towers in environmentally sensitive areas; providing guidance on lighting of associated structures; putting FCC personnel in charge of identifying and evaluating environmental effects of proposed towers instead of allowing tower registration applicants to do it; and adopting an interim approach to registering towers while the commission conducts its environmental analysis and proposes and finalizes revised rules for the ASR program.

Donald G. Everist, P.E. , Cohen, Dippell and Everist, P.C. Professional Consulting Engineering Services:

"The undersigned is licensed as a Professional Engineer in the District of Columbia and has been in continuous employment with this firm or its predecessors for over 40 years. During these 40 years, he has been physically at numerous broadcast sites, often for weeks at a time. These site visits have been throughout the continental United States in various seasons and under different weather conditions. During this period, no birds were observed hitting towers or their guy wires. These towers ranged from several hundred feet in height to 2,000 feet.

"In the 1960s, all AM, FM and TV transmitter sites were manned with personnel during times the station was in operation. This practice continued for many years and there is no recollection of reports of bird strikes.

"While the above observations are not a scientific study, it does support a conclusion that if this does occur, it is not a widespread event."

		Capacitance Unbalance	Picofarads (pF)
Size	Resistance	Resistance Unbalance	Ohms (Ω)
Length	Resistance	Resistance Unbalance	Ohms (Ω)
	Timing	Phase	Degrees (°)

"A balanced line is one where each of the two conductors, and all passive pieces attached to each conductor, are the same impedance in reference to ground."

Bill Whitlock, Jensen Transfo

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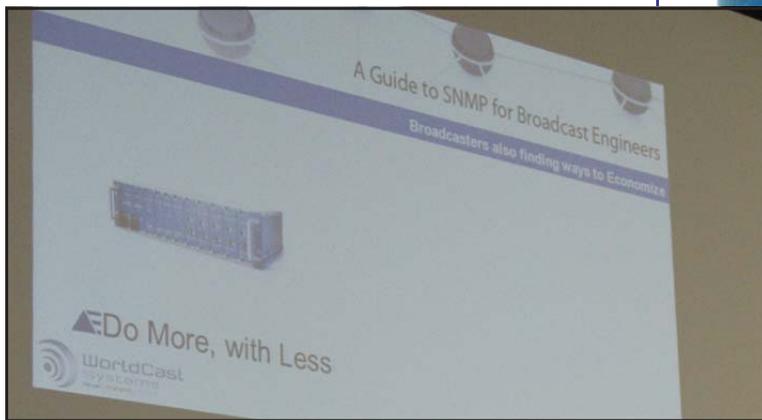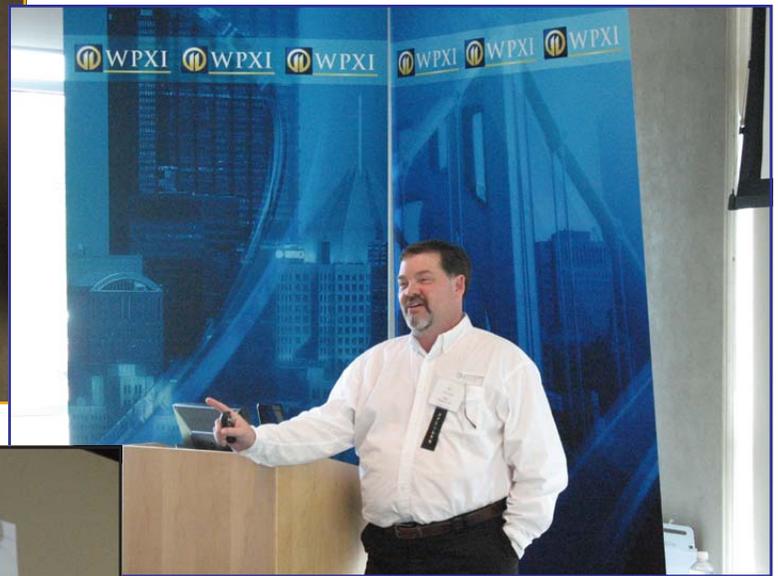
SBE Calendar

National SBE Events

July 1   - SBE Recertification Deadline
            - Ennes Scholarships Application Deadline

July 10 - HAMnet

July 11 - Board Candidate Nominations Deadline

July 15 - SBE Leadership Development Course Registration
            Deadline

July 20 - Webinar: 2PM EDT – Managing a Project and
            Outside Contractors for Success (Leader John Luff)

July 23 - Ennes Workshop New York

July 29 - SBE National Awards Announcement

Sept. 27-28 - National SBE Meeting and Ohio Broadcast
            Engineering Conference, Columbus, OH

Other Events:

September 22/23 – Portland OR; IEEE "Bridging the Gap"; IT
            and Broadcast Fundamentals for Maintenance
            Technicians

October 12/13 – HD World, NY (Also 3D World, Content and
            Communications World (CCW), NY Post Production
            Conference)

SMPTE:

13 - 17 July 2011: Technology Committee Block
            Meetings, Sydney, NSW, AU

19 - 22 July 2011: SMPTE Australia Conference
            and Exhibition, Sydney, Australia

8 - 13 September 2011: IBC, Amsterdam, the
            Netherlands

14 - 18 September 2011: SMPTE Technology
            Committee Block Meetings, Fraunhofer
            Institute, Erlangen (nr. Nürnberg), DE

24 - 27 October 2011: SMPTE Annual Technical
            Conference and Exhibition, Hollywood,
            CA, USA

05 - 09, December 2011: SMPTE Technology
            Committee Block Meetings, Disney,
            Burbank, CA