



CHAPTER TWENTY NEWS

society of broadcast engineers
pittsburgh chapter

Come learn more about 3D when NEP hosts the next SBE/SMPTE meeting on Wednesday, March 17 at 6:00. See page 2 for details.

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Chairman's Corner

Hit by the 3D Train

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I want to avoid being roadkill at all costs, but like many I feel a bit blindsided by the 3D train headed our way.

Just as we started to get comfortable with HD systems and producing good content for terrestrial HD distribution, the CE industry and Hollywood have caught the technical version of Herpes. And like the virus, it doesn't seem likely to be cured by a dose of simple medicine.

I remember the kitschy 3D movies of my youth with some humor. A few were produced, but none had enough commercial success to become a business model. A generation passed before anyone else had the nerve to suggest that 3D was again worth a gamble. Perhaps Hollywood was looking for a way to pull people to the theatre and stem losses in seats warmed by paying customers. But in the end what we care about most and what really happened was that the CE companies saw the nascent success of early modern digital 3D releases as a way to push upscale the large screen home display market.

Of course, Hollywood has become used to the secondary market of DVD release of films, but at first there was little hope of 3D in the home. With BlueRay 3D they can release to their heart's content, IF there are consumer displays, which of course is the symbiotic relationship they have with CE display companies. Sony, who plays in both puddles, has attacked 3D with as much fervor as they did the Trinitron two generations ago. If it succeeds, Sir Howard Stringer will be the first Caucasian hero to the Japanese business community. At NAB both Panasonic and Sony will show one-piece camcorders primed for 3D production.

As always, along came dollars to everyone's rescue. The CE companies are motivated anytime my wallet might be open. We now have a 3D BlueRay release standard, a 3D version of HDMI to connect to displays, a SMPTE committee working on 3D mastering standards, and even talk about 3D in ATSC delivery to the home.

Several networks (notably ESPN and Discovery) and Hollywood producers Sony and Imax are throwing dollars and their reputations at

building an end-to-end delivery system.

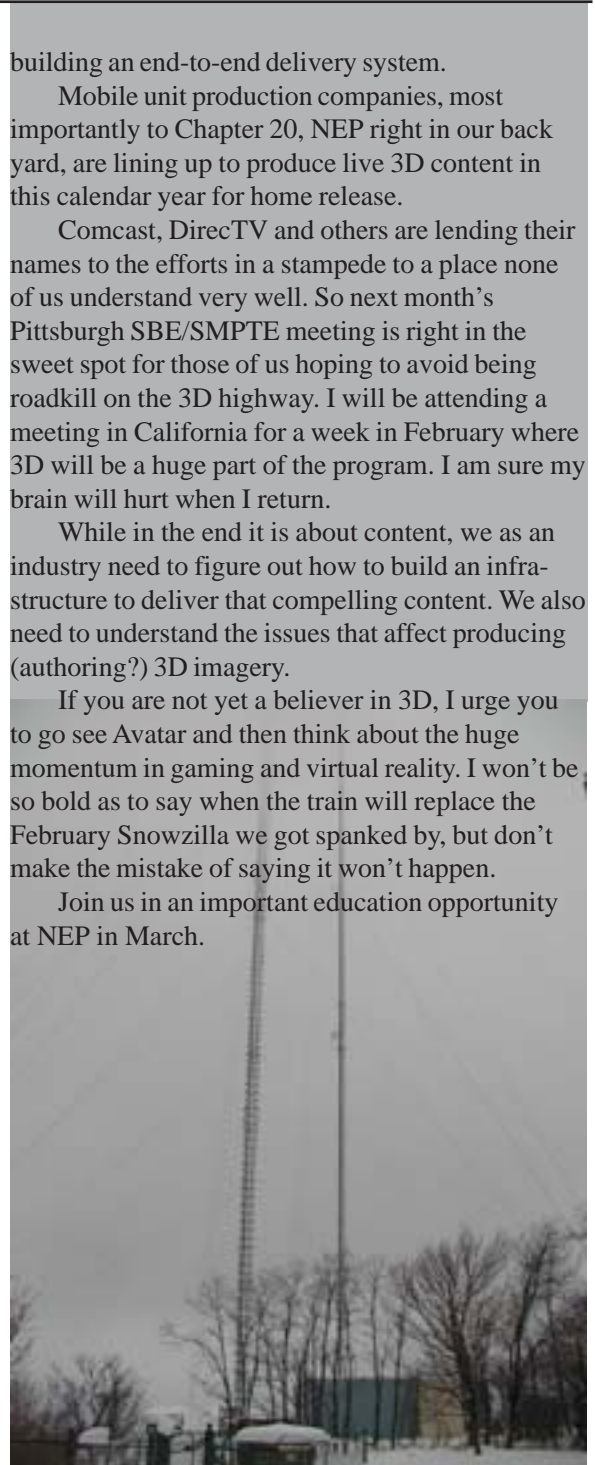
Mobile unit production companies, most importantly to Chapter 20, NEP right in our back yard, are lining up to produce live 3D content in this calendar year for home release.

Comcast, DirecTV and others are lending their names to the efforts in a stampede to a place none of us understand very well. So next month's Pittsburgh SBE/SMPTE meeting is right in the sweet spot for those of us hoping to avoid being roadkill on the 3D highway. I will be attending a meeting in California for a week in February where 3D will be a huge part of the program. I am sure my brain will hurt when I return.

While in the end it is about content, we as an industry need to figure out how to build an infrastructure to deliver that compelling content. We also need to understand the issues that affect producing (authoring?) 3D imagery.

If you are not yet a believer in 3D, I urge you to go see Avatar and then think about the huge momentum in gaming and virtual reality. I won't be so bold as to say when the train will replace the February Snowzilla we got spanked by, but don't make the mistake of saying it won't happen.

Join us in an important education opportunity at NEP in March.





Next Meeting: 3D Introduction

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3-D video is created from stereoscopic cameras where images are seen from two perspectives (or CGI with computer-generated two perspectives). For the effect to be seen, special display hardware and/or eyewear are used to provide the illusion of depth.

3-D films are not limited to feature film theatrical releases. Today, we are embarking on live 3D television broadcasts, compatible HDTV displays and 3D Blu-Ray DVDs.

3-D films have existed in some form since 1890. But the costly hardware and processes required to produce and display a 3-D film, and the lack of a standardized format have traditionally limited 3D acceptance.

3-D films are currently experiencing a worldwide resurgence coinciding with the blockbuster movie "Avatar," the development of digital media and the introduction of 3D and HD video standards.

If you are old enough to remember Anaglyph 3D using red and blue glasses, you can see we have come a long way. Live sports and other events broadcast direct to home TV displays are the new frontier.

NEP, located in Pittsburgh is North America's premier mobile production provider. NEP is also pioneering mobile 3D production using PACE systems.

Come learn more about 3D when NEP hosts the next SBE/SMPTE meeting on Wednesday, March 17 at 6:00 p.m. The meeting will be held at NEP Broadcasting located at 2 Beta Drive, Pittsburgh, PA 15238 (Harmarville)

NEP will provide tours of the nation's first



working mobile unit built for 3D acquisition, SS-3D unit 1. NEP will also show a couple of 3D rigs, the new JVC 46" and Miracube 30" 3D passive displays for use with polarized glasses. They may also be able to show the new JVC 2D to 3D converter. Some hardware is still a secret and subject to NDAs, so will have to see what can be shown. This is bleeding-edge 3D technology.

Our host and presenter is George Hoover, the Chief Technical Officer at NEP. George will be presenting these topics:

1. Show and Tell about 3D demo footage from our various clip reels.
2. Types of 3D display formats- Anaglyph, Active, Passive, Auto-Stereoscopic
3. 3D contribution quality feed considerations- fitting it in a narrow pipe back to the network broadcast center
4. Display Connectivity- Evaluation Grade vs Prosumer Displays
5. 3D rig types and their use
6. 3D's secret sauce- image plane, vergence, depth budget
7. 3D Specialists- Vergence Operators and Stereographers
8. Automating Vergence
9. Challenges of producing live events in 3D
10. ESPN/Sony and DirectTV/Panasonic will be producing many events in 2010 in 3D.
11. Can the same facilities produce a multicamera 3D & 2D live event simultaneously?
12. Getting the signal to the home display (Standards- or what standards?)
13. Challenges in the design of a purpose built 3D mobile unit.

Refreshments will be provided by NEP.

NEP, located in Pittsburgh is North America's premier mobile production provider. NEP is also pioneering mobile 3D production using PACE systems.

Please let us know if you are coming. We expect a large turnout and we want to make sure the seating and refreshments are adequate for the meeting event.

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FIRST 3D LIVE TELEVISION PRODUCTION TRUCK READY TO ROLL

NEP Broadcasting and PACE Design the first 3D Mobile Unit Geared Specifically for Live Television Production



Supershooter 3D, the very first Mobile Television Truck designed specifically for producing live 3D television events, is set to roll. This one-of-a-kind mobile unit, created by NEP Broadcasting and PACE utilizing the state of the art FUSION 3D system, satisfies the growing demand for 3D productions in the Television Industry.

“Like HD years ago, the demand for 3D production is growing industry-wide. Everyone is looking for a way to bring the television audience closer, to make them feel like they are part of a live event. 3D technology can help create a fresh and engaging experience. Our commitment to providing the latest and greatest to our clients made our partnership with PACE, the best in the 3D business, an easy decision.” Says NEP Broadcasting CEO Debbie Honkus.

SS 3D sets the bar high for live 3D television - combining PACE’s cutting-edge FUSION 3D technology, designed in a partnership with James Cameron, and NEP Broadcasting’s live television mobile unit design and integration expertise. Customizable for every client’s individual needs, SS 3D features: a 3D production viewing area, a convergence station, and 3D capable tape, video and engineering rooms. Wired for eight 3D cameras, two 6-channel EVS XT-2 servers, and ten tape machines, with an SSL Aysis Air PLUS! Digital Audio Console, SS 3D is capable of handling any production.

Joseph Signorino, NEP Broadcasting’s senior project engineer says, *“Up to this point the norm has been to integrate bits of 3D technology into a 2D television truck on site for each show. While not insurmountable, it does end up requiring extra time and effort, making the overall process difficult and disruptive. With SS-3D, we have created something entirely new: A fully-equipped truck built specifically to cover live 3D events, able set up easily in a reasonable time, without sacrificing any of the power or technology that our clients need and expect.”*

As an integrated system, SS-3D is designed to handle the most demanding projects. FUSION 3D was used in the creation of the movie Avatar. It has

also been used on NBA All Star Finals, U2 3D, and Hannah Montana/Miley Cyrus: Best of Both Worlds Concert Tour.

“With over six years of shooting in the Sports market, it was clear that the FUSION 3D system needed the right foundation of expertise and commitment to quality that the relationship with NEP brings to the table. Everyone at PACE and NEP is committed to growing the 3D broadcast market with a benchmark for quality entertainment. It is critical that the business side of 3D make just



as much sense as the creative results. SS-3D will now showcase a business solution to 3D projects that takes broadcast entertainment to a new and exciting level,” Says PACE CEO Vincent Pace.



Wow!