CHAPTER TWENTY NEWS

society of broadcast engineers
ittsburgh chapter

SBE EXPO

October 20

Green Tree Radisson

See you there!

Last Meeting

Larry talked about his experiences in broadcasting before he started down the line of equipment.

Our September meeting was held on September 6th, a week and a couple of days early to allow us to host the "Taste of the NAB" Road Show. Twelve people attended.

Larry Bloomfield travels around the country with his Road Show and Tuesday the sixth was the day he was able to stop in Pittsburgh. Larry had equipment from dozens of manufacturers that we were able to get up close to and check out. There was everything

Chairman's Corner

But What About Radio?
By Bob Jordan, CPBE
bjordan@wpxi.com

If you're thinking this issue of the Chapter 20 Newsletter looks like a flyer for the fall expo, you're exactly right. That's 'cause we can't do enough to make sure everybody knows what, where, and when. If you've already marked your calendar, preregistered, and made plans accordingly, then feel free to pass this issue on to an associate, but if not, then get on it before you forget. John, Nick, and Joann have all been hard at work lining up vendors, speakers, and facilities to make this our best regional show ever. You no doubt know by now we've moved to a new central location so that more people will be able to get to the Expo without wasting extra time driving.

But what about radio?

We've gone to considerable trouble to bring things to this show that not every station in the tri-state area can do on their own. Things like the Mark Bell ENG safety workshop, and the Gary Thomas HD lighting workshop.

New this year, and my personal favorite, is our first ever breakfast session with Keynote Speaker Mark Schubin. While you feed your face, Mark's going to feed your mind with his perspective on where our industry is headed and how it's going to get there. If you come to the breakfast this year, you won't have any excuse for not hitting the show floor and technical presentations fully charged.

But what about radio?

John Humphrey tells me he has worked very hard on finding technical presentations that will appeal to and educate attendees at various levels of experience and technical knowledge, as well as those in various disciplines. Look

> **October's Meeting**
> will be
> **The Annual Equipment Expo**
> At the
> **Green Tree Radisson**
> on
> **Thursday, October 20**
>
> **Next month we will be meeting with the SCTE**

But What About Radio?

elsewhere in this issue for the presentation schedule and for John's explanation of the target audience for each.

But what about radio?

So, what about radio? I thought you'd never ask. A wise person once told me TV is just radio with a light to read by. One way or another, everything we're doing now had roots in radio, and there's enough crossover that sometimes we just assume it's all part of the broad field of Broadcasting. But you already know that. And if you're among those in the biz that actually work in radio, then you might understandably be sensitive to being folded in with the herd. So I want you to know that your Vice-Chairman has been hard at work trying to find presenters with topics pertinent to radio. In fact, John even made it a point to get to the Syracuse show to see if he could buttonhole additional speakers and vendors. We've run into a bit of a snafu with the HD radio presentation, but one way or another, we're going to get it presented. We've been working very hard on finding additional radio topics and vendors. But you know what? Besides us, it takes YOU.

Last year we had an unhappy radio vendor tell us he wasn't going to exhibit at our show again because, he said, "It isn't a radio show anymore." I take exception to that, and we've been working hard to prove him wrong, but my fear is, if those of you in the picture-less part of the business don't come out this year, then he's going to be right by default. So...

I hope to see YOU there! Bright and early for breakfast.

Radio Opportunity

Sheridan Broadcasting is looking for a broadcast engineer in Pittsburgh. Job responsibilities include operation, repair and maintenance of broadcast equipment in studio. Set up and operate audio equipment, including microphones, sound speakers, recording equipment, connecting wires and cables, sound and mixing boards, and related electronic equipment for off-site broadcasts or special events. AM & FM transmitters, tower and studio experience needed. Knowledge of digital automation systems, especially Scott Studios systems, along with other computer skills a strong plus. Technical or college training in broadcast technology, electronics or related field preferred. At least 3 years radio studio and transmitter mainte-nance experience required. Must be self-motivated and detail oriented. SBE certification a plus. Send application: Cover letter and resume to Bob Sharkey, Sheridan Broadcasting Corp, 960 Penn Avenue, Suite 200, Pittsburgh, PA 15222. FAX: 412-456-4072. E-Mail: bsharkey@sbcol.com.

Breakfast Keynote Speaker
# What Is HDTV,
and Who Can See It?"
Mark Schubin

Engineer, writer, consultant and researcher, Mr. Schubin is a Fellow of the SMPTE, a multiple Emmy Award winner, and a recipient of many other honors. He serves as Technical Editor for Videography magazine and writes a monthly column for Digital TV magazine.

What Is HDTV, and Who Can See It?"

The term "high-definition television" has been in use at least since the 1930s. Even today it has many meanings. Why does HDTV look better than ordinary TV even when downconverted and recorded on a six-hour-mode analog VHS tape? Can an under-$3000 camcorder really capture HDTV? Where is HDTV-transition money best applied?

Join us for breakfast and find out!

There is limited space and a $5 fee to attend the breakfast. Register on the web page.
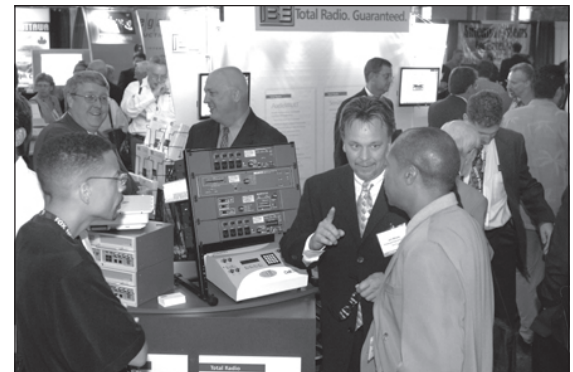
HD At Radio Show

Large crowds attended the East Coast Radio Show September 21 to 23. Attendees showed up from all over the country with cheap air fares into Philadelphia, but the show was close enough for many engineers to drive, even if spending only one day viewing the exhibits (kind of like our Expo on the 20th). The Engineering sessions focused on HD Radio, which was also the primary focus of many of the exhibits.

EXPO Highlights

John Humphrey

"What is HDTV and who can see it? Some Strange Truths About the Future of Television" is the keynote speaker's presentation at the SBE Expo October 20th. Mark Schubin is a widely published author, lecturer and general industry analyst. His controversial and humorous topics always leave you thinking … and this year is certainly no exception! Mark mixes simple and obvious statements with really advanced theories and concepts. Make sure you arrive early to hear his presentation at breakfast from 7:30-9:00 AM. (Advance registration and payment required.) Mark is also speaking at 11:00 in the Maple room.

Everyone knows the landscape of broadcasting is changing rapidly. You need to listen to these speakers to stay up on today's trends. Technical presentations at the Expo this year include: "5.1 audio mixing" and "HD radio" for audio and radio attendees. Broad topics include: "Servers 101," "Next Generation TV station," IPTV, and HDV editing. We have scheduled specialized speakers that will cover subjects like: "MPEG Coding and Streaming," MOS connectivity in the newsroom," and "Newsroom archive systems." Two advanced presentations on "MPEG stream analysis" and "fiber optic transport" for DTV and Cable complete the 1-hour technical seminars running concurrently in the Maple and Oak rooms.

…and if that isn't enough, two half-day seminars are being offered on "ENG Safety" and "Lighting Techniques."

Your regional SBE brings these seminars, workshops and equipment displays to Pittsburgh each year. Don't miss this opportunity to stay a valuable and informed part of the Broadcasting industry.

Axcera Demonstrates DVB-H MOBILE

Axcera conducted a live DVB-H mobile video system demonstration at the International Broadcast Convention (IBC), held at the RAI Exhibition and Conference Center in Amsterdam in September. Using an Axcera Innovator LX solid-state low power Digital Video Broadcasting (DVB) transmitter, they covered the entire Mobile Zone with a robust DVB-H signal. Using advanced mobile handsets, conference attendees had the opportunity to view multiple real-time video streams that were formatted specifically for best viewing on "the small screen."

Mobile video offers broadcasters the potential to tap into a new revenue stream never before possible. Since its formal adoption by the DVB Organization in 2004, there has been growing interest in the use of DVB-H technology for the delivery of high quality video and other services to mobile handsets. Unlike many current mobile multimedia offerings that consume valuable bandwidth resources used for voice and two-way data services, DVB-H networks provide a separate path to the handset, truly enabling the "triple play" in a mobile environment.

SBE EXPO
October 20
Green Tree Radisson
Breakfast at 7:30
Presentations begin at 9 A.M.

Larry started his talk with Larcan FM translators

At our September meeting, Larry did his whole presentation from a motorized wheel chair

Last Meeting

Continued from page 1

from FM Translators, to TV automation software.

Some of the companies represented were Larcan/TTC, Riedel, Modulation Sciences, Leitch, Leader, Teckronix, ESE, AJA, InPhase Technologies, Henry Engineering, Sundance Digital and Orban to name a few. In addition Omneon had someone there to talk about their video servers.

There were door prizes for nearly everyone.

EXPO Speakers and Workshops

The Maple Room

5.1 SURROUND MIXING

Tim Casey, Calrec

Tim works for Studio Consultants in New York City. SCI's customers include audio mastering and sound-for-picture facilities, music studios, mobile productions, broadcasters, independent engineers and others. Studio Consultants specializes in Calrec digital audio consoles.

Surround Sound is being used extensively in sports and entertainment shows. NFL football, basketball and other sports as well as David Letterman, Conan O'Brien are now mixed in surround sound. Considerations on employing 5.1 surround sound will be discussed. How is 5.1 surround used? How is the image placed? This is what you need to know about the brave new world of true multi-channel sound.

MXF file exchange in modern broadcast and production systems

Steve Wynn, Product & Marketing Mgr, Optical & Network Products Group –
Sony Broadcast & Professional Systems Division

Steve Wynn is a Product Marketing Manager in the Optical & Network Group of SONY Electronics, Broadcast & Production Systems Division. In his 13th year at SONY, Steve is responsible for products including MPEG IMX devices, the e-VTR, and transmission servers, along with enterprise newsroom systems and other technologies in development.

MPEG Stream Analysis & Measurement

This presentation will provide perspective on how the Material eXchange File format (mxf) is being applied in current and planned broadcast and production systems. A refresher on the MXF format, goals and a status check on industry applications will be included, emphasizing practical and available techniques for taking advantage of this file format standard from SD and HD playout servers such as the SONY MediaVenue, to acquisition options and NLE components

MXF Applied - file exchange in modern broadcast and production systems

HDTV Transition

Mark Schubin, Technology consultant

Multiple Emmy-award-winning SMPTE Fellow Mark Schubin panned his first 1125-line HDTV camera in 1973 and helped transmit Japan's first regularly scheduled HDTV broadcast.

Where is the Broadcaster's HDTV-transition money best applied? Where can Production and Post-Production companies best apply their future High Definition money?

Panasonic P2 Memory Based Acquisition in HD

Tom Parrish, Panasonic Broadcast & Television Systems Company, District Sales Manager, Director – Broadcast Sales Development

Panasonic's introduction of P2 was intended to partner with existing editing systems, and to promote the fact that HD products would follow shortly. There are now 15 editing partners supporting P2. In addition, Panasonic has announced an HD/SD P2 camcorder "family," with a synchronized release of NLE support for P2 HD. The presentation will discuss the unique attributes of P2 acquisition, the inherent advantages of memory-based storage, why it integrates into editing systems easily, how HD "fits" into P2, and why the MXF O.P. Atom structure makes all this possible.

Next Generation Television Infrastructure

Thomas P. McDonough – Senior Consultant, AZCAR Technologies, Inc

Tom is focused on technology strategy and solutions development. This includes the integration of information and media technologies into innovative, cost effective business solutions. Tom held senior level positions in engineering, technology strategy, product development, and marketing for a global leader in broadband communications, a leading provider of desktop media software, and broadcast/media technology integration firms.

Next Generation Television Infrastructure: The Confluence of TV and IT

In today's changing broadcast operations environment the creation, production, conversion, management, and distribution of content as compressed digital files is becoming the common method for moving and processing assets. However, real-time bitstreams remain core to live production operations. The movement and sharing of these Content files and bitstreams is a fundamental and important issue to consider in the development of a file-

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based, server-centric broadcast or production infrastructure. This presentation will provide an overview of the evolving storage, transport and processing infrastructure required in today's broadcast and production facilities.

IT in Broadcasting
N-Vision

DV Xpress Pro HD - HDV Editing
Avid

The Oak Room
Technology for Fiber Optic Video Network
Jim Jachetta, MS EE
Multidyne Video & Fiber Optic Systems
Jim Jachetta is Vice President of Sales and Product Development for Multidyne Video & Fiber Optic Systems. Jim holds a Masters Degree in Electrical Engineering and Communications from Polytechnic University, Brooklyn, New York. Mr.. Jachetta has been part of the Multidyne Engineering and Sales teams since 1989
Technology for Fiber Optic Video Network
Multidyne will present a technical paper on the latest technologies and solutions in Digital Fiber Optic Transport. The paper will concentrate on MULTIDYNE's patent pending fiber optic video network. In addition, we will present the latest innovations in Coarse Wave Division Multiplexing (CWDM), high speed digital multiplexing and optical routing switchers. Applications include the fiber optic transport of video, SDI, HD-SDI, Firewire, RGB, UXGA, DVI, audio, AES/EBU, phone, data, ethernet, L-band, IF and CATV.

Archive Systems for the Newsroom
Bob Valinski,
Director of Business Development, Crispin
Bob spent nearly 20 years in television news, working his way up from photographer/editor to Director of Engineering, before moving to the manufacturing side of the business. Bob was a product specialist for the Profile video server with Tektronix, sold news automation systems at Thomson/Grass Valley, and has now moved to Crispin to develop automation products for the news industry.

As local television stations migrate to a "tapeless" digital newsroom with nonlinear editing and servers, they soon learn that there is nothing to put on the shelf at the end of the day for archiving. Newsrooms have specific requirements which cannot be met using traditional asset management systems. The presentation will include a brief overview of the newsroom media

workflow, as well as some history on how newsrooms archive and search for video. The focus will be on how to develop an asset management system that will give a newsroom the ability to digitally archive and retrieve previously aired stories, as well as how to create stock footage libraries, catalog raw video, and save aging historic video. There will also be a cost/performance analysis of available storage media such as DVD RAM, DAT, PDD, and RAID

HD Radio
Digital AM/FM Transmission
Ibiquity Digital Corporation

DTV Brings New Testing Challenges to Broadcasters
Eli Kerch, Senior Systems Sales Engineer, Acterna
Eli Kerch has spent nearly a decade working in the digital broadcast industry and traces his roots in MPEG test to the first commercial MPEG-2 transport stream analyzer. His responsibilities included engineering, sales and product marketing as well as spending the last six years tracking the growth of MPEG, DVB and ATSC technologies. Now working as a Senior Systems Engineer with JDSU, he focuses on the growth of digital video in traditional and next generation markets in North America
DTV Brings New Testing Challenges to Broadcasters
Not since "television" was born has there been a leap in technology such as this DTV revolution, not even the momentous launch of color TV. Yes, television has changed, and with that change has come a bevy of new testing requirements for the modern broadcaster. Pictures have become packets, audio and video are completely separate entities sharing only a reference clock as a common tie. Today's broadcaster needs to have both the traditional baseband audio and video test capabilities as well as packet and protocol based testing. Real-time has taken on a new meaning with errors in the digital stream being sporadic, short-lived, and potentially deadly to the picture quality.

We will have two of our MPEG analyzers

available for demonstration purposes and can make use of the LCD projector provided for both our presentation and product demo.

AVC Encoding
Neil Briden / Bob Natwick
Modulus Video
Coding and Streaming

Since 1994 the demand for video services, and hence video bandwidth, has steadily grown. Today's widespread adoption of HDTV is compounding this growth almost exponentially. For example, a single HD channel requires the same bandwidth as six SD channels! Rather than shoulder the expense of adding capacity, broadcasters would prefer to make more efficient use of the bandwidth in their existing MPEG-2-based infrastructure. The problem is that although the MPEG-2 video codec in use today has served broadcasters well, it fails to take advantage of the computing power available today. AVC, also known as MPEG-4.10 and MPEG-4 AVC, replaces MPEG-2 as a compression standard while taking advantage of the ubiquitous presence and massive investment in MPEG-2 broadcast infrastructure by preserving it as the transport protocol. Demonstration of Encoding with HD monitors

The Triple Play and IPTV: 30 Million Sets on a Network
John Luff, AZCAR

John Luff is the Senior Vice President of Business Development at AZCAR. He has 39 years of experience in broadcasting, post production, facilities management, remote production, project management, technical consulting and system design.
The Triple Play and IPTV:
30 Million Sets on a Network

With the entry of SBC and Verizon into the video distribution business it is not only the competitive landscape that has changed. Fundamentally IPTV is different in many respects, some might say defying the laws of physics. From a technical standpoint monitoring and control are quite different in IPTV systems. The paper will discuss the market forces and development and the architecture of at least one approach to delivering programming to consumers over IP

MOS Connectivity in the newsroom
Jim Martinolich, CTO Chyron
Jim has worked in all aspects of television technology for over 20 years, from video games to missile guidance systems. Jim feels the next challenges for Chyron are to move towards distributed applications, helping users manage their graphics assets and creating and exploiting graphics metadata.

MOS is a widely-used protocol for communication between newsroom computer systems and media object servers such as character generators. The installation of a MOS system can greatly increase efficiency and streamline newsroom operations. MOS implementation, however, not only affects the graphics chain, but significantly impacts the workflow for all departments involved in news production. Significant planning and training including the Engineering, IT, Graphics, Newsroom and Production teams. This session discusses Chyron's unique solution to the MOS workflow and our experience with the implementation process. We will offer advice on how to make MOS work best for your facility.

Half-day Seminars

It can happen to you!
Mark Bell, ENGsafety.com

Mark Bell has been a proponent of ENG Safety for TV stations and field news employees for over 10 years. He is the premier Safety Information Specialist for the ENG Safety effort. Good judgment comes from experience and experience comes from bad judgment. The presentation will show accidents, incidents, and causes that all operators, managers, and other involved in news gathering should learn to prevent similar occurrences at their stations.

Fundamentals of lighting for studios, ENG/EFP, and Video Conferencing
Gary Thomas,
National Sales Manager, Videssence

Fundamentals of lighting for studios, ENG/EFP, and Video Conferencing. Demonstration and techniques for lighting effects. Topics include saving energy, cutting operation and maintenance costs.

Please note:
There is a fee for the half day seminars.
$20.00 for SBE Members per session
$40.00 for Non-SBE Members per session