# CHAPTER TWENTY NEWS

society of broadcast engineers

pittsburgh chapter

February 2007 Volume 15 Number 2


*We had great attendance at our January meeting*

## Last Meeting


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Despite a last minute change in location, twenty-two people attended our January 18th meeting. The meeting was originally scheduled for the Red Bull Inn, but had to be moved to the Greentree Inn due to the closure of the Red Bull.

John Humphrey presided over the meeting. After a quick treasurer's report, John announced that Azcar had taken over the operator training for the 2GHz relocation. David Oatey and Ed Holmes from Azcar gave us an overview of how they plan to do the training. They than took questions and comments from the meeting attendees.

After dinner, Arte Machia and Rex Larwence from Network Electronics showed us Network's uncompressed SDI to IP interface equipment. This was followed by a discussion of the applications and advantages of using a dedicated IP network over fiber or microwave.

### E-mail, Hard Copy or Both?

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## Next Meeting


Annette Parks
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The monthly meeting location for the February 15th Pittsburgh chapter of SBE at 7:00 p.m. is WPXI-TV, Inc, 11 Television Hill, Pittsburgh, PA 15214, 412-237-1187. Dinner will be catered by Remo's.

The topic will be "Centralized Technology Management Systems (CTMS)" by John Duffy, North America Director of Sales, Obor Digital, Orlando, Florida.

Broadcasters have unique complements of equipment, programming requirements, and obviously unique content, however, all of the engineering, IT and operations groups all share complex and common operating challenges. Those operating challenges include tracking and manag-

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## Next Meeting

Thursday, February 15
7:00 P.M.

Come at 6:30 for a discussion on "The Dos and Don'ts of IT"

Presentation:

**Centralized Technology Management Systems (CTMS)**

by John Duffy
Obor Digital

Free Dinner catered by Remo's
Location: WPXI-TV11
11 Television Hill, Pgh.
412-237-1187

# Chairman's Corner

John J. Humphrey, CPBE
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The 2006 Expo's financial success has allowed us to pay for all the meals at our monthly meetings since the show. I am pleased to see a good turnout of members and non-members at the monthly meetings in December and January. It looks like free meals has worked and we will continue to do so. Please invite industry people to our monthly meetings, these are the future members of the SBE. I hope we will see some of those non-members join this year. Until further notice, the monthly meeting dinners will continue to be paid by the Chapter and there is no cost to members and non-members.

As you know, the National SBE has selected Pittsburgh, Chapter 20 as the location for the 2007 SBE National meeting. We are going to have a "really big show" next year. We are going to need more help, too! The date for the 2007 Expo is October 10th and 11th. The 10th is the National SBE meeting and set up. It is also the first day of exhibits. Wednesday evening from 5PM until 8PM exhibits will open with a reception to follow. The 11th is the full day of Expo exhibits and technical presentations at the Expo Mart in Monroeville from 8AM until 5PM.

We had a board meeting this week to begin work on my four goals for 2007:

1) Improve the web site: It looks and works much better thanks to Stephen Zelenko, Gary Stewart and Bob Hoffman.
2) Clean up the Expo mailing list: We need to put a committee together to work through the incorrect database. Bob Hoffman has offered to develop a good database for the Expo. We will also put it on the web (password protected) so we can all see it. In addition, SBE 22 Syracuse has offered to help our show with their registration and badge printing hardware and software for our 2007 National SBE Expo.
3) Standardize on meeting times and locations for 2007: We had inconclusive results from our survey. It was pretty much split between move the meetings and a single location. I will bring this up at the next monthly meeting.
4) Make sure we have a great SBE National Expo in 2007. With a little luck we can impress the National SBE, gain recogni tion for our show and make more money than 2006.

I am always open to any suggestions to make the Chapter work better for its members. I would like to hear your opinion about any subject by phone (724) 873-0800 or by e-mail to: john.humphrey@azcar.com.

# CBS Sports New HD Truck

By Nick Cap
Freelance TV Engineer
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This past January 25th 2007, CBS sports launched their 2007 golf coverage in full time HDTV at Torrey pines in San Diego, CA. What is unique about this event was for the first time all cameras, including the wireless handhelds that roam the whole golf course, were HD Sony 1500's. The ability to have a HDTV wireless transmitter that produced a maximum delay time of 64 msecs to the final receiver allowed the production team to finally intercut between wireless and wired cameras.

This broadcast year for CBS sports started over 10 months ago with a number of outside truck vendors and wireless vendors showing how they could best provide CBS sports with the HDTV telecast that their production team requested. It finally came down to NMT building a mobile unit for CBS that comprised a total of 3 tractor trailers, and a support truck.

The first two vehicles, the "A" and "B" units, are double expandos with one of the largest production monitor walls on the road today. Over 164 Sony Luma 9" monitors fill the wall with an additional 2 Sony 24" CRT based monitors for Program and Preview. The main control room will support over 10 working positions for any given telecast. Also located in the "A" unit is the graphics division with 2 Pinnacle Deko 3000's in use.

Moving on to the "B" unit we find that audio, video, tape, and transmission control are located here. One of the largest Pesa routers found on a mobile unit is used to move all the needed signals

Chapter Twenty News is published monthly (except July & August) by

Society of Broadcast Engineers
Chapter 20
P.O. Box 16312
Pittsburgh, PA 15242-0312

Web page http://www.broadcast.net/~sbe20

around. Its matrix size is 1,072 x 1,344 for video, and the audio portion is 1,472 x 1,728. Using Pesa's unique fiber interconnection for it's frame structure, and NMT's method of using the new Statous HX-1080 Expanded Beam connectors the amount of cabling between the mobile units is kept very low. Just to give you and idea of how this works the HX-1080 connector will allow 64 HDTV full bandwidth signals to pass through it.

Moving on to the "C" unit this is where we have an audio submix console and a non-linear edit room. We also have all the fiber from the golf course come into this trailer for conversion to electrical connections to interface to the audio boards, and also for camera control units. One last new feature that is used for truck interconnection is MADI which is how Calrec consoles allow the movement of over 64 AES streams on one coax cable between the sub mix board and the main mix audio console. Finally, to round out the trucks, CBS had seven EVS servers used to record all the isolated golf coverage, and the use of two EVS IP directors allowed the multiple tape operators to merge clips of all the EVS XT servers seamlessly.


If you have a HDTV set at home tune in to CBS golf and look at how good HD can really look.

## Musings of a Consultant

John Luff
Television Technology Consultant
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Just when we are beginning to get critical mass with HDTV, we are beginning to see the emergence of the next step in the evolution.
Today two formats compete in the marketplace, 1080i30 and 720p60. but anyone who ventures into a consumer display of high end flat screens will see 1080p as the latest buzz word being used to sell sets. HDMI can connect 1080p to sets, but to date the only sources are the brand new crop of HD-DVD and BlueRay HD players. Some content has been created using sources which are truly 1080p, but most of the content available today is actually compressed from interlace sources.

It might seem impossible to get 1080p through a 19 Mb stream since it contains twice the frames and thus twice the bits, especially considering how hard high quality 1080i is to quash through the pipe. But there are two factors which make it likely that at some point relatively soon consumers will get true 1080p content delivered.

First, it is easier to compress a progressive scan master, on the order of 15% -30%.

Second, much of the content likely to show up first is film-based material, and 24 frames requires only 80% of the bits that 30 frames needs.

Combined, these two factors leave 1080p24 only 35% (or less) more complex than 1080i30.

As distribution services like IPTV and satellite ramp up the use of VC1 (Windows Media 9 in SMPTE language) and H.264 with their inherent advantages in efficiency, it is practical to see a "premium service" delivering 1080p24 content in the near future.

Remember, SMPTE standardized an interconnect for 3 Gb/sec SDI (SMPTE 424M-2006) specifically to allow single wire interconnections for higher bit rate HDTV signals, and hardware is starting to show up, including cameras and routing systems.

Building a system to deliver the content will not be cheap, but it is thoroughly doable today."

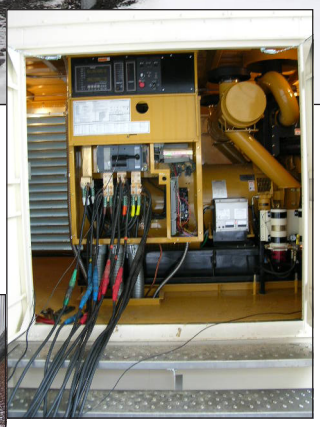
# WTAE Updates Power

David A. Kasperek, Director of Engineering, WTAE-TV sent in some photos of their new 750 KW Caterpillar studio generator.

In the first you can see the crane setting it in place behind the studio building about a month and a half ago.

In the next 4 photos it is undergoing full load testing at the end of January. It was pushed to 110% by the Beckwith tech assigned to the work. No problems. It's not online yet but hopefully first week of March it will be online.

In the foreground of the second photo you can see the new Duquesne Light 750 KVA 480V substation (big green enclosures) they installed to replace the 50 year old substation original to the studios. Part of this project also includes an MGE 150 KW UPS, all Square D switchgear, a Russelectric transfer switch, and a Powersmiths low noise transformer for electronic loads.



Dave says they have been working on this for over 2 years from the planning stages.

Broadcast Building Corporation is the general contractor, Wellington Power and Duquesne Light are the subcontractors doing the work.

For those of you who are wondering, the UPS is located in the Second Floor main electrical room and the units on the back of the Beckwith truck that were wired to the generator for testing are air-cooled resistive loads (5th picture).

## Next Meeting continued from page 1

ing millions of dollars worth of equipment, determining how long that equipment will last, how much it will cost, managing the maintenance and servicing of that equipment, and providing help desk communications to all of the people who use that equipment.

Additionally, inherent complexities of broadcast and IT equipment exist, including software versions, options, plug-ins, systems, and document and drawing management.

Facilities struggle with these challenges not realizing how much not having a system will really cost them both in dollars and time. By adding a Centralized Technology Management System, all of the operation of a broadcast facility or even groups of broadcast stations can be easily managed, share their repair knowledge base, analyze failure trends, determine training needs, reduce costs, increase communications, manage those numerous technical manuals and facility drawings, evaluate service and support contracts, plan Capital expenditures and more.

Web-based Centralized Technology Management Systems (CTMS) are smart enough to interface with equipment to automatically generate a work order based on a failing disk drive and automatically route that work order to the appropriate department or person.

Website: www.obordigital.com

When you arrive at WPXI for the meeting, go to the back parking lot (near satellite dishes) and enter the building through the security entrance. That is the biggest parking lot on our property. There is also parking in a fenced lot directly across the street from the building