Tuesday, October 14

7:00 am - Registration & Continental Breakfast
Location: Lobby
Sponsored By: Continental Electronics

9:15 am - HD and 10dB Power Increase
Location: Superior
Speaker: Richard Hinkle, Broadcast Electronics
This paper will cover the proposed 10dB power increase in the HD signal, how it may affect implementation for the broadcaster, overview of benefits and issues, and impact on manufacturers' equipment and new product offerings. Primary topic of discussion will be based on how the 10dB power increase will affect the broadcaster when implementing an HD system both from a technical and financial standpoint. Input will also be given on new products and how they will address this technical issue.

10:00 am - HD on AM and Interference Issues
Location: Superior
Speaker: Jeff Walton, NAUTEL
HD on AM and interference issues: with the advent last fall of HD Radio™ on AM being permitted at night, there have been some interference issues brought up. Although the complaints have not been extremely widespread at this point, the issues of antenna bandwidth and monitoring of "spectral regrowth" or digital intermodulation products are becoming more apparent as items that need to be addressed in an AM facility. This session provides background on the requirements, discusses the problems that can arise and introduces solutions that are in place to reduce undesirable products as much as possible.

10:45 am - Break

11:00 am - How to Make HD Radio Easy for Broadcasters
Location: Superior
Speaker: Dave Hershberger, Continental Electronics Corporation
Generation of digital signals for broadcasting incurs a certain amount of user-hostility from software and hardware. This is not deliberate – it is simply an inevitable result of new technology. As the technology matures, we can do some things to take off the rough edges and make the implementation easier. Fortunately, many of these technologies for digital radio have already been developed for other applications. One such application familiar to broadcasters is digital television. Some of the approaches used in digital television can be adapted for use in digital radio. Some of the technologies used to ease the broadcast engineer's experience are: Embedded explorer, Operating system, GUI, and remote access, Computer-independent hardware subsystems, Adaptive equalization technology and Performance monitoring. Each of these major points will be discussed, along with some less significant niceties.

11:45 am - Lunch
Location: Mendota
Sponsored By: Ross Video (Production Technology)

1:00 pm - How Much Are We Really Saving? New Radio Station Construction Paradigms Examined
Location: Superior
Speaker: Jim Armstrong, Axia
Companies offering new technologies often claim increased efficiencies. The usual claims come in terms of capital cost savings, installation labor savings, and future savings on maintenance. But, who has actually measured these claims? What data justifies the ad-pitch and anecdotal stories brought before us? And, can we quantify how a new approach may be just 'more fun' than an old approach? Data will be presented from both typical and atypical radio facilities, examining and quantifying work-process data both before and after their infrastructure improvements. Enjoyment is analyzed, as well.

1:45 pm - Nuts and Bolts of WebRadio
Location: Superior
Speaker: Barry Hill, RCS NexGen's
Technology is all around us. We now have the Internet, MP3 players, mobile phones and many new digital platforms emerging around the world. Radio must keep step with the available technologies. How do you keep your station in front of the listener, no matter where they are or what they are doing - and no matter which digital platform they are using? Use today's latest technology to reach more listeners in more ways. Dazzle your audience with animated graphics and information from artist notes to RSS feeds. Add visuals synchronized to your audio stream. From CD covers and artist graphics to station photos and sponsor logos, the branding matches your station look. Let's get into the "Nuts and Bolts of WebRadio."

2:30 pm - Break
2:45 pm - Metadata Collection and Distribution for Radio
Location: Superior
Speaker: Patrick Campion, ENCO
In the ever changing environment of metadata collection and distribution for terrestrial radio broadcasters, what types of data currently exist and what delivery methods are available? This presentation will delve into the past, present and possible future scenarios of how properly gathered and formatted data can enhance traditional broadcasts and lead to alternate means of revenue generation. Included will be details on locally generated data, rebroadcasted data streams from internet and satellite sources and other scheduled data.

3:30 pm - HD Radio (the Next Generation)
Location: Superior
Speaker: Bob Surette, Shively Labs
This session will cover the effects of combining the digital and analog signals at the proposed higher HD power levels in respect to: antenna operation, pattern, mask emissions, interference concerns, and combiner designs. Time permitting, Bob will address NPR Lab interference measurements compared to Ibiquity experiments.

4:15 pm - Broadcasters Clinic Exhibits Open Exhibitors Reception
Location: Wisconsin, Michigan
Sponsored in Part By:
Wave Communications
5:00 - 6:00 pm - SBE National Board of Directors Dinner (SBE Board of Directors Only)
Location: Green Bay
6:00 - 10:00 pm - SBE National Board of Directors Meeting
Location: Green Bay
7:30 pm - Broadcasters Clinic Nuts & Bolts, Panel Discussion lead by Bob Surette Quiz Show: "Are You Smarter Than a 3rd Class Operator" - Jeff Nordstrom / Gary Mach
Location: Superior

Wednesday, October 15
7:00 am - Registration & Continental Breakfast
Location: Lobby
8:00 am - Fellows Breakfast (by invitation only)
Location: Salon C
8:00 am - TSI Trouble-Shooting Investigation
Location: Superior

Speaker: Gordon Carter, CPBE, CBNT
A large part of any broadcast engineer’s job is trouble-shooting. Whether you are working with hardware, software, or even complete systems, these systems fail or malfunction. The job of the engineer is to identify the problem and correct it. Through a process of searching and with enough, most people can find the problem. However, this is often a very inefficient process. Efficient trouble-shooting saves time, helps solve the problem, and helps make the engineer look good to his/her supervisor and co-workers. Efficient trouble-shooting requires a structured approach and disciplined techniques. This session will discuss techniques and a structured approach based on over 40 years of experience. These techniques are applicable to trouble-shooting hardware, systems, software, and even (to a limited extent) personal relationships.

8:45 am - Fundamentals of AM, FM and TV Coverage and Interference Considerations
Location: Superior
Fundamentals of AM, FM, and TV coverage and interference considerations based on FCC rules. Explore the topics of coverage and interference based on the FCC rules and international agreements. How we address, work with, comply, etc.

9:20 am - TV White Space and How Spectrum Changes May Affect Wireless Microphones
Location: Superior
Speaker: Chris Lyons, Shure Incorporated
The FCC is reorganizing the UHF TV band, which has long been home to wireless microphones, in-ear monitors, production intercoms, and other professional wireless gear. This session will examine the results of the recent spectrum auctions, the potential impact of new consumer devices operating in the "White Spaces," and the interference protection approaches being considered.

10:05 am - Special Announcement
10:15 am - Exclusive Exhibit Time
11:00 am - Lunch (Ticket required)
Sponsored By:
Location: Wisconsin, Michigan
1:30 pm - Bend Radius
Location: Superior
Speaker: Steve Lampen, Belden
Sure, you’ve heard the standard rule “No tighter than ten times the diameter.” For some data cables, you might hear “four times the diameter.” But what actually happens when you bend a cable? This presentation would show exactly what changes inside a
2:15 pm - How Tower Design Relates to Antenna’s Performance
Location: Superior
Speaker: David Davies, ERI

The tower design will affect the commercial broadcast antenna’s performance by altering both the horizontal plane and the vertical plane (azimuth pattern) relative field energy distribution. Electrical interaction between the tower and antenna will distort the antennas horizontal plane energy distribution and create nulls in the pattern. Also, this tower/antenna interaction can disrupt the phase relationship between individual antenna elements in a multiple element array which will reduce the stacking gain values of the system. Excessive antenna/tower movement will alter the orientation of the vertical plane (elevation) antenna pattern and can result in up to 20 dB signal attenuation. This paper will present the root causes for the signal strength and antenna gain degradation, provide case studies to illustrate extent of this problem and offer solutions to avoid both horizontal plane distortion and vertical plane attenuation scenarios.

3:00 pm - Break

3:15 pm - E Scrap
Location: Superior
Speakers: Jeff DeGarmo, CRT Processing Corporation; Sarah Murray, DNR; Taral Jha, Cascade

Learn about the general issues regarding e-scrap, the implications of the 2009 Digital switchover for television disposal/ options as well as how to find a vendor for equipment generated by television and radio stations.

4:00 - 5:00 pm - SBE National Annual Membership Meeting
Location: Salon E

5:00 pm - SBE Awards Reception
Location: Atrium

6:00 pm - SBE National Annual Awards Dinner (Additional Registration Required)
Location: Salon D

THURSDAY, OCTOBER 16

7:00 am - Registration & Continental Breakfast
Location: Lobby

8:00 am - DIGITAL PROceiver • IFB for Electronic News Gathering Enters the Digital Age
Location: Superior
Speaker: Eric Small, Modulation Sciences

Analog PRO channel, long the mainstay of reliable, infrastructure independent IFB, will go away when analog television shuts down in February. Cell phones, up until now the only post-analog option for most broadcasters, are plagued by random disconnects, high variable latency and preemption by emergency personnel. Using cell phones for IFB are a time bomb waiting to destroy your coverage of a major story. Digital PROceiver provides the solution to reliably deliver IFB to talent in the field today and after analog shutdown. Modulation Sciences pioneered PRO Channel IFB for analog. Now ModSci brings it’s more than fifteen years of IFB experience to the digital era. This Session will cover the Digital PROceiver.

8:45 am - The Transition to IPTV
Location: Superior
Speakers: John Brandl & Ken Christensen, Sencore

Internet Protocol Television (IPTV) combines traditional television with broadband Internet services. This session will answer these questions.

• How do IPTV delivery systems compare and differ from legacy systems?
• What are the technical issues of IPTV that broadcasters need to be concerned about?
• What is IP packet loss? What causes packet loss?
• How will broadcasters ensure the quality of the IPTV delivery?
• How can broadcasters implement monitoring and analysis solutions to ensure the delivery of the highest quality IPTV services?

9:30 am - Troubleshooting & Monitoring DTV
Location: Superior
Speaker: Shyamal Desai, Triveni Digital, Inc

In depth technical discussion of troubleshooting & monitoring DTV, with emphasis on what needs to be looked at. Explanation of ATSC A/78 RP on monitoring, practical strategies for troubleshooting & monitoring.

10:15 am - Break
10:30 am – DTV Audio
Location: Superior
Speaker: Frank Foll, Telos Systems/Ominia

February 17th, 2009 is closer than we think! This is the magic date where analog television channels must be switched off. In the world of DTV audio, there is a myth that must be busted, our viewers complaints will further escalate. At present, most DTV stations employ HDTV, not any audio processing. This is the myth that must be busted. To date,

DTV viewer complaints are exceedingly high and the reason is on account of DTV stations not employing signal processing in the audio chain. DTV audio for better stereo and surround must be processed in order to control L-O-U-D commercials, as well as providing a properly balanced audio environment that enhances the DTV and HDTV viewing experience. This presentation will demonstrate a system that ensures how all segments of DTV transmission will sound correctly 100% of the time, commercials included!

11:15 am – ATSC Update
Location: Superior
Speaker: Jerry Whittaker, ATSC

The ATSC is currently involved in several important standards development efforts—none of which is a mobile/handheld broadcast standard that is backwards-compatible with existing DTV transmissions. Also of top priority is a standard for non-terrestrial delivery of a wide variety of content. These projects, and others currently underway within ATSC, will be outlined and discussed in this presentation.

Noon – Lunch Location: Morinco

1:15 pm – Mobile TV Transmission
Location: Superior
Speaker: Wayne Luplow, Zenith Electronics

Based on the expressed desire of U.S. broadcasters for mobile and handheld reception of DTV using their in-band transmission facilities, the ATSC has undertaken an aggressive standards development activity to enable service rollout in 2009. Zenith, LG and Harris have responded to this desire with the introduction of their M/H transmission system, which will be described with emphasis on what is required by the local broadcaster to implement M/H transmissions.

2:30 pm - ATSC M/H synchronization based on GPS Time
Location: Superior
Speaker: Mike Simon, Rohde & Schwarz

The new ATSC Mobile Handheld (M/H) Standard will soon give broadcasters an option to use a portion of their own 5W (in-band) to explore new mobile services and reap incremental increases in revenue going forward. A new complementary technology is now under discussion in ATSC. This emerging technology is called “ATSC System Time” and technically can enable the time aligned RF emissions from several M/H stations to an epoch based on GPS time. This synergistic technology can enable new modes of operation and services not possible heretofore. A brief overview of this technology and some potential use cases will be presented.

2:45 pm - Is Circular Polarization Essential to the Success of Mobile TV
Location: Superior
Speaker: Kerry Cozad, Dielectric

Who isn’t fired up about mobile connectivity and the ability to watch the boob tube at 100 mph? Broadcasters are breathing new life into the prospect of standardizing “In-Band Mobile TV,” but service reliability will be key to its success. Reliability of digital service is all about margin above threshold, not about signal strength and depends on the spatial immunity of the receiver in both location and orientation as it travels through a fading environment. This presentation will compare horizontal, vertical and circular transmission polarization and present experimental results supporting circular polarization’s superiority in mobile applications by providing significant margin improvement and ultimately reliable service.

Don and Leonard to Close........

The 2008 Broadcasters Clinic is dedicated to Don Borchert

“Thank you for your many years of service and devotion to the Broadcasters Clinic”

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BROADCASTERS CLINIC 2008 REGISTRATION FORM

October 14-16, 2008

I will attend: (Please check) ☐ Tuesday ☐ Wednesday ☐ Thursday

Fees: $130 (Any two days) $150 (All three days)
PLEASE FILL OUT COMPLETELY

Name: ____________________________

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Mail this form and your check by September 22, 2008 made payable to Broadcasters Clinic:

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Linda Baun
WBA
44 E. Mifflin Street Ste. 900
Madison, WI 53703

To register by phone, please call 1-800-236-1922 or fax to 608-256-3986 or register at www.wi-broadcasters.org

GENERAL INFORMATION

DATES
Tuesday through Thursday, October 14-16, 2008

LOCATION
All sessions of the Broadcasters Clinic 2008 are held at the Madison Marriott-West, located at 1313 John Q. Hammons Drive, Middleton, WI 608-831-2000.

FEE
$130 - Any two days $150 - All three days
$14 - SBEE National Awards Dinner

Please make your own room reservations with the Marriott-West. The hotel telephone number is 608-831-2000. We suggest that you make your reservations before September 11, 2008, while discounted rooms are being held for the seminar. Please specify that you are attending the Broadcasters Clinic 2008.

INFORMATION
For further conference or exhibitor information, contact Linda Baun, Phone: 800-236-1922, lbaum@wi-broadcasters.org, or Don Borchert, 1955 Oakland Avenue, Sun Prairie, Wisconsin 53590, Phone: 608-837-3462

REGISTRATION
To register by phone, please call 1-800-236-1922 or fax to 608-256-3986 or register at www.wi-broadcasters.org

ACCOMMODATIONS
The WBA will need to guarantee meal counts with the hotel, therefore the WBA will NOT refund any cancellations made after October 1, 2008. The WBA will also invoice for all "no-shows."