

2010



# Broadcasters Clinic

And

## Society of Broadcast Engineers National Meeting



October 26-28, 2010  
Madison Marriott West  
Middleton, WI





# BROADCASTERS CLINIC 2010

## Program Agenda



### TUESDAY, OCTOBER 26

#### 7:45 AM - Registration & Continental Breakfast

Location: Lobby

Sponsored By: Wisconsin Broadcasters Association



#### 9:00 AM - Opening Remarks

Location: Superior

#### 9:15 AM - Push Radio

Location: Superior

Speaker: Jeff Welton, Nautel

Moderator: Gordon Carter



*PUSH Radio is a term that we've coin to describes the advances in technology that we have experienced over the past several*

*years and how they push the boundaries of the traditional time based studio to transmitter radio content delivery concept and permit a more flexible, free form methodology for content delivery – it could be used to empower listener interactivity, link to web content, decentralize the studio and put more employees out in the street interacting with the listeners, among other things. It also permits more flexibility of engineering, so that an engineer can be at one site troubleshooting a transmitter at another site and interacting with tech support via phone – with both sides of the conversation seeing the same data in real time. Join me as we look into PUSH Radio.*

#### 10:00 AM - Elevated HD Power Look before You Leap!

Location: Superior

Speaker: Dave Hershberger,  
Continental Electronics Corp.

Moderator: Clif Groth



*Broadcasters may now increase their digital signal power in most cases, to average levels as high as 10 percent of the analog power.*

*Transmitting more digital power will certainly increase the digital coverage area and reduce digital dropouts. However, there may be some unintended consequences which every broadcaster will have to evaluate before increasing digital power. Most broadcast revenue derives from the analog signal – for that reason, analog should be protected. Self-interference which adds noise to the analog signal is one such effect. Another effect is negative envelope modulation caused by the linear addition of digital sidebands. If peak to average ratio reduction systems do not control negative envelope modulation peaks, the result can be transient capture of the FM demodulator by the digital signal.*

#### 10:45 AM - Break

Sponsored By: Nautel

#### 11:00 AM - Not Just Audio Over IP, All Of it Over IP!

Location: Superior

Speaker: Jeff Zigler, RCS

Speaker: Barry Hill, RCS

Moderator: Jason Mielke, WCLOWJVL



*It seems so long ago that Audio Over IP (AOIP) was "the dream". Think of it, the highest quality digital audio flowing around the station just like the internet just waiting for us to tap into or to source. No more custom audio cabling running upwards of several dollars a foot to pull, attempting to manage pair counts in and out of studios and so on. That was the dream, but this time the dream came true and now its reality and it really works. Learn about the migration!*

#### 11:45 AM - 1:00 PM - Lunch

Location: Mendota

Sponsored By: Ross Video



#### 1:00 PM - Efficient Use of FM Composite

Location: Superior

Speaker: Frank Foti, Telos Systems/Omina/Axia

Moderator: Keith Kintner, UW-Oshkosh



*This paper will express, in detail, a method utilizing single sideband suppressed carrier (SSBSC) modulation of the stereophonic*

*subcarrier in the FM multiplex baseband that is compatible with existing radio receivers. Additionally, there are multiple overall benefits to the broadcast signal, which are perceivable to the listener. They reduce multipath induced distortion, and offer additional protection to the spectrum used for RDS, SCA signals, and HD-Radio content - thereby improving data robustness in the receiver.*

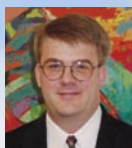
#### 1:45 PM - Engineering FM translators for AM Stations

Location: Superior

Speaker: Jeremy Ruck, D.L. Markley & Associates

Moderator: Greg Dahl,

Second Opinion Communications



*With the revision in the permissible service for FM translators, much new interest has been generated in this secondary service. In this presentation we*



will look at the process from start to finish of using an FM translator for an AM station, including regulatory and engineering considerations and restrictions.

### 2:00 PM - National Certification Committee Meeting

Location: Madison Board Room

### 2:30 PM - Break

Sponsored By: Nautel



### 2:45 PM - IP Audio Untethered: Harnessing IP Microwave Links for STL

Location: Superior

Speaker: Mark Hile, CommConnect LLC

Moderator: Jason Mielke, WCLO/WJVL



Computer IP networks continue to merge with traditional studio facilities and the recent popularity of IP-based consoles and routers seems

poised to supplant analog and AES digital-based facilities for some time to come. As IP-audio becomes the norm in the studio, it makes sense to continue that IP transport over the Studio To Transmitter (STL) links to the transmitter site. Mark will bring his years of experience with various microwave link manufacturers to this presentation on the evolution of private microwave links over IP. He'll expose the wireless carrier market and how to plan and commission microwave links.

### 3:30 PM - Who Moved My Battleground?

Location: Superior

Speaker: Brian Foster, NextMedia360

Moderator: Greg Dahl,

Second Opinion Communications



While Radio spent the last few years gearing up for the interactive war, end users changed the battle ground. The new frontiers no longer the

computer, it was the smart phone. Join Brian Foster, Vice President of NextMedia360 as we look at the affect mobile devices are having on our audiences. We will discuss new technologies, cover the barriers of entry, and forecast how the next 6 months will play out. Brian has a well rounded knowledge of the industry and can help arm you with the tools to justify investment in this space with all departments back home.

### 4:15 PM - 7:30 PM - Broadcasters Clinic Exhibits Open/Exhibitors Reception

Location: Wisconsin, Michigan

Sponsored By: Wisconsin Broadcasters Association



### 5:00 PM - 6:00 PM - SBE Board of Directors Dinner

Location: Green Bay

### 6:00 PM - 10:00 PM - SBE Board of Directors Meeting

Location: Greenway

### 7:30 PM - Nuts & Bolts Session "War Stories and Your Stories"

Location: Superior

Sponsored By: Resonant Results



## WEDNESDAY, OCTOBER 27

### 7:00 AM - Registration & Continental Breakfast

Location: Lobby

Sponsored By: Wisconsin Broadcasters Association



### 8:00 AM - Fellows Breakfast (By Invitation Only)

Location: Salon C

### 8:30 AM - Broadcast Tower Failures: Causes and Cures

Location: Superior

Speaker: David Davies, ERI

Moderator: Gordon Carter



The presentation will discuss the top five reasons towers fail. An in-depth compilation of data, including a large collection of graphics

combined with mathematical explanations of these failures, demonstrates without a doubt, how the previous design standards have proven inadequate. A portion of this presentation addresses several successful methods of risk detection and reduction. Upon conclusion, it will be an undeniable fact: Had preventative measures discussed in this presentation been implemented, over 75% of tower failures could have been prevented.

### 9:15 AM - Coax Versus Coax

Location: Superior

Speaker: Steve Lampen, Belden

Moderator: Gary Mach



There are hundreds of different coaxial cables to choose from. Even when we concentrate on just 75 ohm versions, there is still a

dizzying selection. Why are there so many? How are they different? What are their advantages and disadvantages in performance, ruggedness, life, cost? Even shielding options, and shield effectiveness (transfer impedance), is a major issue. This presentation covers all of this and more including low and high-frequency applications, and the performance of connectors.

### 10:00 AM - Exclusive Exhibit Time

Location: Wisconsin, Michigan

### 11:00 AM - Lunch on Exhibit Floor

Sponsored By: Comrex



### 1:30 PM - Keeping an Eye on Your Tower and RF System

Location: Superior

Speaker: Richard Wood, Resonant Results

Moderator: Bill Hubbard, UW-Green Bay



*This presentation will include tips on what to look and listen for during a site visit, how to find RF noise sources on a tower, proper VSWR monitoring methods,*

*rigging guide lines, and changes in the EIA/TIA tower codes, along with great shots from the top down.*

### 2:15 PM - Discover How SBE Can Help Take Your Career to the Next Level

Location: Superior

(From left to right)

Jim Bernier, CPBE, CBNT, Chair, SBE Certification Committee, Turner Entertainment Networks, TBS, Inc.

Vinny Lopez, CEV, CBNT, SBE President, WSYT/ WNYS TV

David Priester, CPBE, Chair, SBE Education Committee, Ithaca College

Megan Clappe, SBE Certification Director

Kimberly Kissel, SBE Education Director

John Poray, CAE, SBE Executive Director

Moderator: Leonard Charles, Television Wisconsin Inc.



*The SBE has a host of programs designed to help members advance their careers through professional development. This session will explore the SBE Program of Certification and SBE Education Program. The presentation, delivered by national committee leadership and staff, will*

*cover the SBE University series of on-line, on-demand courses; live and recorded webinars; traditional in-person seminars and certification and recertification eligibility and procedures. Other career services, such as the recently improved SBE JobsOnline, SBE ResumeBank and SBE Bookstore, will also be discussed. SBE members have access to all of these services which, when used together, can help advance your career.*

### 3:00 PM - Break

Sponsored By: Nautel



### 3:15 PM - The Receive Side of the Digital Television Equation

Location: Superior

Speaker: Kevin Kukowski,  
Milwaukee Public Television

Speaker: Brad Eckwielen, Digitenna

Moderator: Kent Aschenbrenner,  
Milwaukee Public Television



*An open forum discussion of what we are learning about digital television reception. Topics will include signal measurement, outdoor and indoor antennas, VHF and UHF, signal amplification, antenna location, and long distance reception.*

### 4:00 PM - 5:00 PM - SBE Membership Meeting

Location: Salon E

### 5:00 PM - SBE Awards Reception

Location: Atrium

*To register for the SBE National Awards Dinner, please go online to [www.sbe.org/cal\\_conv.php](http://www.sbe.org/cal_conv.php) then scroll down to SBE National Meeting in conjunction with Wisconsin Broadcasters Association Clinic.*

### 6:00 PM - SBE National Annual Awards

Location: Salon D

## THURSDAY, OCTOBER 28

### 7:45 AM - Registration & Continental Breakfast

Location: Lobby

Sponsored By: Wisconsin Broadcasters Association



### 8:30 AM - Optimizing TV Transmitting Antennas for ATSC/MH Mobile DTV

Location: Superior

Speaker: Bill Ammons, Micronetixx, Communications

Moderator: Kevin Ruppert, WISC-TV



*Mobile TV is coming. This presentation is an under the radome look at how to design TV broadcast antennas to provide the best coverage for mobile TV. We will*

*look at some of the design rules for antennas and explore a few mobile TV projects.*



### 9:15 AM - The State of the Art of Displays

Location: Superior

Speaker: Bob Manes, Sony

Moderator: Mark Burg, Grant Media LLC



*The presentation will provide an overview of the latest display technology developments. It will cover topics such as LCD technology, Plasma, and OLED. It*

*will review the latest product offerings from most manufacturers and discuss what is on the horizon. Included in the presentation will be detailed discussion on how these work as well as state of the art.*

### 10:00 AM - Break

Sponsored By: Nautel

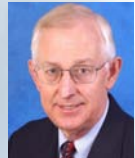


### 10:15 AM - The State of the State of Mobile TV

Location: Superior

Speaker: Sterling Davis, Cox Media Group

Moderator: Leonard Charles, Television Wisconsin Inc.



*Results of OMVC's Washington Consumer Showcase will be presented along with how the event was conducted. In addition there will be an overview*

*of the current status of the various mobile TV initiatives.*

### 11:00 AM - New Directions for Digital TV

Location: Superior

Speaker: Wayne Luplow,

Chair of the ATSC, Zenith Electronics

Moderator: Gary Mach



*With the transition to digital television rapidly becoming a distant memory, the ATSC DTV system for transmitting high-definition and/or*

*multiple program streams is well established. The new frontier for ATSC is mobile services. This presentation will review the status of ATSC Mobile DTV and related technologies currently under development. In addition, work on ATSC 2.0 - the umbrella term for next-generation services to fixed receivers - and advanced delivery of non-real-time services will be outlined.*

### 12:00 PM - Lunch

Location: Monona

Sponsored By: RCS



### 1:15 PM - The Broadband Plan

Location: Superior

Speaker: David Donovan, MSTV

Moderator: Leonard Charles,

Television Wisconsin Inc.



*This slide presentation will summarize the FCC's national Broadband Plan. Donovan will outline the Notices of Proposed rulemak-*

*ings that are scheduled to be published in the 3rd quarter of this year. The presentation will also assess the impact of reallocating up to 120 MHz of spectrum from the TV broadcast industry.*

### 2:00 PM - Impacts of 3D Television on Video Distribution and Broadcasting

Location: Superior

Speaker: Dan Holden, Comcast

Moderator: Kent Aschenbrenner,

Milwaukee Public Television



*New display technologies that are being deployed in the home are now capable of delivering a stereoscopic, three-dimensional illusion of*

*depth TV experience. This presentation will explore the end-to-end requirements from production to display technology for delivering frame compatible and full resolution 3D television. Comparison of anaglyph, stereoscopic, and auto-stereoscopic technologies will be presented. Encoding technologies, including MVC, and transport requirements for broadcast will be covered in depth.*

### 2:45 PM - 3D From Science Projects to Business Models

Location: Superior

Speaker: Mike Bergeron, Panasonic Solutions

Moderator: Bill Hubbard, UW-Green Bay



*This session will be a discussion of historical and modern techniques for 3D image acquisition and presentation;*

*including engineering hurdles to overcome; and how existing technologies can be applied to create a viable 3D acquisition system capable of delivering high quality 3D with minimal modifications to 2D production techniques and business practices.*

**Join us next year for the 2011  
Broadcasters Clinic  
October 11-13  
Madison Marriott West Hotel**

## SPONSORS



Full Compass - Audio Equipment



Nautel - Breaks & Program



Live Production Technology™  
Ross Video - Tuesday Lunch



Sony - Projector



Comrex - Wednesday Lunch



RCS - Thursday Lunch



Wisconsin Broadcasters Association

Exhibitor Reception and  
Continental Breakfasts

Resonant Results, Ltd



RF Specialists

Resonant Results

Nuts & Bolts Session  
Edible Material (Food)

## THANK YOU'S

### Cover Photo Credits:

Terry Baun, CPBE CBNT  
Educational Communications Board

Paul Meyer  
Educational Communications Board

Doug Garlinger  
CPBE 8VSB CBNT

## SPEAKERS FOR YOUR EXPERTISE!

### Clinic Committee and WBA Staff

Kent Aschenbrenner - Milwaukee Public Television

Stephen Brown - Radio Rangers, LLC

Mark Burg - Grant Media LLC

Gordon Carter - La Grange, IL

Leonard Charles - Television Wisconsin, Inc.

Greg Dahl - Second Opinion Communications, Inc.

Clif Groth - Watertown, WI

Bill Hubbard - UW-Green Bay

Vern Killion - Johnson Lake, NE

Keith Kintner - UW-Oshkosh

Gary Mach - Green Bay, WI

Jason Mielke - WCLO/WJVL

Kevin Ruppert - WISC-TV

Tom Smith - WHA-TV

Michelle Vetterkind - CAE, WBA President & CEO

Linda Baun - WBA Vice President

Mandy Endicott - WBA Administrative Assistant




## EXHIBITORS

---

*The Broadcasters Clinic Committee and the Wisconsin Broadcasters Association wishes to extend our gratitude to: The Broadcast Clinic Exhibitors and The Prize Donors*

Avid Technology, Inc.  
Broadcast Electronics  
Broadcasters General Store  
Clark Wire & Cable  
Continental Electronics Corporation  
Comrex  
Dielectric Communications  
Electronics Research, Inc.  
EVERTZ  
Full Compass  
Gorman Redlich MFG CO  
Grass Valley  
Hitachi Kokusai Electric America, Ltd.  
KATHERIN INC., SCALA DIVISION  
Joseph Electronics  
Logitek Electronic Systems  
Midwest Media Group  
Miranda Technologies, Inc.  
Nautel  
Omneon, Inc.  
RAM SYSTEMS  
RCS  
Roscor Corporation  
Ross Video  
SBE  
SONY  
Stainless LLC  
SWITCHCRAFT, INC.  
VIZRT, Inc.  
WideOrbit

*(List is inconclusive. See Exhibitors Map in your Attendee Packet for complete listing.)*



# BROADCASTERS CLINIC 2010 REGISTRATION FORM

October 26-28, 2010

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

Fees: \$130 (Any two days) \$150 (All three days)

The above fees do not include the SBE Awards Dinner. Please see below for more information.

PLEASE FILL OUT COMPLETELY

Name: \_\_\_\_\_

Organization/Station: \_\_\_\_\_

Business Address: \_\_\_\_\_

\_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Amount enclosed: \$ \_\_\_\_\_

Mail this form and your check by October 1, 2010 made payable to Broadcasters Clinic:

*To pay by credit card please complete the following:*

Name on Card: \_\_\_\_\_ Daytime Phone: \_\_\_\_\_

Billing Address: \_\_\_\_\_

Credit Card Number: \_\_\_\_\_ Type of Card: ☐ VISA ☐ MasterCard

Expires: \_\_\_\_\_ CSC#: \_\_\_\_\_

Signature Required: \_\_\_\_\_

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

**To Register By:**  
Phone: 1-800-236-1922  
Fax: 608-256-3986  
Online: [www.wi-broadcasters.org](http://www.wi-broadcasters.org)

## GENERAL INFORMATION

### DATES

Tuesday through Thursday, October 26-28, 2010

### LOCATION & ACCOMMODATIONS:

All sessions of the Broadcasters Clinic 2010 are held at the Madison Marriott West, located at 1313 John Q. Hammons Drive, Middleton. 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 Friday, October 8, 2010, while discounted rooms are being held for the clinic. The discount rate is \$109. Please specify that you are attending the 2010 Broadcasters Clinic.

### FEE

**\$130 - Any two days \$150 - All three days**  
Fee covers program materials, continental breakfasts and luncheons as indicated, refreshment breaks, and an evening reception with hot hors d'oeuvres (cash bar). Vegetarian meals can be requested by calling the WBA office at 1-800-236-1922, by **October 1, 2010**.

The WBA will need to guarantee meal counts with the hotel, therefore the WBA will NOT refund any cancellations made after **Monday, October 11, 2010**. The WBA will also invoice for all "no-shows."

### SBE AWARDS DINNER

To register for the SBE National Awards Dinner, please go online to [www.sbe.org/cal\\_conv.php](http://www.sbe.org/cal_conv.php) then scroll down to SBE National Meeting in conjunction with Wisconsin Broadcasters Association Clinic.

### INFORMATION

For further conference or exhibitor information, contact: Linda Baun, 800-236-1922, [lbaun@wi-broadcasters.org](mailto:lbaun@wi-broadcasters.org)

### REGISTRATION

To register by phone, please call: 1-800-236-1922  
Fax to: 608-256-3986  
Register Online at: [www.wi-broadcasters.org](http://www.wi-broadcasters.org)