



MIDWEST  REGIONAL

BROADCASTERS CLINIC

and SBE National Meeting

Agenda & Exhibitor's Guide | Sept. 10-11, 2024 | Madison, WI



MRBC SESSIONS

Monday, Sept. 9 Evening Reception (5-6:30 p.m.)

 Marriott Atrium

Tuesday, Sept. 10

8:30 a.m.

Emergency Communications with the Public - Before, During, and After Disasters

 Superior



Manny Centeno will share a brief background on FEMA's Integrated Public Alert and Warning System (IPAWS), share innovative resources that emergency managers can use to ensure effective alerting to their communities, and provide information on the National Public Warning System. IPAWS is America's only system for local and national emergency communications with the public.

Presented by Manny Centeno, Director of the Integrated Public Alert and Warning System or IPAWS

9:15 a.m.

RADIO | Why Worry About Your Air Chain?

 Superior



Over the past several years, Mike has reviewed AM and FM air chains, in large and small markets, and has found a plethora of problems. Not only do these problems negatively impact audio quality, they can affect Nielsen PPM encodability! Air chains inevitably degrade over time, and there are many reasons. Equipment, formats, and other conditions change. Analog to digital conversions (or digital to analog) happen. "Stuff" may have been added to the air chain over the years, and you might not even be aware of its existence. PPM encoding and EAS may have been inserted in less-than-ideal locations, and there's also the issue of mic processing, mic selection and, of course, board operators. "But," you say, "the air chain is working, so why should I worry about it? I've found some interesting problems over the years, and many are quite humorous. This talk will address locating the problems, plan to resolve the problems and the actual resolution. *Presented by Mike Pappas, Orban Labs*

TV | SMPTE 2110: The Good, The Bad, and The Ugly

 Mendota/Geneva



This presentation explores SMPTE 2110, a groundbreaking standard reshaping broadcasting. It outlines the benefits driving its adoption, such as enhanced flexibility and interoperability. However, it also addresses the challenges broadcasters face, from infrastructure complexities to interoperability hurdles. Drawing from real-world experiences, the talk reveals hidden intricacies and "dirty little secrets" encountered in implementing 2110 environments, offering practical insights for success. *Presented by Ken Stiver, Telestream*

10 a.m.

RADIO | Achieving Signal Alignment for FM and HD SFN Across Wide Area IP Networks

 Superior



IP-based WAN STLs have become standard and widespread deployment in diverse topologies has significantly lowered their cost. Consequently, broadcasters have been transitioning to different types of private and public IP-based STLs to reduce operational expenses. Despite the improved stability of IP-based STLs over the years, challenges related to impairments remain. Packet losses and varying network delays can have detrimental effect on the operation of FM and HD SFN systems. In this presentation, we will discuss various techniques and technologies that have been employed to overcome the challenges of Wide Area IP networks to successfully deploy FM and HD SFN systems. *Presented by Keyur Parikh, GatesAir*

TV | What's Up and What's New with ATSC

 Mendota/Geneva



ATSC 3.0 is growing faster than you think. Since the beginning of 2022, deployment grew by another 50 percent to reach more than 60 percent of US households, including many Top Nielsen DMA Regions. Are you up to date on the latest trends in both ATSC1 and ATSC3? From Virtual Channel, SDR to HDR, DRM, PSIP Fetch and Rebranding, workflow consolidations, as well as utilizing Cloud Native solutions for more agility and flexibility, let's discuss creative ways to elevate your broadcast strategy and obtain the key to success.

Presented by Jing Zhou, Harmonic



10:45 a.m. Break

11 a.m.

RADIO | AI in Radio 2024 - Demonstration

Superior



Last year generative AI was the new kid on the block, making interesting sentences from minimal human input, sometimes laced with an occasional hallucination. Around the same time, radio production folks started playing with what generating synthetic voices might creatively bring. Now stations are actually using generative AI to both create content ranging from copy to on-air voices for occasional ads or promos. Some are even working with pure computer-generated hosts, on the air. What's the latest in this fast-changing space? Who's doing what? What seems to be working? What does all this mean for radio's future? We'll talk about that, and a little about the history of AI, and how it first became a powerful tool for automated closed captioning in broadcast via speech to text algorithms. Then we'll jump ahead to what generative AI is, how it works and hear some real-world examples from today, and play with making some of our own AI-generated text and voices during a live demo. The audience should gain a stronger understanding of the benefits and challenges of generative AI in its many forms, and therefore how to prepare for its use. *Presented by Bill Bennett, ENCO*

11 a.m.

TV | Frequency Coordination for Program Making and Special Events (PMSE)

Mendota/Geneva



Join Gary Trenda for a discussion of frequency coordination for Part 74 Low Power Auxiliary Station (LPAS) users at broadcast and other special events. This discussion will include common deployments of Wireless Microphone, IEM/IFB, and Intercom Systems at events. We'll cover recent amendments to Part 74 of the FCC Rules for LPAS operation allowing Wireless Multichannel Audio System (WMAS) operation. We'll discuss the potential changes to frequency coordination workflows that WMAS systems could bring about. We'll also cover other PMSE industry trends and leave time for Q&A. *Presented by Gary Trenda, Sound Device*

11:45 a.m.

RADIO | A New Approach to the Design of FM Bandpass Filters for IM Product Suppression and FM Channel Combining



With the increasing congestion of the FM band with new FM translators and the potential for new interference with the FCC considering approval of zone casting, new requirements for output filtering for full-service FM stations and FM translators and boosters have been created. We will explore the requirements of these passive components for IM suppression and channel combining and present a new design that provides a much more compact configuration for these increasingly important components of the FM broadcast air chain. *Presented by Bill Harland, ERI*

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TV | Media Over IP in the Cloud

Mendota/Geneva



This session outlines broadcast operations in the cloud, mapping traditional contribution, processing, and distribution workflows to AWS solutions. We'll cover cloud concepts, best practices, production components, connectivity, latency, innovating with AI/ML, and demos of well-architected designs. Attendees will leave understanding considerations for broadcast in the cloud and the importance of the AWS Well-Architected Framework for these workloads. *Presented by Jason O'Malley, AWS*

12:30 p.m.

Combined Lunch Session: Amber Alert Panel

Superior



Chris Tarr, Wisconsin FCC SECC Chair, hosts a discussion about Amber Alerts. Amber Alerts seem to have an air of mystery about them, our guests would like to lift the veil and give station personnel an insight on how the what constitutes an alert, the chain of command, and the dissemination procedures.

Presented by (L-R) Chris Tarr, Magnum Media, Wisconsin EAS; Melissa Marchant, Wisconsin Department of Justice; Wendy Paulson, Minnesota Broadcasters Association; Sara Phelan, Wisconsin Department of Justice

MRBC SESSIONS

1:30 p.m.

RADIO | Transmission Lines, Vector Network Analyzers, and Antenna Tuning

 Superior



The session will review the useful functions of vector network analyzers and examples of transmission system analysis and optimization. *Presented by Stephen Wilde, American Amplifier Technologies*

TV | Vibration and Fatigue Criteria in the Design of Television Transmission Antennas  Mendota/Geneva



It is expected that a fatigue and vibration assessment will become part of the required criteria used to design television transmission antennas. The presentation of an analysis of representative single top mounted UHF/VHF pylon style antenna designs using the approach currently found in CSA-S37-18 Annex N [1]. The key design details examined are the slotted areas, holes, and the base flange/base flange attachment. These results for vibration and fatigue are compared with those using the current strength-based approach to show the effects on antenna design in terms of the diameters and lengths, as well as the types of materials and types of details allowed. *Presented by James Butts, Dielectric*

2:15 p.m.

RADIO | Panel: Automation Systems: Disaster Planning and Recovery

 Superior



A disaster affecting your automation system? In most cases, it's not a matter of if, but when. A roundtable discussion on how to plan for, and recover from, disasters of all types. We'll talk about the best practices for backups, equipment security, and restoration of operations.

Presented by (L-R) Al Schermeister, Beasley Media; Shane Toven, Triple Helix Technologies; Jeff Zigler, RCS; Chris Tarr, Magnum Media, Wisconsin EAS Committee Chair – Moderator

TV | UltraHD Now!

 Mendota/Geneva



Why would anyone decide to revolutionize broadcast television in the middle of a global pandemic? Ever dreamed of owning your own TV station with multiple HDR channels? Well, Anton did – and we'll cover the details, discoveries, and takeaways from deploying the nation's first UltraHD programs on an ATSC 1.0 LP digital station, K03IM-D. We'll cover program media routing and handling from initial development and testing, through to station deployment, as well as new multiplexing innovations co-developed by Anton Kapela and Steve Doll at D2D Technologies. *Presented by Anton Kapela, Channel 3 Eugene*

3 p.m. Break

3:15 p.m.

Combined Session: Digital Technology's (Continuing) Transformation of Radio and TV Broadcasting



The broadcasting industry has embraced digital technology in a big way and has been transformed by it. This transition, still underway, has been different for radio and TV; while all TV broadcasters now offer only digital over-the-air signals, the same is not true in radio. In this presentation I will touch upon various aspects of this transition, focusing mostly on radio, including trends in digital and hybrid radio, virtualization of radio's infrastructure, and regulatory topics that may impact radio operations. Also included is important information about the Broadcast Positioning System (BPS) being developed by NAB, a new technology that leverages the flexibility and ubiquitousness of ATSC 3.0 signals to provide an important and much-needed augmentation to GPS. *Presented by David Layer, NAB*

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4 p.m. Reception and Exclusive Exhibitor Time

7 p.m.

Nuts and Bolts: What Were They Thinking?

Superior

All of us here have created a project plan, manage a project, and dealt with the successes and failures that come along. No plan goes perfectly due to long lead items, change orders, manufacturing delays, pandemics, staffing issues, overzealous deadlines and acts of God. To make it successful we all have had to recreate the wheel and make it happen. Tonight, we want to hear your stories about your creativity, failures, success, magic tricks, and results. On our panel we will have representatives from the tower industry along with radio and television project managers/DOE's. Come with your stories, questions, and solutions while we feast on a traditional Wisconsin meal fit for the best in the business. *Presented by the Clinic Committee*

Wednesday, Sept. 11

8 a.m.

Site Safety - Because We All Work Alone, Even When We Shouldn't

Superior



Safety is a concern that should be at the top of mind as we go about our daily routines every day. Whether at home, in the office or at the transmitter site, the vast majority of injuries and accidents are preventable. As we cover more responsibilities with fewer resources and lower budgets, it becomes even more critical. This session will discuss some of the potential concerns, show various areas where safety and security can be easily improved and provide thoughts on how to get through our days while minimizing risk to personnel and equipment. There will be some war stories and a few, "been there, done that" examples in the process! *Presented by Jeff Welton, Nautel*

8:45 a.m.

Integrating Legacy Transmitters and Other Equipment into a Modern Broadcast Infrastructure



The modern broadcast infrastructure is often more IT based than not. In this presentation Tim will review methods he has implemented at the Cumulus Media Chicago facilities to bring 30 plus year old equipment up to a level that monitoring and control can be done with IP. We will review both commercially available and custom solutions that are or can be implemented. *Presented by Tim Wright, Cumulus*

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9:30 a.m.

Critical Backup Power Solutions

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Presentation will focus on backup power specific to the broadcast industry such as UPS systems and backup generator power. We will cover the newest product introductions over last couple years including equipment utilizing lithium ion batteries, sodium ion, and nickel zinc technologies for extended lifecycles. We will answer just about any questions related to facility design for power, specialize docking stations for maintenance, reliability/redundancy, and expandable solutions for future growth. *Presented by Thomas Lappe, C&I Power Solutions*

10:15 a.m. Lunch/Prizes/Exclusive Exhibitor Time

1:30 p.m.

The FCC and Your Station, and How ABIP Can Help

Superior



Have you ever worried about an FCC inspection of your station? There's a way to prepare and in many cases turn aside an FCC inspector if one shows up. Many state broadcasting associations, including the WBA, have partnered with the FCC to create the Alternative Broadcast Inspection Program (ABIP). In this session, WBA's inspectors Clif Groth and Tom Weeden describe how ABIP works and how it can benefit your station. *Presented by (L-R) Clif Groth and Tom Weeden, WBA ABIP inspectors*

MRBC SESSIONS

2:15 p.m.

Physical Security and Access Control at Tower Sites

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In this session, we will explore new ways of securing and monitoring remote broadcast facilities with modern access control and physical security technology. While lock boxes and padlocks have traditionally been used to control access to tower and transmitter sites, they offer none of the advanced features that modern systems can provide. As telecommunications sites across the country continue to be hit with copper theft and vandalism, more security measures are needed at remote broadcast tower/transmitter sites. In the past, it might have been cost-prohibitive to install robust physical security systems at small, remote broadcast sites; however, with the advancement of cloud-based access control, coupled with the development of broadband infrastructure, the investment and cost of ownership for these systems has decreased, while their feasibility and simplicity has increased. In partnership with Motorola, Joda Media is integrating Motorola's new cloud-based security suite at telecommunications sites around the country, and we'll be demonstrating a fully functional system on a model door. We will explore various options available to enhance security at remote broadcast sites, including a variety of systems and components from different manufacturers. *Presented by Ty Magnum, Joda Media*

3 p.m. Break

3:15 p.m.

Roundtable: Succession Planning

Superior



A critical concern to everyone in this industry is: "Who will be the next person to fill this job?" The very livelihood and future of our businesses depends on answering that key question. This interactive session will explore participants' experience with planning to fill critical positions at a media/broadcast company. Best practices, ideas, thoughts, fears, and concerns are all part of the discussion you will have with your colleagues in the industry. Come prepared to share what you know and what is on your mind in this engaging session. Fear not! We are all in this together. *Presented by Bill Hubbard, WBA Duke Wright Media Technology Institute*

4-6 p.m.

SBE

SBE Annual Membership Meeting & National Awards Reception

We will be joined this year by SBE National, which will be holding a membership meeting and an awards event.

Green Bay/Milwaukee/La Crosse Salon A, B, C, E, F, G, H

A UHF repeater is available for use during the Midwest Regional Broadcasters Clinic. The N9BDR repeater frequency is 444.375 MHz, with a PL of 123.0. All amateur operators are welcome. Please keep in mind that if there is severe weather, you should clear the repeater and let that traffic have priority. A special thanks to Ralph Pellegrini, N9BDR, for the use of his system.

SNAPSHOTS FROM LAST YEAR

