2020 VIRTUAL BROADCASTERS CLINIC

& SBE Upper Midwest Regional Meeting

More information and registration available on the WBA website:

wi-broadcasters.org

Registration fee: $100

Follow the Broadcasters Clinic on social media:

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Tuesday, October 13

9:45 a.m. - Opening Remarks

10 a.m. - NAB Technology Update

David Layer, Vice President, Advanced Engineering, National Association of Broadcasters

2020 has been an unprecedented year in the midst of a global pandemic and its impact on our society. NAB has experienced its share of impact with the cancellation of its in-person events (including the 2020 NAB Show) and delayed entry into NAB's new home at 1 M Street SE, but despite all this, the Technology Department has been very productive working with its broadcaster and technology partners. This session will focus on technical work being done by the National Radio Systems Committee (NRSC, co-sponsored by NAB and the Consumer Technology Association) as well as the NAB's own Radio Technology Committee, which has two active subgroups focusing on hybrid radio and next-gen HD Radio architecture. Also included will be a short tour of the new NAB building including the new Technology Lab and Tech Showcase.

10:45 a.m. - Unchain my air chain: The move to the virtual air chain – from microphone to the transmitter. What is realistic, what are the challenges, and where are we going?

Mary Ann Seidler, Telos Alliance The Telos Alliance

With the advent of cloud-based and virtual solutions, the world of broadcast engineering and facility design has changed rapidly. Everything from station automation, to the console, to audio processing is moving to the cloud. How well is this working? We will explore what type of solutions work in this environment and what needs to be improved. We will look at real life implementations that broadcasters have created using this technology, and what hardware is still needed. As with all technology shifts, the benefits also bring new challenges such as latency and the perils of cloud-based solutions. We will examine some of the issues the move to the cloud has created, and how broadcasting may change as a result.

11:30 a.m. - Break

11:45 a.m. - On the Air from the Cloud

Bill Bennett, Media Solutions Account Manager, ENCO Systems Inc.

This presentation will introduce real-time, live Cloud backup, playout and Disaster Recovery from your studio's on-air playout systems. We'll discuss cyber-attacks, studio-to-Cloud synchronization, user interfaces, streaming options, and other ways to keep DR seamless.

12:30 p.m. - Working from Home

Chris Crump, Comrex Corporation

March started out like just about any other month. The major difference was the constant drumbeat about the virus outbreak from China in the news cycle. By about Thursday, March 5, radio stations around the globe were having emergency planning meetings as programming and engineering teams were trying to plan for all of the "what ifs." Fast forwarded to the present day and everything is basically upside-down and backwards. With everyone broadcast home now, most station managers assume that station engineers have LOTS of extra time on their hands for all of those back-burner projects. The reality is that station technical staffs now have to service 10 to 20 remote sites (salespeople and air staff's homes) in addition to their pre-COVID-19 duties. This session will cover topics such as helping your remote employees get organized, gearing up on a budget and best practices for broadcasting from home in the "new normal."

6 p.m. - Nuts and Bolts Session: What to Expect When You are Expecting…New Equipment and Facilities

Jeff Welton, Nautel; John Bisset, The Telos Alliance
Moderator: Bill Hubbard

This interactive session will begin with a presentation by Jeff Welton detailing the planning and preparation process for new installations. John Bisset will share his expertise on tips and hints and all attendees will have the chance to add to the discussion. Although you are on your own for brats and beer, this year we encourage you to join the conversation, share your ideas, learn from each other and have some fun along the way.

Wednesday, October 14

9:45 a.m. - Opening Remarks

10 a.m.
Ajit Pai, FCC Chairman

10:45 a.m. - What Opportunities, Threats and Compliance Issues at the FCC Should the Broadcast Engineer be Looking for?
David Oxenford

Broadcast engineers operate in a regulated environment – with the FCC and other government agencies watching what your station does, and providing opportunities through new technologies and threats through spectrum changes and regulatory obligations. What opportunities, threats and compliance issues at the FCC should the broadcast engineer be watching? Experienced Washington DC attorney David Oxenford will give you an update on the Washington DC policy and regulatory issues to which you should be paying attention.

11:30 a.m. - Break

11:45 a.m. - The Internet at 50
Pat Christian and Chris Lund, UW-Madison

The Internet has reached middle age, and it's become a critical part of everyone's lives, including broadcasters'. We'll go over how it got started, how it's evolved, take a behind-the-scenes look at how it all works, and wrap it up with a look at how Wisconsin Public Radio is leveraging a combination of networks to get their content on air.

12:30 p.m. - Repack Punch List
Jeremy Ruck, Principal Engineer, Ruck & Associates

Jeremy Ruck has been fully involved across the United States with TV Repack and all that involves design, testing and construction. Jeremy will review what he has encountered with test data, construction challenges, and results from the field.

1:15 p.m. - Solo Transmitter Visits – Safe and Secure
Jeff Welton, NAUTEL

These days, between distancing and just having fewer technical staff in the industry, more and more engineers are in a position where they need to make solo visits to remote locations, typically the sort of places where the big volts live (the transmitter site). While most folks make these visits with safety in mind, the goal of this presentation is to provide a refresher, to keep safe working habits and conditions foremost in everybody's mind and to give some tips on things that people may not always consider in the process of performing the daily routines. The goal is to provide a set of tools that give attendees what they need to work safely, without slowing things down unnecessarily – because we all know that nobody is any less busy this year than they were last year!

2 p.m. - Closing Remarks

7 p.m. - SBE Meeting
Gary Trenda is going to present RF Coordination at Major Sports Events on behalf of Sound Devices.

Thursday, October 15

9:45 a.m. - Opening Remarks

10 a.m. - ATSC 3.0 Today and Tomorrow

Madeleine Noland, ATSC President

ATSC President, Madeleine Noland will discuss the Today and Tomorrow of ATSC 3.0. As with any transition, success of next-generation TV powered by ATSC 3.0 can be predicated on delivering a great initial consumer experience that can be built upon for many years to come. Noland will describe details of the basic TV service profiles that are being contemplated for initial service offerings. Also, recognizing that ATSC 3.0 was 10 years in the making, Noland will talk about the future of the broadcast industry and how ATSC members are laying the groundwork for success in the years to come.

10:45 a.m. - Near Field Drone Measurements of Broadcast Antennas

Nicole Starrett, Engineering Manager, Dielectric

In order to ensure that a broadcast antenna is operating as designed, installed correctly and reaching the intended audience, a field verification study of its radiation characteristics should be performed. Before the recent development of drone measurements, user surveys, ground-based measurements or helicopter measurements were the only options for verification. Drone measurements are limited by FCC flight authorization, ground reflections and multipath. This paper will describe how these limitations can be overcome, providing an accurate and cost-effective alternative to ground-based field strength studies.

11:30 a.m. - Break

11:45 a.m. - Where Are We Going, And How Do We Get There

John Schilberg, Director of Product Development & Technical Marketing for Utah Scientific

Over the past 40 years, the world of radio and TV broadcasting has changed from analog, to serial digital, and now to IP. Years ago, we carried three main tools – the Xcelite R181, the R3322, and the P12S. The only “password” required was knowing how to operate the rack tray cover. Times have changed, and now we’re working with signals carried on copper or fiber optic cables and function at blazing speeds! Join us for a quick trip back and a look forward on what we might expect in the years to come.

12:30 p.m. - Cloud Delivery of NextGen TV/ATSC 3.0 Services to Transmission Sites using Secure Reliable Transport (SRT)

Joe Seccia, GatesAir

Many aspects of media management and delivery today are readily accomplished in the cloud. Whether public or private, migration to such delivery is done for several reasons, e.g. flexibility, upgradeability and certainly reduced expense. However, in the TV space, there remains Studio-to-Transmitter Link architecture that is based on legacy thought of both the studio and transmitter sites under common ownership and management. NextGen TV makes use of the concept of a Scheduler/Broadcast Gateway at the studio site that sets up and controls the service and PLP properties of the NextGen TV emission from the transmitter site. As the repack has wound down and NextGen TV winds up, it may be very advantageous to break this 1-to-1 studio and transmitter linkage. Especially given the myriad of channel share scenarios to successfully move forward with NextGen TV. This presentation will discuss a proposed implementation of the NextGen TV Scheduler / Gateway function in the cloud, enabling secure, flexible and cost-effective delivery to any transmitter site with an appropriate internet connection.

1:15 p.m. - Final Remarks

SPEAKERS

John Bisset

John Bisset got into broadcasting after hooking up two turntables to a Lafayette mike mixer and a wireless mike transmitter and playing DJ. He's worked as a jock, operations manager, chief engineer, and contract engineer for 50 years. He has also worked for a number of companies in various sales positions. Probably best known for his Workbench Column in Radio World, John is SBE Certified, serves on the SBE Education Committee, and represents the Telos Alliance as Western Regional Sales Manager for Studio Products. A big believer in educating engineers, he's a popular speaker at both state broadcast conventions and SBE meetings, and is the recipient of the SBE's Educator of the Year award.

Bill Bennett

Bill Bennett joined ENCO Systems in early 2019 after a sales engineering position with the German manufacturer Lawo. Previous to that, he was a long-time remote broadcasting engineer, consultant, and project manager overseeing venue technical setup and operations for five Olympics and countless U.S. broadcasts spanning the NBA, NHL, NFL, and more. He exercised the right-brain as an executive producer and new media business development executive at QVC, and owned a laser display production company (where he got to play with really big lasers).

Pat Christian

Patrick Christian has worked in the telecommunications industry in public and private practice for over 30 years. In his current role as an Assistant Director at the University of Wisconsin-Madison Division of Information Technology (DoIT), Pat is responsible for network architecture, budget and operations of over 3300 miles of network in 7 states in support of academic, administrative and research activities. These networks include:

- UW-System Network (SysNet) - interconnecting UW-System facilities in WI to each other, the Internet and special purpose research networks
- Broadband Optical, Research, Education and Research Network (BOREAS-Net) - a regional optical network interconnecting upper Midwest universities to worldwide scientific instruments, labs, computation and data storage resources
- Metropolitan Unified Fiber Network (MUFN) - a greater Madison metropolitan area education, government, healthcare and commercial fiber network

Pat chaired a Big10 athletic conference committee to build and operate the Big10 Academic Alliance (BTAA) OmniPoP, a network exchange in downtown Chicago, and was its first operations chair. He also co-chaired a national higher education committee to redesign a nationwide higher education network (Internet2) peering (network interconnect) service. In addition, Pat wrote an $8.86 million dollar grant, developed and is secretary of a non-profit, public/private community-based network organization called MUFN (www.mufn.org) that operates over 200 miles of fiber-optic network in the greater Madison metropolitan area.

Chris Crump

Chris Crump began his professional radio career in 1987 as a producer at WHYT-FM in Detroit before his work as an editor for the Mediabase Research radio trade magazine Monday Morning Replay. He went on to serve as a Remote Broadcast Engineer then Creative Services Director for Capitol Broadcasting (and subsequently Paxson Communications) in Orlando as well as the Ron & Ron Radio Network in Tampa. Since 1996 he has served in sales capacities for Euphonix, Symetrix and Klotz Digital. He has been Director of Sales & Marketing for Comrex Corporation since 2004. Chris, his wife Seval and 15-year-old daughter Zara, live just north of Atlanta where he is a CBNE member with SBE Chapter 5.

David Layer

David Layer is vice president, advanced engineering in NAB's Technology department. David has been with NAB since 1995 focusing primarily on the radio technology and standards setting area. David's principal responsibilities include serving as a project manager for technology projects being conducted by PILOT (formerly NAB Labs), and as principal administrator of the NAB Radio Technology Committee, a group of technical executives from NAB member companies that advises NAB on technology development and technical regulatory matters. Currently, David is the chairman of the RadioDNS Steering Board and is the NAB representative to the RDS Forum. He is also vice-chair of the North American Broadcasters Association (NABA) Radio Committee. He is a senior member of the IEEE and a member of the Association of Federal Communications Consulting Engineers (AFCCE). David was the recipient of Radio World's 2015 Excellence in Engineering Award and was recognized by Radio Ink Magazine in

November 2010 as among the top ten best engineers in radio. In 2014 David received the Consumer Electronics Association Technology Leadership Award. The IEEE BTS awarded David the Matti Siukola Memorial Award for the Best Paper of both the 2014 and 2018 IEEE Broadcast Symposia.

Chris Lund

A recovering software developer, Chris Lund has spent 12 years in the data center industry—terminating cables, racking servers, schlepping batteries, tending chillers, chasing electrical gremlins, and now serves as the lead engineer for the University of Wisconsin–Madison's data center efforts, where he oversees all technical aspects of the design, operation, and evolution of the university's major, mission-critical data centers that house infrastructure serving the university, the state of Wisconsin, and beyond. A large portion of Chris's work is building partnerships with and supporting those that carry out the university's core missions of research, teaching and learning, and dissemination of knowledge.

David Oxenford

David Oxenford is a partner at the Washington DC law firm Wilkinson Barker Knauer LLP. He has represented broadcasters for over 35 years on regulatory, transactional, and copyright issues. He is the Wisconsin Broadcasters Association Washington DC counsel and also represents a number of other state broadcast associations, the National Association of Media Brokers, and a number of digital media companies. David is a regular speaker at industry conferences and the principal writer of the Broadcast Law Blog, which covers legal issues of importance to media companies.

Madeleine Noland

Madeleine Noland is the President of the Advanced Television Systems Committee Inc. (ATSC). Widely respected for her consensus-building leadership style, she chaired the ATSC technology group that oversees the ATSC 3.0 next-generation broadcast standard before being named ATSC President in May 2019. Previously, she chaired various ATSC 3.0-related specialist groups, ad hoc groups and implementation teams since 2012. A 15-year industry veteran, Noland held key technology management and standards roles at Backchannelmedia Inc., Telvue Corp. and LG Electronics. She received TV NewsCheck's "2019 Futurist" Women in Technology Award and was named one of 2018's "Powerful Women in Consumer Technology" by Dealerscope magazine. In 2016, she received the ATSC's highest technical honor, the Bernard J. Lechner Outstanding Contributor Award. She graduated cum laude from the University of Massachusetts.

Ajit Pai

Ajit Pai is the Chairman of the Federal Communications Commission. He was designated Chairman by President Donald J. Trump in January 2017. He had previously served as Commissioner at the FCC, appointed by then-President Barack Obama and confirmed unanimously by the United States Senate in May 2012. Chairman Pai's regulatory philosophy is informed by a few simple principles. Rules that reflect these principles will result in more innovation, more investment, better products and services, lower prices, more job creation, and faster economic growth.

Jeremy Ruck

Jeremy Ruck is Principal Engineer with Jeremy Ruck & Associates in Canton, Illinois. He has worked in broadcasting for nearly 30 years, with the last 25 in RF consulting. He is a graduate of Bradley University with the Bachelor of Science in Electrical Engineering degree, and is a licensed professional engineer in the State of Illinois. He holds membership in the Association of Federal Communications Consulting Engineers (AFCCE), the Institute of Electrical and Electronics Engineers (IEEE), the Society of Broadcast Engineers (SBE), and the Society of Motion Picture and Television Engineers (SMPTE).

John Schilberg

John Schilberg is the Director of Product Development & Technical Marketing for Salt Lake City-based manufacturer Utah Scientific, Inc. Originally from Milwaukee, John has worked in television engineering at stations in Montana, Texas and Oklahoma, and in broadcast equipment sales with vendors and manufacturers including Masstech and Dejero. John is based in the Dallas, Texas area and has been with Utah Scientific since March 2018.

Joseph Seccia

Joe Seccia is Principal Architect for the product management group of TV transmission products area at GatesAir. Joe received his B.S. in Electrical Engineering from Michigan Technological University in 1990 and his M.S. in Electrical Engineering from National Technological University in 1997. Since joining GatesAir, formerly Harris Corporation's Broadcast Division, in 1990, Joe has held positions of increasing and varied capacity within GatesAir's engineering and product management groups including solid-state amplifier design and digital signal processing. Joe has been a key part of GatesAir's digital television development beginning in 1995, most recently leading GatesAir's technology evolutions in software configurable exciters that support all popular worldwide DTV standards as well as high efficiency transmitter platforms. Joe is an active participant in ATSC activities and is a 33 year member of the IEEE. Joe is a registered professional engineer in Michigan and holds five U.S. patents.

Mary Ann Seidler

Mary Ann Seidler works together with the Solutions group at the Telos Alliance, which focuses on creating specialized solutions for broadcasters worldwide. She has been involved in broadcasting since she was 11 and a family friend gave her a crystal radio kit to put together. She's worked with Mr. Foti and the gang at Telos for many years, starting with setting up their European office and on from there. She is currently a consultant for Telos. She is also the owner and CEO of First Light Broadcast, an engineering sales consultancy company. Telos Alliance and MultiCAM systems are her major clients. Mary Ann is a HAM radio operator and a proud member of the SBE.

Nicole Starrett

Nicole Starrett joined Dielectric as an Electrical Engineer in 2014 upon her graduation from the University of Maine with dual bachelor's degrees in Electrical Engineering and Mathematics, and has played an instrumental role in transitioning the company to more efficient design and production processes. Her implementation of modernized, software-based has accelerated production schedules and increased operational efficiencies – both of which paid dividends through the busy spectrum repack period. These experiences made her a natural fit to champion the new technology of utilizing drones for near-field measurements of broadcast antennas.

Nicole primarily focuses on TV antenna design and testing at Dielectric's Raymond and Lewiston facilities, with a secondary concentration on the R&D roadmap for future products. Her embrace of software-based antenna design has significantly reduced electrical design time, resulting in quicker deliveries for customers.

Nicole is also responsible for some of Dielectric's most recent cutting-edge innovations, including the original pattern work and modeling for Dielectric's highly popular WB line of auxiliary antennas. She was also active in the simulation and development of two unique Dielectric products: the DCRU high-power, multi-station FM antenna; and the APT panel TV antenna with its unusual, variable vertical component. All three innovations help Dielectric remain competitive and forward-looking in a rapidly changing industry.

Jeff Welton

Jeff Welton has worked with Nautel for almost 30 years. He is currently the Nautel Sales Manager for U.S. Central Region. Previously he spent 16.5 years as a Nautel Customer Service Technician, was involved in the 2015 MA3 field tests with NAB Labs and has performed hundreds of transmitter site visits and field calls. A regular speaker and contributor on broadcast engineering, Jeff has been recognized with the following awards: the 2020 NAB Radio Engineering Achievement Award; 2019 APRE Engineering Achievement Award; and 2018 SBE Educator of the Year Award. He's also contributed to the most recent edition of the NAB Engineering Handbook and performs several presentations a year in the area of broadcast engineering.

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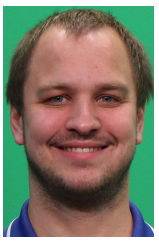
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CONGRATULATIONS LINDA!

WBA Vice President Linda Baun is retiring after 14 years and a long career in broadcasting. Thank you, Linda, and best wishes for a happy retirement!

THANK YOU!

- Board of Directors of the WBA
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- Michelle Vetterkind, WBA President and CEO
- Liz Boyd, NCSA/PEP Coordinator
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We look forward to next year's Broadcasters Clinic, Sept. 8-10, 2021 at the Madison Marriott West