

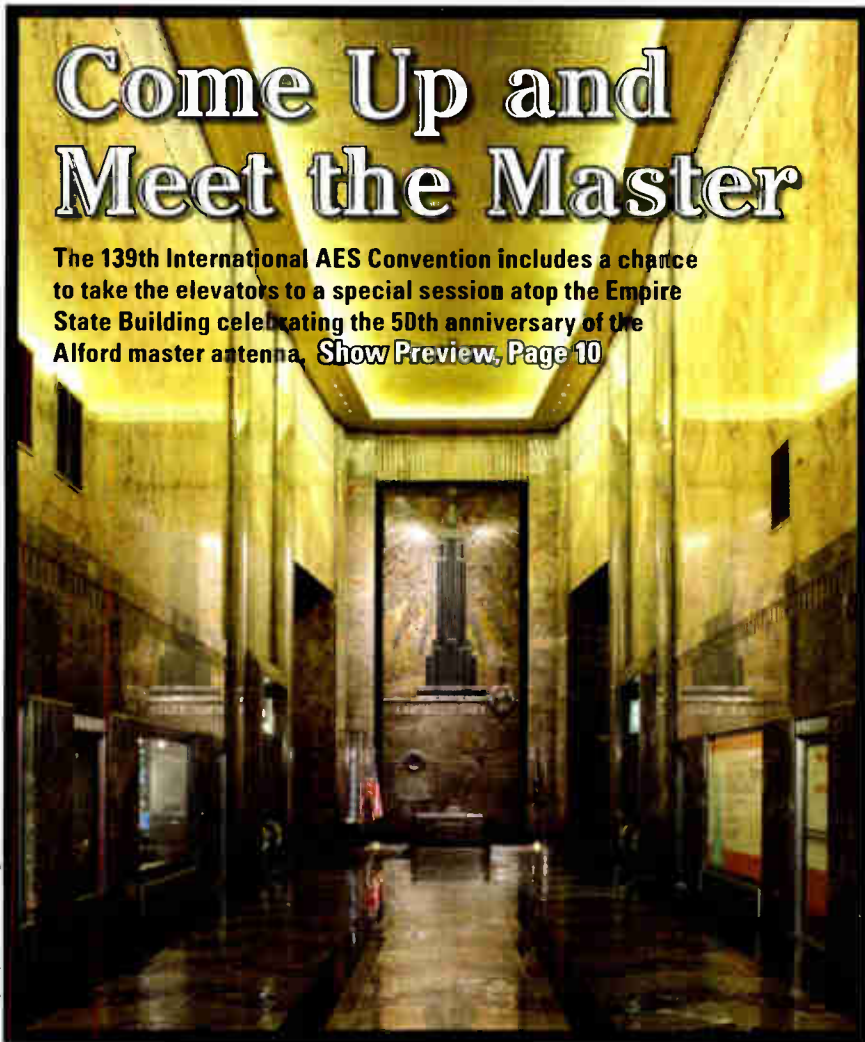


RADIO**WORLD**

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Come Up and Meet the Master

The 139th International AES Convention includes a chance to take the elevators to a special session atop the Empire State Building celebrating the 50th anniversary of the Alford master antenna. [Show Preview, Page 10](#)



Courtesy Empire State Building

Massey Set to Lead Engineering Society

Entercom technologist is a big believer in certification and career adaptation

NEWSMAKER

BY RANDY J. STINE

GREENVILLE, S.C. — Jerry Massey is disappointed if he doesn't learn something new every day in his job. He's pretty sure most broadcast engineers feel the same. The fast-evolving technology of the broadcast industry seems to suit him well.

Massey, director of engineering for

Entercom Greenville in South Carolina and corporate regional engineer southeast for Entercom Communications, begins his tenure as president of Society of Broadcast Engineers in October with a plan that focuses on education, retention and recruitment. He will be inducted as president during SBE's annual membership meeting in Madison, Wis., succeeding Joseph Snelson.

SBE is the professional organization of radio and television engineers and

(continued on page 6)



Jerry Massey stands in the Technical Operations Center of Entercom Greenville. "My message to SBE members is to become certified. If I can do this beginning midlife, you can too."

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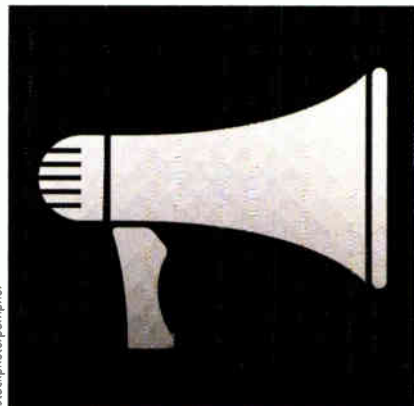
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EAS Workshop Notes Challenges in Access

FCC event discussed the necessity of a next-generation nationwide alerting system



ALERTING

BY SUSAN ASHWORTH

What if we knew then what we know now?

That was one of many questions asked during an August FCC workshop promoting wider use of the Emergency Alert System. Panelists talked about the 10-year anniversary of Hurricane Katrina and the necessity of improving the nation's warning systems.

The workshop explored how to improve the usefulness of EAS for state and local emergency managers, and how to improve the accessibility of alerts to people with disabilities.

Access is also a key issue for multilingual communities, said David Honig, cofounder of the Multicultural Media,

Telecom and Internet Council. MMTCC submitted a letter to the FCC the day prior to the workshop, lamenting a lack of multilingual emergency communications during Katrina. The group is pushing the commission to mandate that radio and TV broadcasters provide multilingual alerts in the case of an emergency.

RADIO AS BEACON

Radio in particular has the capacity to serve as a metaphorical beacon of light when disaster hits, Honig said.

During Katrina, some radio stations remained on the air after the disaster, even after television, wireless and wireline communications went down. The MMTCC filed a petition with the FCC in 2005 to create a plan of action so that one station in a market will serve as a so-called designated hitter to broadcast alerts in key languages if all other stations are kicked off the air, Honig said.

The FCC workshop followed a June Notice of Proposed Rulemaking that proposed to address problems experienced during the first nationwide test of EAS in 2011. Proposals in that rulemaking would require broadcasters to file test result data electronically, as well as ensure alerts are accessible to all members of the public, including those with disabilities.

During the three-hour meeting, workshop panelists said that the myriad new technologies at our fingertips —

texts, email, social media — have to be integrated into a cohesive nationwide alerting system. While a tweet sent from a passerby to a radio station about an accident has the power of immediacy, it also has the power potentially to undermine efforts of police enforcement to provide accurate information.

"We have an opportunity to tie in and integrate [different] capabilities so you have a single platform enabled by the PSAPs [public-safety answering points], who are the first people you call," said workshop panelist Jay English, director of APCO International, a public safety communications firm. "We're closer than ever to make that integrated approach a very real capability."

"SERIOUS GAPS"

The workshop also discussed problems with alerting people with disabilities via the current EAS.

"There are serious gaps in alerting," said Zainab Alkebsi, policy counsel for the National Association of the Deaf. She offered several examples in which alert systems failed to alert deaf individuals in an emergency situation. "We can no longer rely on only those traditional options of radio and television," she said, pointing to media like text, email and social media that have become de facto alternatives to receiving emergency information.

Tapping into those new media is a priority for the multilingual community, too. "Ten percent of our state has English as their second language ...

(continued on page 5)

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We Need Better Revitalization Than This — "The idea of making a 250-mile move area would do little more than cause a super-inflation of prices on existing translators, some of which were worth only a nominal amount as 10-watt operations in the reserved band located in the middle of nowhere." So writes Larry Langford, owner of WGTO(AM) and W266BS in Cassopolis, Mich. Read his commentary at radioworld.com/langford.



Five Questions: Jim Leifer — "I started my career by accident. I was lost looking for directions. I pulled up to a radio station to use the phone, and to get directions." Learn more about the new SBE vice president at radioworld.com/leifer.

A Little Engineering Humor — Did you see the engineering cartoon that made us groan? Check it out at radioworld.com/resist.



The FAA's Drone Drill: An Introduction — "Let's be honest: you want a drone, just like the rest of us. ... But, also like the rest of us, you'd probably like to use your drone for something more than purely recreational purposes, and you've heard that the FAA expects you to jump through a number of hoops before you can do so." Laura Stefani of law firm Fletcher Heald & Hildreth writes at radioworld.com/droneaw.



Drone: iStockphoto/Alexandri Dubovitskiy; tower: iStockphoto/Robin Olimb; smiley: iStockphoto/MudhMania

PubRadio Responds to Audience on Move

Jacobs Media partnered with PRPD on its seventh annual Public Radio Tech Survey

Podcasts. Social. The mobile revolution.

Public radio has been in the middle of them all; now a survey provides some fresh insights into how this part of our industry is evolving.

The information comes from Jacobs Media, which partnered with the Public Radio Program Directors Association to release its annual Public Radio Tech Survey recently. It reflects input from some 19,000 listeners to 54 public radio stations.

I always find the Jacobs research insightful, whether the company is studying habits of listeners to public radio, rock formats or radio at large. Jacobs also publishes a useful Tech Survey in the spring, around NAB Show time, that I've shared with you before.

Jacobs takes pains to emphasize that this survey does not represent all public radio listeners or each station's total audience, but the results provide context for important industry decision-making. Note that most respondents are members

of stations' email databases; the responses were gathered online and weighted by market size.

Here's how Jacobs summarizes its findings. The commentary in these bullets is directly from Jacobs Media:

- *The "why" of public radio:* It's about learning, credibility and objectivity, and a deeper perspective into news that drives ongoing public radio usage. Each of these values is mentioned by at least three-fourths of PRTS7 respondents.
- *On-demand:* Weekly usage of video streaming platforms like YouTube and Netflix is higher among public radio listeners than streaming audio channels like Pandora and Spotify.
- *The rise in podcasting:* Nearly one-fourth (23 percent) of public radio partisans agree they're listening to more on-demand content from their favorite public radio stations and networks. And more than four in 10 (44 percent) say they've listened to a podcast or on-demand audio in the past month.

Among millennials, three-fourths (76 percent) have accessed on-demand audio or podcasts in the past 30 days.

- *And the winner is ...:* The most popular podcast among public radio respondents is "This American Life," followed by "Wait Wait ... Don't Tell Me!" "Radio Lab," "Serial" and "Fresh Air."
- *The mobile revolution:* Nearly eight in 10 (78 percent) PRTS7 respondents own a smartphone, while six in 10 (61 percent) carry a tablet.
- *The NPR One app:* Among those who have downloaded it, the NPR One app

FROM THE EDITOR

Paul McLane

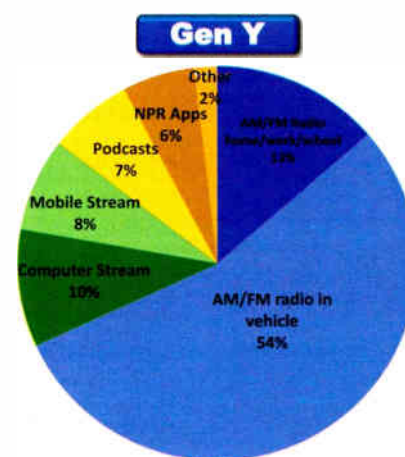


is used frequently, receives strong performance ratings, and appears to be driving more public radio listening.

- *Word of mouth:* When it comes to recommendation, public radio stations continue to excel, although this year's Net Promoter Score is the lowest since the PRTS studies began. Still, the NPS level of 64 is exceptional, led

(continued on page 5)

Among public radio's Millennials, 30% of consumption occurs via digital channels and platforms.

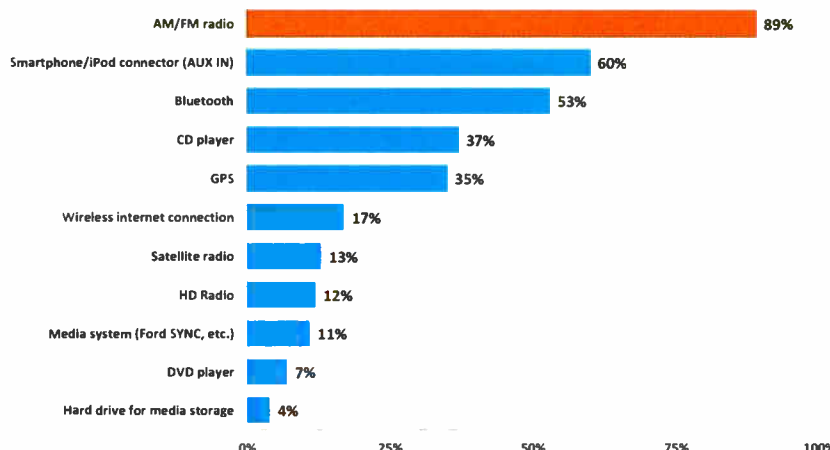


Traditional: 67%
Digital: 30%



Public radio continues to make the digital transition; about a fifth of weekly usage is on digital sources. Meanwhile, as this chart shows, 30 percent of consumption among public radio's millennials occurs via digital channels and platforms.

Of those in the market for a new car in the next year, 9 in 10 say an AM/FM radio is very important.



"Very Important" features among the 10% of respondents planning on buying/leasing a new vehicle in next 12 months



It's important to remember that these results are based on a pool of people who are by definition likely to value radio, by the nature of this survey. Still, radio managers will find this chart encouraging as well as informative.

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Paul Kaminski

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and that is expected to triple in volume over the next 10 years," said panelist Lillian McDonald, executive director of ECHO Minnesota, an emergency readiness communication organization in St. Paul. "A new system we would like to propose is [one where] smart technology and multilingual technology [can work together] to help get warnings out to those different language groups."

The 10-year anniversary of Hurricane Katrina was a timely reminder of the consequences of inadequate multilingual EAS alerts.

"For the over 100,000 Louisianans not proficient in English, their world went dark that day and remained that way for many days," MMTC wrote to the FCC in August. "The penalty for an

PUBLIC RADIO*(continued from page 4)*

by women, as well as members of Generations X and Y.

- **Socializing:** Nearly eight in 10 (78 percent) public radio devotees are in the social space, led by Facebook and LinkedIn. But these platforms vary considerably by public radio formats, generation and gender.
- **Big news:** By 4 p.m., one-third (33 percent) of public radio listeners say they're very informed about the big news stories of the day. Most credit their local public radio stations and NPR new reports, but younger fans are more apt to have gotten their news and information from social media and national news websites.
- **Car radio rules:** Of those in the market for a new vehicle in the next year, nearly nine in 10 (89 percent) say an AM/FM radio is very important. However, many are also interested in new in-car technology, including Bluetooth and an AUX IN connector.

Jacobs Media President Fred Jacobs stated in the announcement, "The public radio audience is on the move, increasing its use of digital media. Fortunately, the system is answering changing audience needs with podcasts like 'Serial' as well as mobile applications like the NPR One app."

The survey was released in conjunction with the PRPD's Public Radio Content Conference in Pittsburgh in late September.

You can read more details at www.jacobsmedia.com and see more slides like the ones shared here.

NEWS

adult's or child's lack of English proficiency must never be death."

The letter referenced the role of radio as a conduit of multilingual EAS information when other stations are pushed off the air after an emergency.

"In many cities with large Latino, Korean, Chinese and Vietnamese com-

said. In an emergency, "We really rely on radio rather than TV. Even if a TV station is still on air, if the power goes out, most TV sets don't run on batteries.

"We think that stations have a bed-rock obligation to serve the problems, needs and interest of the community they serve. You have the tools to do it.

The penalty for an adult's or child's lack of English proficiency must never be death.

- MMTC

munities, few or no stations are broadcasting in those languages," the MMTC letter said. "There is a clear consensus that only 100 percent ubiquitous, free local radio can always be counted upon to provide life-saving information at the most critical of times."

The MMTC is hoping the FCC will act soon on the 2005 petition, which asked for emergency broadcast procedures for multilingual alerts. "We want the commission to ensure that all radio and TV markets have a station that provides multi-language alerts," Honig

you have been licensed with the extraordinary power to do that to the exclusion of all others."

The August workshop also discussed the benefits of adding additional elements of the FEMA Integrated Public Alert and Warning System into a national EAS system as well the benefits and challenges of the Next Gen 911 program, which involves the sending of text-to-911 messages.

Later this year, an FCC task force will offer recommendations on ways to further improve the reach of EAS.

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MASSEY

(continued from page 1)

people who work in related fields; it has approximately 5,100 members and more than 100 chapters.

NEED FOR KNOWLEDGE

Massey, 68, noted both the pace of change as well as the expansion in platforms that come under the purview of SBE members.

"Just 10 years ago, about all broadcast engineers had to be concerned with was the studio and transmitter site. Today we have HD signals, streams, a wide variety of IT office, studio and transmitter circuits and programs," Massey said. "The quest ahead for SBE will be to support our membership through these changes."

Things were perhaps simpler when Massey began his career in 1973 at WFBC(AM/FM/TV) in Greenville. He

remains with the same station group after 42 years.

In hindsight it seems clear he was destined for a career in radio — his first word as a young toddler was "radio," according to his parents. However, he

and got a tremendous education as a Ground Radio Communications Equipment Repairman. I spent four years in the Strategic Air Command and studied for my FCC First Class License."

Being settled into one location for

According to his parents, Massey's first word as a toddler was "radio."

started out studying chemical engineering major at the University of South Carolina; and his first five years at WFBC were spent on the TV side.

In 1969, during the Vietnam conflict and in his fourth year at USC, Massey was informed he was up to be drafted. Instead, "I chose to join the Air Force

so long hasn't deterred Massey from advancing his training and education — with the help of SBE — which happens to be the focus of his plans as president.

"Going forward, broadcast engineers will have more and more duties added to their charge. While other station, cluster and regional jobs may in time be

consolidated or trimmed, it will be the broadcast engineer that will be needed to keep operations of these new technologies functioning."

Radio and TV face more technology changes that are still being developed. The quest for SBE, he said, will be how to support membership throughout the changes.

"Our main objective will be of course providing the educational webinars and courses that will aid in training members for new technologies," Massey said. Broadcast engineers need to learn how to manage and support new platforms."

IT-based technologies will continue to dominate broadcast, and the transition to IP technology isn't slowing, Massey said. "Everything now seems to have some IT base to it. That includes the basic units of consoles, mic processors, editing equipment, EAS systems,

(continued on page 8)

NATIONAL PRESIDENTS OF SBE



Jerry Massey is the 29th president of the Society of Broadcast Engineers. His predecessors, according to www.sbe.org:

2013-15

 Joe Snelson, CPBE, 8-VSB

2011-13

 Ralph Hogan, CPBE, DRB, CBNT

2009-11

 Vincent Lopez, CEV, CBNT

2007-09

 Barry Thomas, CPBE, CBNT

2005-07

 Christopher H. Scherer, CPBE, CBNT

2003-05

 Raymond C. Benedict, CPBE

2001-03

 Troy D. Pennington, CSRE, CBNT

1999-01

 James "Andy" Butler, CPBE

1997-99

 Edward J. Miller, CPBE

1995-97

 Terrence M. Baun, CPBE, CBNT

1993-95

 Charles W. Kelly Jr.

1991-93

 Richard Farquhar, CPBE

1989-91

 Bradley Dick, CPBE

1987-89

 Jack McKain, CPBE

1985-87

 Richard Rudman, CPBE

1984-85

 Roger Johnson, CPBE

1983-84

 Doyle Thompson, Sr., CPBE

1981-83

 Ron Arendall, CPBE

1979-81

 Robert Jones, Sr., CSBE

1978-79

 James Hurley, CSBE

1977-78

 Robert Wehrman

1975-77

 Glen Lahman

1973-75

 James Wulliman, CPBE

1971-73

 Robert Flanders, CPBE

1970-71

 Lewis Wetzels, CPBE

1968-70

 Al Chismark

1966-68

 Charles Hallinan, CPBE

1965-66

 John Battison, P.E., CPBE

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MASSEY

(continued from page 6)

STL relays and transmitters." HD Radio developments, too, are of high interest to SBE membership, Massey said.

For seasoned broadcast engineers, all this means constant study and learning to adapt to those changes, he said.

"The public has more options than ever in obtaining their news and entertainment. For the broadcast industry, this means adapting and providing those new and ever-changing means of access. It's not the status quo anymore," Massey said.

The SBE's Government Relations Committee continues to track the shrinking spectrum for wireless mics and Broadcast Auxiliary Service operations, he said.

"We have filed comments on the FCC's rulemaking regarding wireless mics. Wireless mics are a staple in the broadcast industry and especially for TV for in studio and remote broadcast, so it's a big concern."

In addition, SBE's large membership of TV engineers has its eyes on ATSC 3 and spectrum repacking.

Those interested in reading SBE's filings on wireless mics and BAS operations can visit the SBE website at www.sbe.org.

Even the Voltair processor/PPM ratings controversy could present teaching opportunities for SBE. "It may be along the lines of proper placement, alignment, monitoring and problem resolution of encoders and processors that are providing the ratings data to the air signals," Massey said.

A NOO TO RON

One early career influence was Ron Rackley, principal with duTreil, Lundin and Rackley Inc. Massey credits Rackley for everything he knows about AM directional antennas. When Massey started at WFBC, he was partnered with Rackley, then a student at Bob Jones University in Greenville.

"We worked on the station's AM directional system. We did field measurement including partial proofs. What a great time to learn from an eventual leading authority on AM directional systems," Massey said.

Massey today oversees broadcast engineering aspects in Greenville for

WFBC(FM), WROQ(FM), WSPA(FM), WTPT(FM) WYRD(FM) and WORD/WYRD(AM). Nielsen ranks the Greenville-Spartanburg metro as market No. 59 for ratings purposes. Its metro 12+ population is just over 924,000, according to Nielsen.

As part of the regional engineering team at Entercom, Massey assists other clusters in the southeast with capitalization and implementation, as well as disaster preparedness and disaster implementation and recovery when necessary. He reports to Entercom's DOE

John Kennedy.

Massey said he is set to lead SBE by example as he steps into the presidency this fall. He was active in establishing SBE Chapter 86 in Greenville and diligent in continuing his education and earning certifications. "I am a Certified Professional Broadcast Engineers (CPBE) with specialties in AM Directional Systems (AMD), Digital Radio Broadcasting (DRB), Digital TV (8-VSB) and a Certified Broadcast Network Technician (CBNT).

"So my message to SBE members

is to become certified. If I can do this beginning midlife, you can too. Do it for yourself and do it to show others that you are capable and certified as a broadcast engineer." He is also a member of the American Radio Relay League and the Blue Ridge Amateur Radio Society.

Massey and his wife Norma have three grown children and live in Simpsonville, S.C.

"I am very thankful to have a wife who is supportive of my busy career. For a broadcast engineer that is a must," Massey said.

NEWSROUNDUP

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TRANSLATORS: Two past commissioners — former Acting Chairman Michael Copps, a Democrat, and former Commissioner Robert McDowell, a Republican — urged the FCC to let more AM stations apply for FM translators. Separately, NAB attorneys met with FCC staff to press the case and push back on the notion that a translator window would constitute "free" spectrum for AM operators, a sentiment expressed a few days earlier by Chairman Tom Wheeler.

CONTEST RULES: The FCC modernized its broadcast contest rules, which had been in place since 1976 and required broadcasters to disclose specific terms of any contest over the air and in their entirety. The report and order now allows stations to publicize contest rules via a website. Stations will be required to broadcast the URL periodically and in a way that allows a consumer to find the information easily. Information must be maintained online for at least 30 days after the contest. Read the new rules at <http://tinyurl.com/rw-contestrules>.

PROGRAMMATIC: The first spots aired in a test of an ad buying exchange called Expressway from Katz, due to launch nationally early next year. Entercom provided inventory in Boston and Buffalo. Katz Radio Group represents 3,000 stations as agent for national spot inventory and is owned by iHeartMedia. Working with advertiser



GEICO and media services agency Horizon Media, Katz announced

what it called the first live programmatic transaction for spot radio. STRATA, which makes software for media buying and selling, built connections for Expressway from Katz to integrate with its systems; its clients include Horizon Media. Horizon and Katz placed the buy and "will monitor the delivery and performance of the campaign through a cloud-based platform powered by Jelli," maker of a cloud-based ad delivery platform to be integrated across stations.

PARTNERSHIP: NAB Labs entered into a corporate partnership with 1776, a Washington-based startup hub that, according to a release, provides resources and networking connections for new companies in government-regulated industries. The membership complements NAB and NAB Labs initiatives like Futures Park, NAB Futures and Sprockit, it said. Over time NAB Labs has invested in companies like NextRadio, OTT media technology company Sync-

bak and, most recently, online and mobile engagement platform Antenna.

MESNIK: After 25 years with Beasley Media Group, Vice President of Corporate Communications Denyse Mesnik announced her intention to transition to a consulting role. Soni Dimond takes over her responsibilities.

PRESERVATION: The Radio Preservation Task Force announced its first national conference, Feb. 25-27 in Washington. The task force is part of the Library of Congress's National Recording Preservation Board.

JIM WHITE: Jim White, chief engineer of WFMT(FM), Chicago, died in Evanston, Ill. Earlier he worked at what was then WMET(FM) and became heavily involved in the redesign and overhaul of the RF combiner at the John Hancock



Jim White

Center. His passion for RF also led him to create Chicago Radio Engineers, a consulting firm.

Everett C. Parker



United Church of Christ

such as the Federal Communications Commission.

MOVING: 305 Broadcast LLC relocated its U.S. headquarters. The broadcast equipment distributor remains in Miami but moves to a 5,000-square-foot facility. The new address is 2561 Northwest 74 Ave., Unit A-16, Miami, FL, 33122. The company is owned by transmitter manufacturer Elenos.



Denyse Mesnik

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AES Show: Streaming on My Mind

Master FM antenna visit at Empire is a highlight of the broadcast sessions

BY BRETT MOSS

The 139th International AES Convention is upon us, Oct. 29–Nov. 1, at its East Coast home, the Jacob Javits Center in New York.

The show's audio scope easily can fill the time of any visiting broadcast engineer. An exhibition floor busy with equipment to ogle, fascinating and educational sessions, tutorials, workshops and tours make a trip to New York worthwhile (finding accommodations is a whole 'nother matter).

Keeping with the times, there'll be a strong number of sessions focusing on streaming and IP delivery, notably in the Broadcast and Streaming Media track as well as a dedicated Networked Audio track.

HIGHLIGHTS

Broadcast and Streaming Media track Chairman David Bialik said sessions will "discuss issues from all phases: production, transmission, reception and audience experience." Events not to miss, he said, include the 50th anniversary of the FM Master Antenna on the Empire State Building and a session on production of "The Prairie Home Companion."

Here are some highlights from the Broadcast and Streaming Media track, with details as of press time.

Thursday Oct. 29

"Streaming Audio from the Cloud," 2:15–3:45 p.m. Former NPR Labs guru John Kean will lead a panel in looking at the whole toolbox of Internet delivery tools — streaming, podcasts, file delivery, etc.

"Loudness for Streaming," 4–5:30 p.m. Mastering engineer Bob Katz moderates a panel that includes Kean, Thomas Lund, Scott Norcross (Dolby Labs), Rob Byers (American Public Media) and Adrian Wisbey (BBC FM Services). They'll look at the uneven levels problem across multiple media forms and discuss the loudness war among streamers. Can the "Wild West" of streaming be tamed?

Friday Oct. 30

"Audio and IP: Are We There Yet?" 9–10:30 a.m. Steve Lampen poses big questions: What is a broadcaster and what is the medium of broadcasting? He notes that Internet distribution is trying to replace broadcast but asks whether it can complete the effort. His panel includes Tony Peterle of WorldCast Systems, David Josephson of Josephson Engineering and Kevin Gross of AVA Networks.

"Audience Measurement for Stream and Broadcast," 10:45 a.m.–12:15 p.m. Streaming is one thing, but how does one

measure the recipients of the streams? Ratings are crucial to broadcasters, but what about solid numbers for streaming? The NAB's David Layer leads a panel to take up those vital questions.

"Audio for Adaptive Streaming — Understanding HLS-DASH, HTML5," 3:15–4:45 p.m. Adaptive streaming? Is it important? If your operation is streaming content, then, yes, it is. Representatives from Dolby Labs, DTS, Fraunhofer, Adobe and others will be on hand to explain.

Saturday Oct. 31

"Integrating Mobile Telephony and IP in Broadcast," 3:15–4:45 p.m. The Telos Alliance's Kirk Harnack will examine the evolving methods of delivering audio from remote to studio.

On Friday, Oct. 30, 1:30–3 p.m., a detailed look at how "The Prairie Home Companion" is created, featuring members of its production and engineering staff.

In a similar "inside dope" vein for TV will be Ed Greene's "Mixing for Telemedia in the 21st Century," Oct. 30, 5–6:30. Greene, who'll also deliver a lunchtime keynote earlier in the day, is the mixing engineer for "The Price Is Right" and other TV shows.



IF YOU GO

What: 139th Annual AES Convention

Where: Jacob Javits Center, New York

When: Oct. 29–Nov. 1

How: www.aes.org/events/139/

How Much: Advance all-access registration is \$550 for non-members until Oct. 15; member discounts and various registration options are available including one-day passes and exhibits-only

High on the agenda for the radio broadcast engineer should be the tour of WNYC, the public radio broadcaster, Oct. 30, 1–3 p.m. It is a technical tour and space is limited. Other tours of interest include Avery Fisher Hall and the Thomas Edison Museum in West Orange, N.J. Both are on Oct. 31.

Last, SBE certification exams will be held Nov. 1, 2–5 p.m.

It should be noted that, as of press time, details for many sessions were still being finalized, so checking the AES show website (www.aes.org/events/139/) is a worthwhile endeavor.

EMPIRE MASTER FM

A special Oct. 29 session at the Empire State Building celebrates the 50th anniversary of the installation of the original FM master antenna.

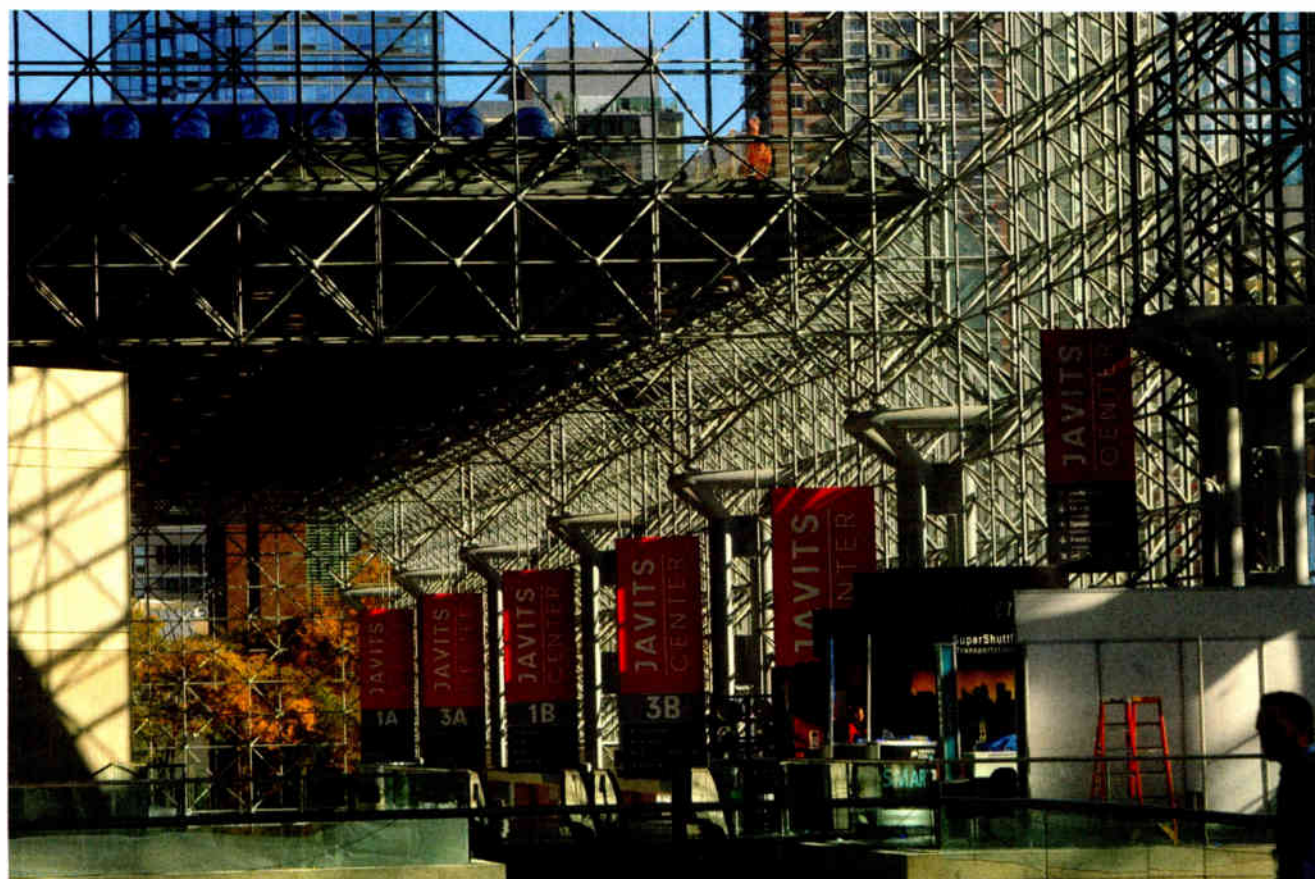
The invitation-only event is hosted by Bialik and co-sponsored by the Society of Broadcast Engineers. Scott Fybush, Radio World contributor and well-known "tower guy," will moderate a panel on the topic. There will be a tour of the historic broadcast site and an anniversary cake is rumored.

Tickets are limited. Due to space limitations, reservations are required. Interested parties can sign up starting Oct. 28 at the AES Tech Tour Desk in the Javits Center.

Bialik said, "This event will bring AES to new heights as we meet on top of one the tallest broadcast facilities in the world to discuss the history, technology and the future."

The Empire State Building FM master antenna, developed by Andrew Alford and Frank Kear, was the first of its kind, allowing for the use of a single mast by multiple stations via proper

(continued on page 12)



Courtesy AES

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AES*(continued from page 10)*

A view of the top of the Empire State Building as seen in 2008. The top of the spire is 1,454 feet above ground. The original Alford master FM antenna consists of two rings of T-shaped metal elements, visible below the base of the antenna mast.



arrangement of smaller antennas. That made it ideal for multi-user transmission from facilities with limited space, such as the top of buildings. The original 1965 master antenna is still installed at Empire and serves as a backup.

Though this event celebrates the master antenna, Empire's history with radio and TV goes farther back. An NBC show aired on Christmas Eve 1930, even before the building was finished. On Empire's opening night in 1931, NBC broadcast an RKO program from the 86th floor, according to the building's website. Regular television broadcasts date to 1939; and in July 1950, New York Mayor William O'Dwyer, RCA Chairman David Sarnoff and others drove the first rivets into the base of the broadcast tower.

Looking beyond the broadcast and streaming tracks ...

ALL ABOUT AES67

For those wanting to earn their AES67 spurs, the Networked Audio track is the place to be. It'll offer numerous sessions, but the gold mine will be Saturday, Oct. 31 when three sessions are available.

"Benefits of AES67 to the End User" starts off the afternoon, 1:30–2:30 p.m. That will be followed by "How to Get AES67 into Your Systems/Products" at 3:15–4:45 p.m. For that session Andreas Hildebrand of ALC NetworX will lead a group of manufacturing reps on what can be done with AES67. While not wholly germane for the radio broadcast engineer, it will offer a glimpse into what's coming down the pike.

Ending the day, 5–6:30 p.m., is "How Will AES67 Affect the Industry." Sunday offers a continuation of the theme with "AES67 Interoperability Testing," another equipment-oriented session and one that promises to have some practical use for the radio broadcast engineer. It will reference the October 2014 Plugfest in Munich and outline the upcoming November Plugfest at NPR. Kevin Gross of AVA Networks will chair; panelists include Andreas Hildebrand and Greg Shay of The Telos Alliance.

FUN WITH RECORDING

It's a dirty AES show secret that the Recording and Mastering track often has the sexiest sessions. Check these out.

Hang out with Grammy-winning producer Tony Visconti, Trident Audio legend Malcolm Toft and others for "Great British Recording Studios," Oct. 30, 5–6:30 p.m. "Some of the most important and influential recordings of all time were created in British studios during the 1960s and 1970s — iconic places like Abbey Road, Olympic, Trident, Decca, Pye, IBC, Advision, AIR and Apple. This presentation will unravel the origins of the so-called

'British Sound' and celebrate the people, equipment and innovative recording techniques that came out of those hallowed halls, including rare photographs, videos and musical examples."

If you want to rub shoulders with more celebrity engineers and producers, Val Garay will be at the show for "In Conversation With Val Garay — A Master Class," Oct. 31, 11:30 a.m.–1 p.m. "In this Master Class, Mr. Garay takes you behind the console for an in-depth look at making hit recordings and working with top-name artists, while discussing his revolutionary recording techniques in detail. Some of the classic recordings to be presented include 'Bette Davis Eyes,' for which Mr. Garay won the Record of The Year Grammy as a producer/engineer, Linda Ronstadt's 'You're No Good,' and tracks from James Taylor's acclaimed 'JT' album."

Or just bathe in the celebrity vibe with "Raw Tracks 2.0 — Anatomy of: On-Set Recording 'Nashville' — Keeping It Real," Oct. 31, 3:45–5:15 p.m. This covers the behind-the-scenes techniques used by the TV show's sound crew to make live music a part of the show's drama.

AUDIO GEEKS STEP FORWARD!

The AES show also has fascinating tutorials and workshops for the dedicated audio pro.

"Evolution of Electronic Instruments," Oct. 29, 9–10 a.m. From Les Paul's "Log" to today's electronic audio chameleons, what's next on the electronic instrument front?

"Help, I Have a Tape Machine! (Redux)," Oct. 30, 2–3 p.m. For the true keeper of the analog flame, join several tape machine connoisseurs and users in this tape machine lovefest.

"Educating Your Clients on the Vinyl Process," Oct. 30, 3:15–4:15 p.m. Vinyl is hot! Wanna be a real live, old-fashioned record mogul?

"Recording the Modern Big Band," Oct. 31, 9–10:30 a.m. Join Al Schmitt, Leslie Ann Jones and others on this discussion about matching modern recording technology with live retro music.

"Saul Walker — The Rocket Scientist in the Recording Studio," Oct. 31, 12:30–2 p.m. Besides being the mind behind some of API's best studio equipment, Saul Walker has also worked on spectrum analyzers for the U.S. Navy and NASA.

"Righting a Wrong — Distortion, from Recording Accident to Rock and Roll Requirement," Nov. 1, 9–10:30 a.m. It's the enemy of recording except when it's the friend of recording. What to do with distortion?

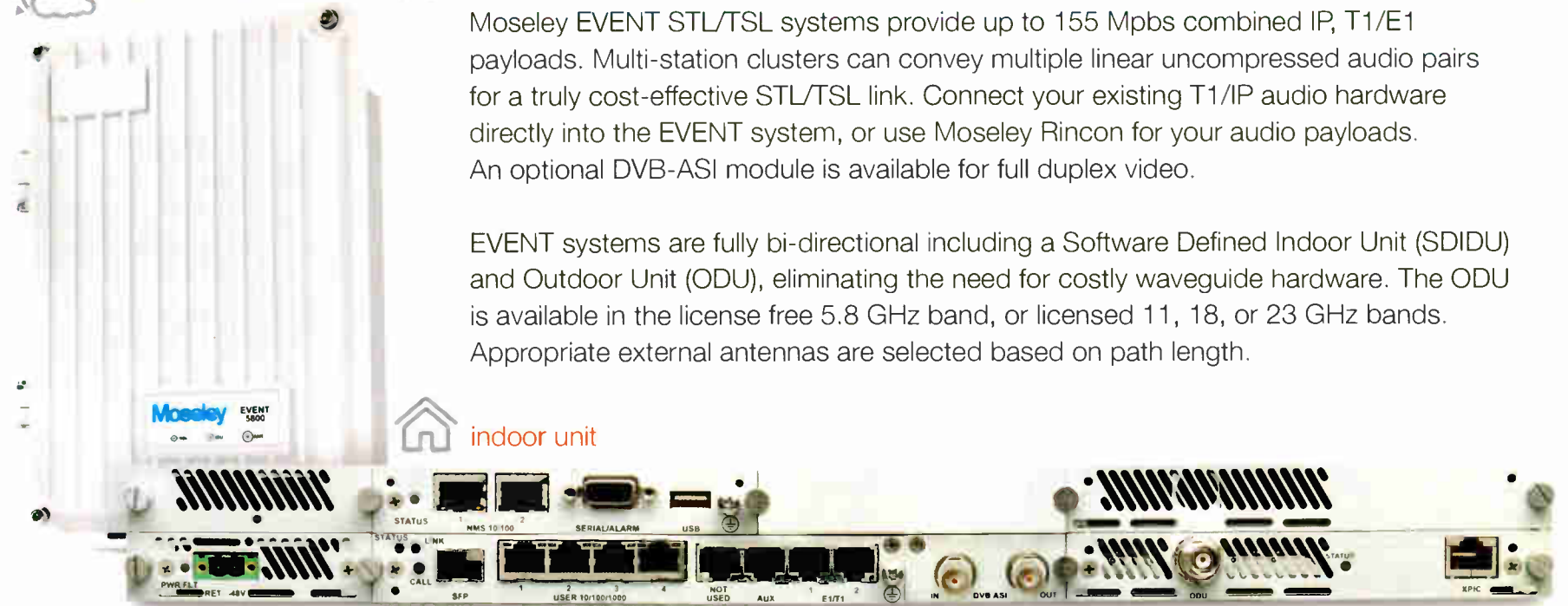
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WORKBENCH

by John Bisset

Read more Workbench articles online at radioworld.com

Contract engineer Tim Walker says his station's 1 kW AM transmitter had been in reliable service for 13 years but

then went off the air one day, displaying a "High B Minus Voltage" fault. When he reset the fault detector the failure recurred.

Several days of swapping circuit boards and modules and replacing suspect components ensued. But he discovered the culprit when a station employee

noticed small arcs as the transmitter was operating. The problem was in the junction between the output network enclosure box and the ground lug bolt, intended to "RF ground" the enclosure securely. This bolt can be seen in Fig. 1. Close examination revealed pitting where the metal surfaces met.

With a turn of less than one-eighth rotation on the companion nut and lock washer, Tim restored the transmitter to reliable service. Sometimes, he

gate and wandered into the parking lot, taking up residence under the program director's car.

Rick needed to close the gate but didn't want to leave them in the parking lot where they had no food or water supply. He decided to get a broom and chase the ducks out.

If you have tried this, you're already laughing. It didn't take long for ducklings to scatter all over the parking lot. Rick even brought in reinforcements in the form of the rest of the engineering crew plus a production staff member — all literally herding ducks.

They decided to grab the ducklings to get them into a box because even those

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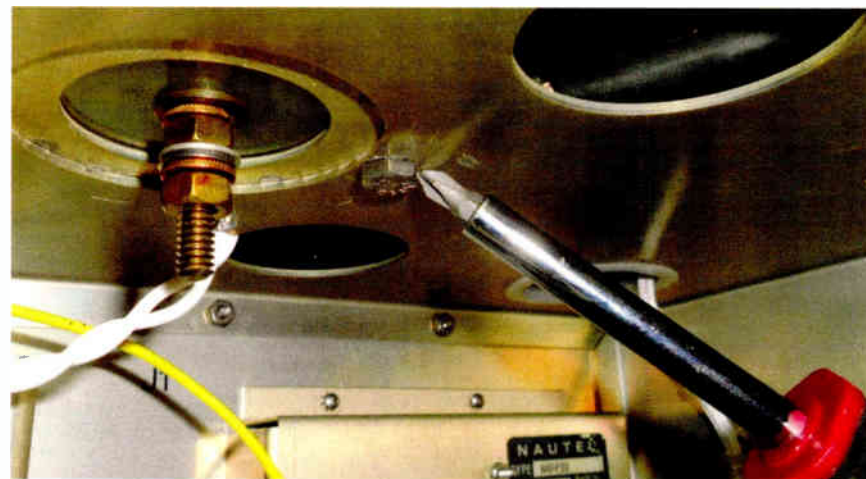


Fig. 1: A loose RF ground bolt could keep your transmitter off the air.

concludes, the little pebbles in the roadway are the ones we trip over.

The transmitter in this case was a Nautel NDI, and I remember learning at a Nautel User's Group session years ago that tightening the hardware in these solid-state transmitters is an important maintenance procedure. This is good advice for equipment of all brands. If you haven't adopted this maintenance task for all your equipment (transmitters, couplers and phasor components), you should do so.

Loose hardware also can cause AM directional antenna parameter drifting or instability. So before you start cranking on the phasor, make sure all component connections are tight.

Crawford Broadcasting Chicago Engineering Manager Rick Sewell recently chronicled an interesting engineering problem in his department's Local Oscillator newsletter.

Coming back from lunch, Rick noticed that the automatic back gate was stuck open — one more thing to handle before getting to his desk and the real duties of his day.

Before he could even reach the gate, though, a mother duck and eight of her ducklings took advantage of the open

that were shoed outside of the fenced parking lot kept coming back in to try to find their mother. And Mama was not even inside the fence any longer because she was too busy dive-bombing everyone as they tried to rescue her babies. For some reason, a couple of other species of birds took turns diving after the staff as well.

Ultimately all eight ducklings were reunited with Mama outside the fence. Hopefully, that's where they will stay.

Rick's story suggests a new category for our Broadcast Engineering Badge program: Radio Duck Herding.



And while we're on the subject of Engineering Experience Badges, TV Studio Supervisor Brian Urban of Austin Community College writes to suggest another, gleaned from his contract engineering years: a badge for successfully moving "x" number of studios in just "y" number of days because someone forgot to (a) renew a lease, (b) change the move-in date when the construction completion date changed, (c) inform the engineer that the building had been sold and the premises must be vacated in "y" days or (d) any similar circumstance. Many of us

(continued on page 20)

NEW

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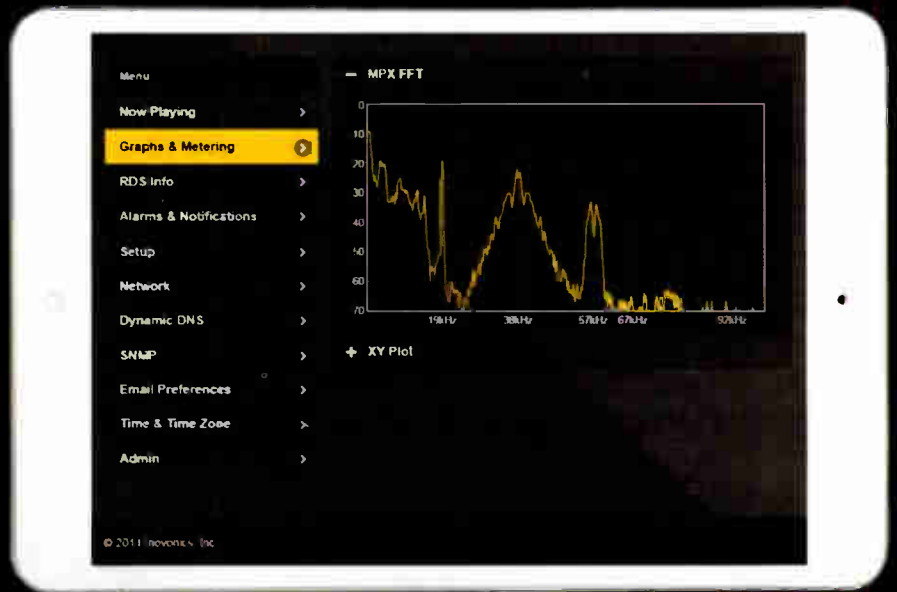


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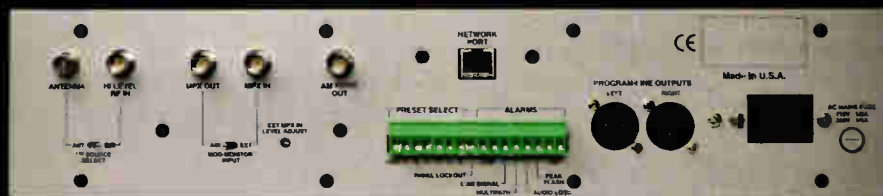
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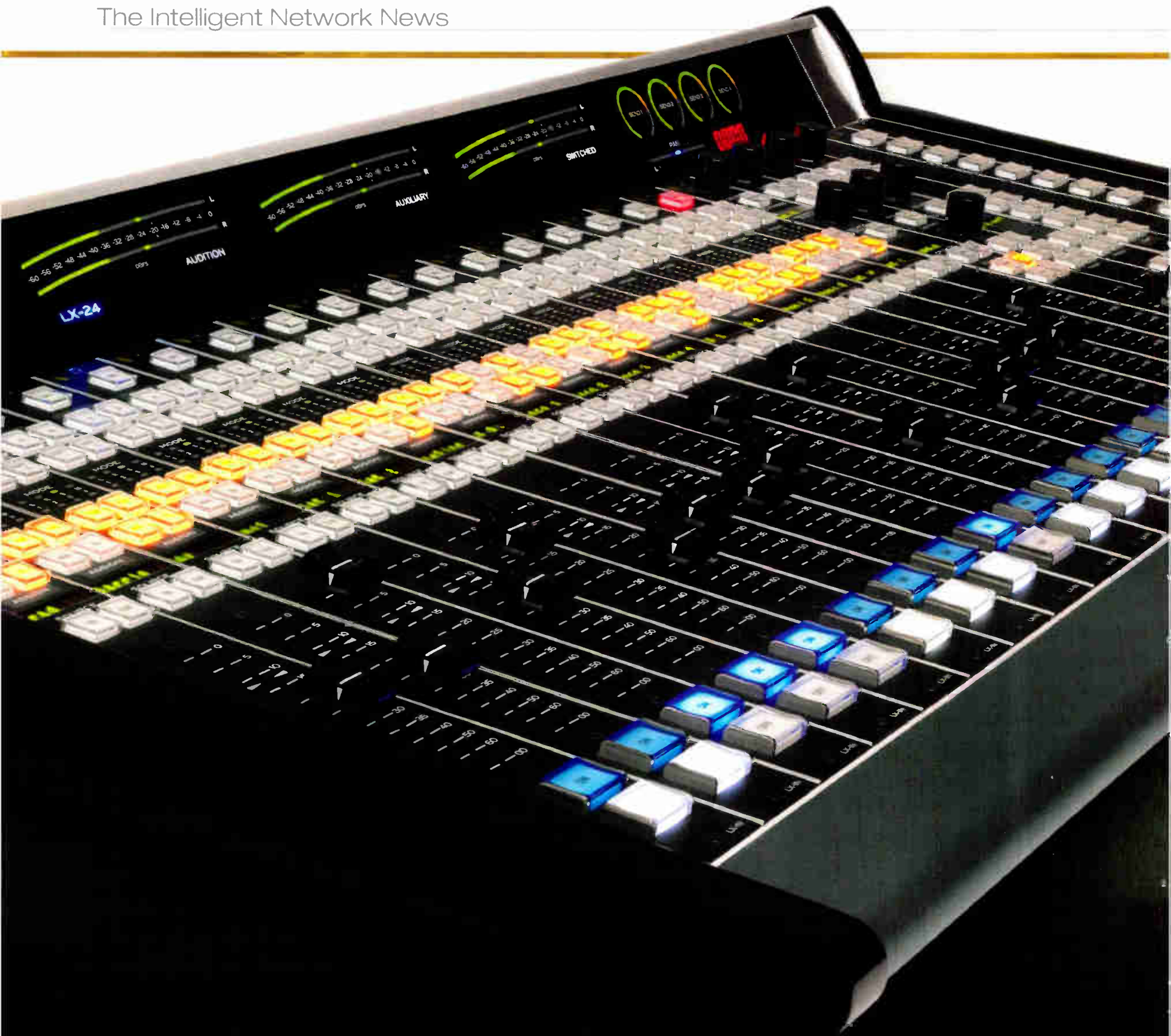


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5 things you need to know about this audio standard.



AES67 is everywhere. It's in every major audio network, including our WheatNet-IP, which means that you'll be able to transport audio between all these systems and other devices and peripheral gear that are connected to them. This IP audio transport standard was ratified in 2013 by the AES X-192 task force, of which Wheatstone was a member.

But, AES67 is by no means a complete interoperability standard. It doesn't provide for discovery and control, both of which are needed for any kind of interfunctionality to take place. These standards are in the works, but in the meantime, turning devices on and off, controlling peripheral gear from the console, signaling when a source is ready for air play, and controlling the playout system with a fader – these are all functions of WheatNet-IP and similar audio networks. In the case of WheatNet-IP, for example, a single Ethernet cable carries the real-time audio stream as well as network and device control messages and other metadata. AES67 covers the audio streams only.

With all this in mind, here are straightforward answers to the more common questions our engineers receive on AES67.

For the entire story... INN27.wheatstone.com

New Studio?

Heaven Forbid You Forget the Elevator.

It's easy to lose track of the many details of a new studio project. Let us take a moment to remember

Edificio Intempo, the 47-floor skyscraper built in Spain that was said to be missing one important detail. Elevators.

The good thing about being in the audio network and console business is that we get to tour more than our share of broadcast studios from around the world. Our Director of Sales Jay Tyler has been in no less than 3,000 broadcast studios in his 20+ years at Wheatstone, and he has seen it all.

Here are a few things Jay, along with Studio Technology's Vince Fiola, who builds broadcast studio furniture, has noticed lately.

For the entire story... INN27.wheatstone.com



Network Edge: Engineers Vote BEST of SHOW at IBC!

At IBC, judges are comprised of engineers and industry experts who spend a great deal of time poring over every considered product before they choose a winner. So, it's great news when they select your gear! This year, we are proud to have won **the NewBay Media Best of Show Award from Radio World International** for our **Network EDGE**, which lets you use IP wireless radios to establish STLs (and more)!

For the entire story... INN27.wheatstone.com



Pictured left to right: Wheatstone's Kelly Parker, Raffaella Calabrese (Publisher, Radio World International), Marguerite Clark (Editor in Chief, Radio World International) and Wheatstone's Jay Tyler

AM Redux

Beyond FM translators

AM gets a bad rap. Fortunately, recent changes to FCC regulations are helping some AM operators turn things around with the use of FM translators.

We're firm believers in translators to extend coverage, which explains why we've just come out with the FM-25 audio processor for this purpose (we also make a step-up version, the FM-55). But we're also firm believers in AM radio and began to wonder why so little in the way of new technology is available to adequately process the AM signal. So for our engineers Jeff Keith, Steve Dove and Mike Erickson, it was back to the drawing board – and Mike's large collection of AM radios...

For the entire story... INN27.wheatstone.com



Dan Slentz Sayz 'Thanks'

LPFM advocate predicts new 100W will rank in ratings.

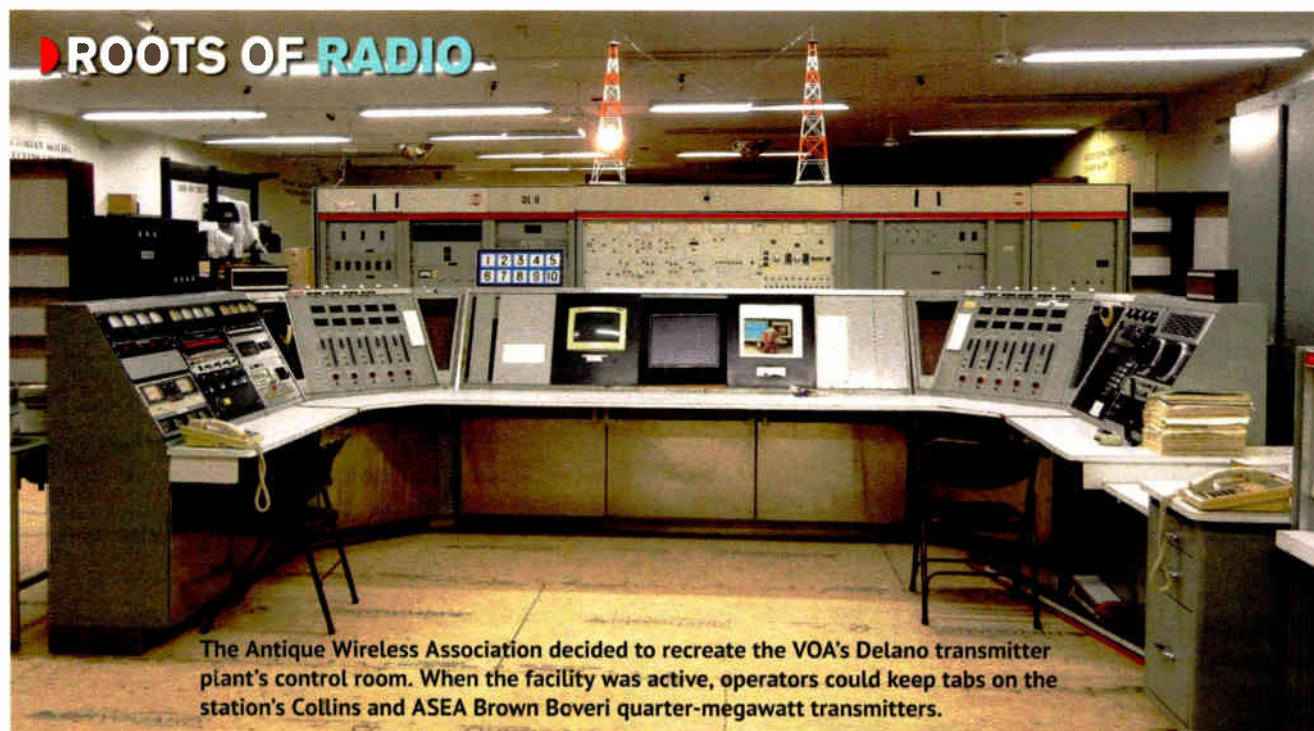
We received an email from Dan Slentz, an engineering consultant who has become a tireless advocate and industry friend to LPFM. He recently flipped the on-air switch to new WDPE low-power, non-commercial, educational FM radio station licensed to Dover - New Philadelphia, Ohio. He's got stuff to say about the AIR-4 console and other gear he's installed at the station.

For the entire story... INN27.wheatstone.com



VOA Delano Transmitter Readied for Public Display

Gargantuan task of reassembling 19-ton transmitter now completed



The Antique Wireless Association decided to recreate the VOA's Delano transmitter plant's control room. When the facility was active, operators could keep tabs on the station's Collins and ASEA Brown Boveri quarter-megawatt transmitters.

BY JAMES E. O'NEAL

If you've been following the saga of the Voice of America's Delano, Calif., transmitter plant since its closure in the fall of 2007, you know that one of the big Collins Radio machines there — a 1960s-vintage 821A-1 250,000-watt

shortwave transmitter — was rescued through the combined efforts of the Antique Wireless Association and the Collins Collectors Association.

The organizations pooled their resources to create the Collins Radio Heritage Group and funded the removal and shipping of 38,000 pounds of heavy-

PRODUCT SPOTLIGHT

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Audio-Technica BP40 Large-Diaphragm Dynamic Broadcast Microphone

Audio-Technica's new BP40 broadcast vocal microphone offers a rich, natural, condenser-like sound from a large-diaphragm dynamic design. The 40 mm diaphragm features patented floating-edge construction that maximizes diaphragm surface area and optimizes overall diaphragm performance, while the humbucking voice coil prevents electromagnetic interference (EMI).

With rugged construction and stylish, waveform-inspired design, the BP40 delivers clear and articulate reproduction. Optimized capsule placement helps maintain a commanding vocal presence even at a distance, while the multistage windscreen provides superior internal pop filtering. Mic also includes a switchable 100 Hz high-pass filter to provide additional pop protection. U.S. estimated street price \$349.

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The Collins 821A-1 250,000-watt transmitter is shown after its reassembly at the AWA Museum in Bloomfield.

metal transmitter some 2,700 miles to the small New York town of Bloomfield.

During my visit in 2014, the Collins 821A-1 had arrived, but was still in relatively small pieces occupying more than 100 packing boxes and pallets. (The accumulation of big rig components was sometimes referred to as "the world's largest Erector set" or "the Heathkit from hell" by those involved in its relocation.) Making things all the more challenging was a mandate attached

to donated transmitter by the General Services Administration, manager of the Delano site after it was vacated by the VOA, that required the transmitter to be reassembled and on display within 12 months of its acquisition.

TOGETHER AGAIN

I'm pleased to report that the 821A-1 transmitter — as well as the VOA's Delano transmitting station control room where the facility's aggregation of high-power quarter-megawatt rigs were monitored and controlled — are both back together now, looking very much as they did in their California location.

Everything was made ready in time for a viewing at this year's annual AWA conference in mid-August, though according to the AWA's deputy director, Bob Hobday, the official opening is still a couple of months away.

"We were rushing quite hard to have the transmitter available for the conference members," said Hobday. "We still have to put up some displays and walls around it. This needs to be done before we can open it to the general public as part of the museum."

Hobday said in late September, "Our hope is to have the grand opening in early November. The construction is well underway."

He said that visitors arriving at the

museum prior to official opening would still be allowed to view the new exhibit.

YOUR SUPPORT IS NEEDED

Hobday stated that, while costs associated with relocating the VOA gear — some \$20,000 — had been covered by donations and other funding, financial assistance is still needed.

"The fundraising effort is still ongoing," said Hobday. "We've paid for the expenses [associated with the move



The Delano "big rig" now shares space in the AWA's new museum facility with a range of yesteryear's communications equipment.

and reassembly]. However, to put the transmitter in a museum setting we're incurring some additional expenses. If anyone wants to get in on the support of the project, we sure would appreciate their help."

Additional information about the VOA transmitter/control room project and how readers can support it may be found at antiquewireless.org.

The AWA Museum was established more than 60 years ago, and in 2013 moved from its previous home a few miles west of here to the present 10,000-square-foot facility in Bloom-

field, N.Y. In addition to the VOA transmitter, the collection also includes early spark transmitters, amateur radio gear, a wide range of consumer radio and television receivers, military electronics and more. The AWA has some 1,800 members worldwide.

For more on this topic read our March 2014 story "VOA Delano Station Goes on the Block" and our February 2015 story "AWA Saves Piece of Delano Station" at radioworld.com.

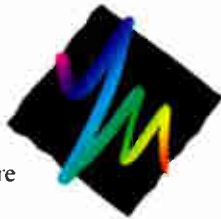
James O'Neal is a frequent contributor to Radio World who often writes about the history of broadcast technology.

Minnetonka Comes Under Telos Umbrella

BY PAUL MCLANE

Minnetonka Audio is now part of the Telos Alliance.

Linear Acoustic founder and Telos Alliance Chief Technology Officer Tim Carroll made the announcement at the IBC convention in Amsterdam in September. Terms were not disclosed.



Linear, which makes television audio control products, is part of the Telos group of companies, along with Omnia, Telos

Systems/Axia and 25-Seven Systems. Minnetonka Audio Software makes products for motion picture, video, broadcast, game and optical disc production; products include software kits, plug-ins and enterprise systems.

The transaction was described as a merger of audio processing entities that creates a "seamless audio content chain from creation to transmission."

Both companies are held privately. Telos is headquartered in Cleveland and has several other offices. Minnetonka is based in Minnesota and has a subsidiary in Germany. Carroll said Minnetonka's offices, executives and staff remain in place, "and we are expanding."

Carroll was joined in the announcement by John Schur, president of Minnetonka Audio. They said the agreement involves not only television audio but also aspects of radio, streaming and future broadcast delivery methods.

The business deal brings expertise in an area in which the Telos Alliance wants to grow. Carroll told Radio World in an email.

"Traditionally, we have been more hardware-focused but recognized a few years ago that the television and radio industries were heading rapidly towards software and cloud-based workflows," he said. "Some time ago, we worked with Minnetonka to create a plug-in that provided NBC Olympics mixers with upmixing, downmixing and loudness control for their Avid Media Composer edit suites and Pro Tools mix rooms during the Vancouver, London and Sochi games." He called that an example of "a perfect meshing" of Linear algorithms and Minnetonka's software plug-in experience.

According to the announcement, current products at the combined companies include "hardware, application software, software plug-ins and widely-used licensed and OEM versions of key technologies such as loudness measurement and control, upmixing and downmixing, and Dolby and DTS encoding, decoding, and transcoding."

According to its website, Minnetonka Audio Software started as software engineering services firm Minnetonka Software Inc. in 1986, and developed what it called the first professional-level graphical audio editing software for PC platforms. Minnetonka Audio Software Inc. incorporated in 1998 to produce professional digital audio editing products.

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TA

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PEOPLE NEWS



Larry Norton

Cumulus Media's WGRF(FM) in Buffalo, N.Y.

will retire after 40 years in Buffalo radio

Torey Malatia

Rhode Island Public Radio

will serve as president/CEO and GM

S. Cory Willis

Cumulus Media Pensacola, Fla.

named as production director



Bob Kempf

WBGH Boston

leaves NPR to serve as VP of digital services

Chris Coleman

iHeartMedia Montgomery

named SVP of programming



Dave Russell

Cumulus Media

has been named PD and afternoon personality of WARM(FM) in York and Lancaster, Pa.



Steve Tuzeneu

Bible Broadcasting Network

has accepted a position as network staff engineer

Bill Johnstone

Oregon Association of Broadcasters

has retired as president and CEO



Ravinder Dahiya

Jampro Antennas

serves as the regional sales manager for South Asia and the Middle East

James Harrington

Salem Media Group

chosen as GM for Colorado Springs

John Pooley, Clifford White, Patrick White and Elaine Phillips

Ennes Educational Foundation Trust received scholarships

Brad Hardin

iHeartMedia

will lead National Programming Platforms group as executive vice president



Zach Brand

NPR

adds the Digital Services portfolio to his responsibilities

Lori Spencer, Linda McHugh, Keith Goldstein, Dave Boretti and Joe Laffey

PodcastOne

join the sales and marketing team

Send information to radioworld@nbmedia.com with *People News* in the subject field.

WORKBENCH

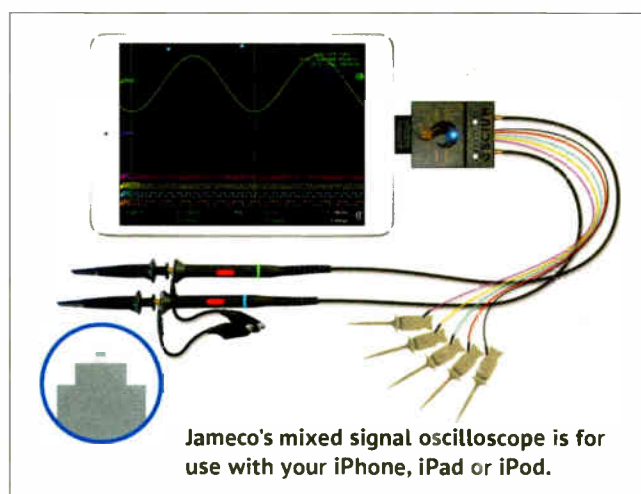
(continued from page 14)

can say "Been there, done that."

We'll call this the Radio Get Moving Badge.

Frank Hertel, engineering consultant at Newman Kees RF Measurements and Engineering, found an interesting application sold by Jameco. It's a mixed signal oscilloscope app for the iPhone, iPod or iPad designed by Oscium.

The touch interface of your Apple device represents a viable alternative to traditional knob-based oscilloscopes. The app's software allows you to pinch the screen to zoom into a waveform, just like you do with a picture. The software is intuitive so you don't have to spend your time fumbling with oscilloscope settings. Retail price is \$399.95,



Jameco's mixed signal oscilloscope is for use with your iPhone, iPad or iPod.

which includes oscilloscope hardware, two 1x/10x analog probes, slotted screwdriver, four analog tip covers, logic harness (four digital + 1 ground) and SMD grabbers.

For more information, enter part number 2225246 in the search field at www.jameco.com.

It's the time of year when the subject of budgets comes up around the station.

Budgets include not just cap-ex but staff salaries; and in the last two weeks alone, I've had three engineers tell me their positions had been cut to part-time or eliminated altogether.

Personally, I think station management too often does not evaluate such situations fully. They want to save money; yet a station can have the best talent and the greatest sales people but still be dead in the water if it goes off the air.

Unfortunately, I think such cuts sometimes occur because the engineer has done his

or her job too well. The station has had zero off-air time; there are no complaints from air staff that equipment is broken; the sales computers all work flawlessly. Do we really need an engineer when things are running so smoothly?

Managers, I hope you will realize the role your engineer plays in keeping things running well and legally. This doesn't happen by itself.

Engineers, a suggestion: Prepare a brief, one-paragraph weekly report and send a copy to every department head. This comes back to promoting what you and your department do to keep the station on the air and legal. Funny

how those aspects of the operation are forgotten or taken for granted by some managers when they see an engineer's salary that could be eliminated. Many GMs haven't a clue about what it takes to keep stations running technically; if we don't inform them, they will never know.

What do you put in the report? Go back through your email "Sent" folder for ideas of what you did the previous week. Be proactive. If you worked at the transmitter site all night, leave everyone an email or voicemail so they know what you did and where you are (hopefully getting some sleep). The same is true if you work over the weekend. Engineering is not a 9-to-5 job. Does your management know that?

If you've developed other successful strategies to highlight your work and protect your job, send them to me at johnpbisset@gmail.com. Let's cut this cancer out right now.

Contribute to *Workbench*. You'll help your fellow engineers and qualify for SBE recertification credit. Send *Workbench* tips to johnpbisset@gmail.com. Fax to (603) 472-4944.

Author John Bisset has spent 46 years in the broadcasting industry and is still learning. He handles West Coast sales for the Telos Alliance. He is SBE certified and a past recipient of the SBE's Educator of the Year Award.

A Chill Is in the Air

Make the most of the coming ice with these wintry ideas

Alert the media: Winter is coming!

Yes, my dear friends, for those of us who broadcast to an area with four seasons per year, our listeners are on the verge of complaining about the cold, snow, sleet and darkness. I suppose it is a simple part of the human condition to act shocked when a new season changes our environment.

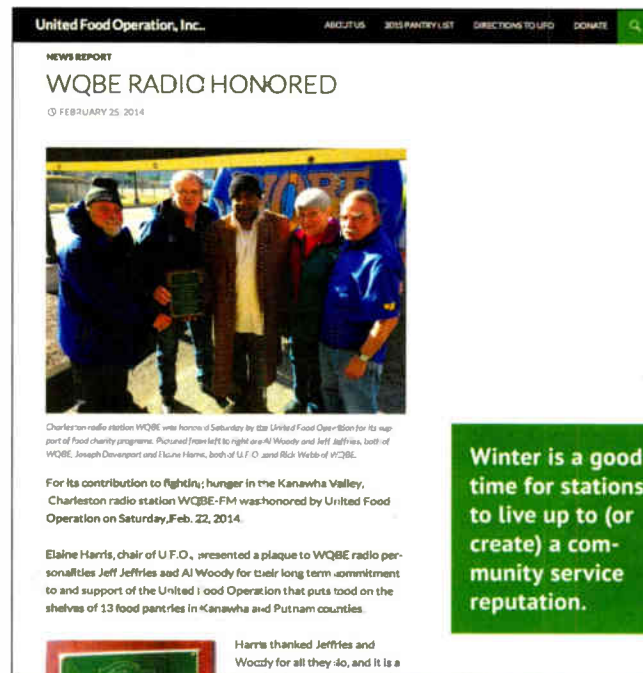
However, while even the squirrels have been preparing for the inevitable freezing temperatures, many of us will wait until it's too late to have the right programming, promotions and activities scheduled to ski smoothly from December to spring. Consider this a last call to finalize your calendars and make the most of the coming ice.

"FALL BACK" TO WEATHER REPORTS

I am always amazed at how few stations increase their quantity of local weather reports and weather-related information per hour in the late fall and winter. News/talk stations are the exception, but too many stations in other formats do not rebuild their clocks or even discuss with DJs or hosts just how often they should be focusing on current and future weather conditions.

In focus groups, I've seen time and again how much listeners appreciate advice about home issues, such as prevention of freezing pipes and reminders to keep pets indoors; alerts on transportation/travel issues; tips on handling icy driving and emergencies; and prompt reports on delays and closings.

Do you have a well-produced "breaking weather" bumper that is used sparingly but consistently when an emergency occurs? Once you've got your act together, consider holding an air staff meeting (include those who voice-track from out of town) to make your direction clear. Leaving this up to the whim of air talent will



provide your audience with uneven results, at best.

PLAN YOUR SERVICE

Winter is the ideal time to do good in your local community, but it won't happen if you don't plan it right now.

Around the holidays it doesn't take much encouragement to get listeners to donate food, jackets, gloves, presents and even cash. The more you focus the effort on one item at a time, like canned food, the better the collection will perform. It's also nice to have an achievable goal such as filling up a moving truck so that listeners feel successful and get a sense of closure.

I also love partnering with local charities because

PROMO POWER



Mark Lapidus

they bring expertise, manpower and, most important, an altruistic perspective to the endeavor. Ideally you would've started planning to pull in sponsors a month or two ago, but that doesn't mean it can't be done when winter is close at hand. Sponsors can make excellent

The cool thing about being prepared for winter is that, once you're ready, you can, as my kids say, truly be "chill."

staging or collection centers and often get their own employees involved in the effort.

HOLIDAY SPIRIT

What's on tap for New Year's, Valentine's Day and St. Paddy's? While it might seem that you don't have enough staff to pull off these activities, the reality is that all you really have to do is find a fun event happening in your town and get behind it promotionally.

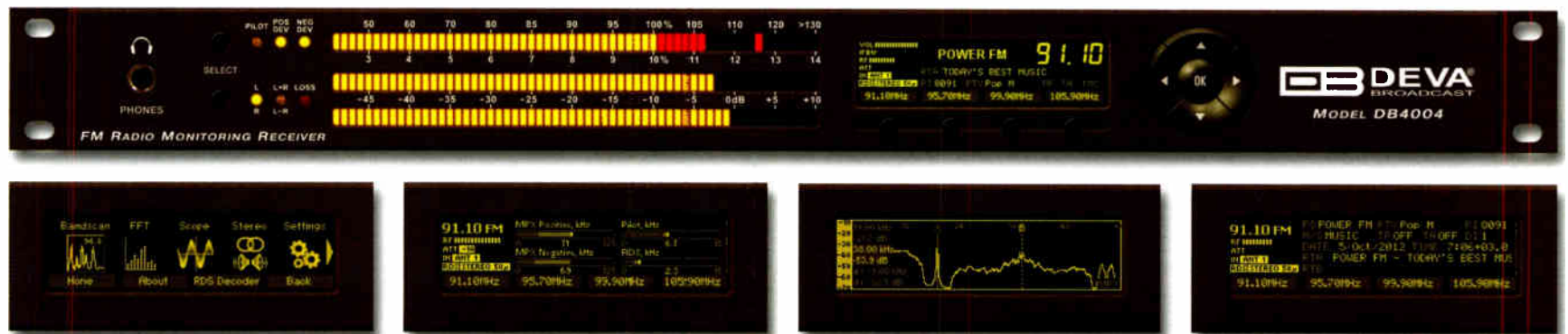
Finally, if you're lucky enough to have your own station or cluster engineer, be sure to ask him how you can help prepare your facility for winter. It's tough for a small department to make certain that your building has up-to-date emergency supplies like fresh water and enough food for a few days.

The cool thing about being prepared for winter is that, once you're ready, you can, as my kids say, truly be "chill."

The author is president of Lapidus Media. Contact him at marklapidus@verizon.net.



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GM's Connected Cars Are Mobile Hotspots

There's an app for that and then some — and radio hasn't been forgotten

CONNECTED CAR

BY PAUL KAMINSKI

General Motors has an all-of-the-above strategy for connecting its cars, trucks and crossovers to the outside world. If your communication needs include unlocking a locked door, connecting a Bluetooth equipped phone, crushing some candy on a mobile device, streaming a video or listening to "traffic reports on the 8s," the latest generation of Chevrolets, Buicks, Cadillacs and GMC vehicles handle that in the same way they handle the road ahead.



Here's the home screen for the Chevrolet MyLink infotainment system.

the leaders in the Open Automotive Alliance. The company has begun rollout of Apple CarPlay and Android Auto across many of its 2016 model year vehicles. The Corvette was the first sold with Apple CarPlay. So far, in total, both CarPlay and Android Auto systems are rolling out across 14 Chevrolet models, five GMCs, two Buicks and nine Cadillacs.



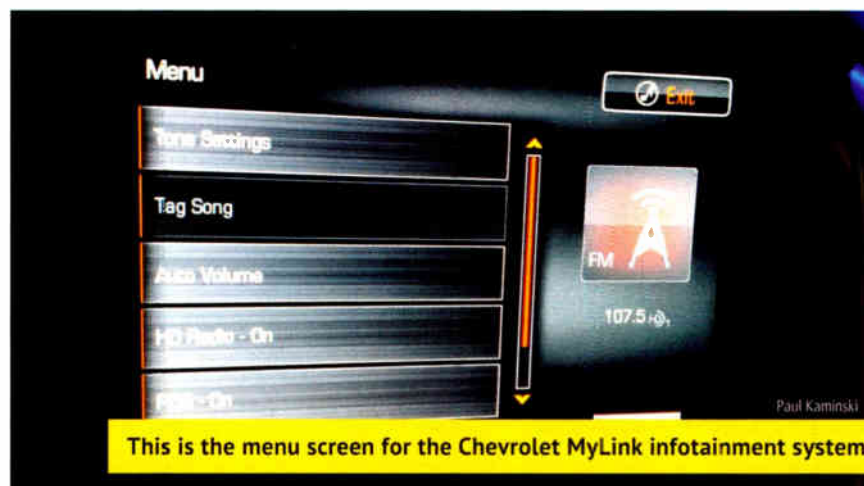
The 2015 Chevrolet Impala LT sedan comes with 4G LTE wireless data access installed.



Basic connection for a vehicle like the Chevrolet Impala LT, which I drove recently, includes an interface to vehicle information, optional navigation, apps like Pandora and Stitcher and the most popular in-dash application, radio, whether that be AM, FM, HD channels and/or XM Satellite Radio. Chevy calls that MyLink; Buick and GMC Trucks call the interface IntelliLink and Cadillac calls it the Cue system.

ONSTAR

The interface also connects with the OnStar network, which provides vehicle diagnostics, directions, crash reporting and vehicle unlocking service, in addition to prepaid telephone calling over the OnStar network. The magic happens when 4G-LTE data connectivity is added to the existing OnStar network, effectively turning each vehicle so equipped



This is the menu screen for the Chevrolet MyLink infotainment system.

into a mobile hotspot. That is in keeping with GM's belief that the connected car has three elements: A built-in element (like the Chevy MyLink); a brought-in element (like mobile phone apps) and a beamed-in element (the OnStar data connection).

With OnStar, 4G LTE is an additional subscription-based service, giving Internet data access to subscribers on the OnStar network. The OnStar and 4G-LTE connectivity are featured on virtually all GM cars and trucks sold in the U.S. The system is rated to connect up to seven devices wirelessly. That's good if driver and passengers have

Apple iOS and Android devices, as in my recent test; two smartphones and an iPad posed no problem. To connect, one simply punches up the OnStar option on the vehicle menu and enters the connection credentials in the appropriate device when the device software calls for it. OnStar has monthly subscriptions for various data consumption levels; the least expensive of those (250 MB/month) will cost around \$5 per month.

iOS AND ANDROID

GMC worked with both Apple CarPlay and Android Auto to develop future applications and functionality as one of

It will also continue to support HD reception capability; that support will depend on customer choice and demand.

GM's point man on connected car issues is John McFarland, the director of global markets and innovation, whose Global Connected Customer Experience Group is in his words, "responsible for the future of the connected car."

That future includes radio.

"Radio is highly contextual in the car. For us, as we look to target and drive connected solutions, while you are in the car is an ideal time to reach you with a message."

The MyLink and OnStar connection yields a lot of data; more with some of the streaming audio apps. That helps to focus the message that McFarland wants to deliver. He says, "As radio continues to evolve, as a marketing director at GM, I'll be looking to understand what are the ways I can leverage that medium to give contextually relevant, driving related automotive related messages to the right person in the car."

Paul Kaminski is a longtime Radio World contributor and columnist, and host of msrpk.com's Radio-Road-Test program. Tweet to follow him @msrpk_com; follow him on Periscope and search for him on SoundCloud (radioroadtest).



So You Want to Podcast, Legally? Good Luck!

Music licensing requirements for downloadable programs are confusing, with no relief in sight

PERMISSIONS

BY KEN DEUTSCH

Radio stations that play music over the air pay annual fees to three performance rights organizations: ASCAP, BMI and SESAC. Anyone who wishes to stream music from a website can purchase a digital license from these same agencies.

But what if one wishes to create a podcast that contains music, and make that podcast downloadable from iTunes and other distribution sites? To whom does one send the check, and for what amount?

Uncovering this information was not straightforward, as I discovered when I attempted to assist my friend David Milberg, a veteran broadcast executive and air personality who wanted to get an oldies podcast



David Milberg

up and running by early 2016.

Milberg is a lawyer and a broadcast law professor; he wanted to keep his podcast legal in all respects and pay any appropriate fees.

I started my research by contacting Kevin M. Goldberg, a member at Fletcher, Heald & Hildreth PLC.

NOT A SIMPLE QUESTION

"Podcasts are pretty complex," he said. "First, there is a difference between a downloadable podcast and a non-downloadable podcast. The former is likely to be more difficult because it involves mechanical reproduction. There is a compulsory rate for the reproduction of the musical work, but the use of the sound recording is going to have to be negotiated. A non-downloadable podcast might work more efficiently if you stay within certain rules regarding archived programming. That would allow it to be considered non-interactive streaming, allowed under the Sound Exchange licenses. But to

qualify as an archived program, it must be at least five hours long and even then can only stay on the website for two weeks."

I asked Goldberg about the future of licensing music for podcasts.

"It appears that the problem is not easily answered, but the likelihood of getting to a result that would make much practical sense seems limited," he said.

Very well! I then contacted BMI and was put in contact with Molly Thompson, a digital licensing specialist based in Nashville, Tenn. She told me about BMI's digital license.

"The license will cover all usage of BMI music, whether in a podcast, audio-only stream, videos, etc. The license provides blanket coverage for your URL," she told me.

To whom does one send the check, and for what amount?

Unfortunately the type of podcast I was referring to would be available not via a single URL, but on iTunes and other similar sites. So it was still legally murky.

ASCAP's representative told me that licensing is available for streaming audio, but for podcasts I would have to contact the individual publishers for each song I wished to play, and work out permission and a licensing fee with all of them. That hardly seemed practical.

The folks at SESAC, the third PRO, did not answer several emails.

THE RIGHT TO REPRODUCE

One would think that licensing music within a downloadable podcast would be a simple matter of going to a website, grabbing a form and sending it in

(continued on page 25)



The logo for Milberg's pending podcast plays up the oldies theme.



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Why Radio Doesn't Work



COMMENTARY

BY JIM POTTER

How many times have you heard, "Radio doesn't work, we tried it and got nothing from it"?

A little digging usually finds the client ran two awful spots per day ROS for two weeks 15 years ago. Bad copy and a teaspoon of airtime completely explain why many retailers shun radio.

We in the biz know radio advertising does work or else we wouldn't be getting paid. Radio works when it's done right, which I believe is rare. Good advertising successfully sells products and services and enriches customers and stations, but a substantial number of radio ads I hear are an ineffective waste of airtime and client's money. Repeat business comes when customers know and appreciate and even document the sales boost from radio advertising.

Since most people listen to broadcast radio in cars to and from work, commercials or "spots" should be designed with this audience in mind. There are lots of distractions while driving, and many stations on the dial. Drivers don't have pen and paper to copy phone numbers, and when they get past their irritation threshold, they punch a button for another station for relief from the air pollution.

But spots that hold their attention are built with the application of simple principles.

HEADLINE GRABBER

You have about three seconds to get your hooks into the listener's ears before they tune out. A strong topic sentence and optional sound effects, like echo or music

burst, draw the listener to endure the rest of the spot. Otherwise, you've lost them.

"There are 20 chemicals in tobacco smoke that can kill you. You can avoid those by using a non-tobacco vapor inhaler from Bob's Smoke Shop."

CHOOSE THE RIGHT DURATION

Except for political season when agencies pelt stations with :60s, nobody suffers through :60s to the bitter end; we tune-out.

The American attention span is almost immeasurably short. Thirties are best for most products, and services :15s work well as bookends for established products on both sides of the news at TOH. Keep it simple and direct, short and sweet.

CLEARLY IDENTIFY THE PRODUCT OR SERVICE

The listener should know exactly what's being pitched by brand, make and model.

"We're talking about the all-new Veeblefretzer Model 2100 food processor that's revolutionizing commercial food preparation!"

Contrived dialog exchanges may amuse but don't sell. Sappy jingles with mushy lyrics went out with The McGuire Sisters harmony in the 1940s. Radio advertising isn't a school board meeting, so sound enthusiastic about that great product! Remember the piglottal push — use it.

MAKE A CLEAR CASE FOR BUYING

Advertising either plants a buying motive or elevates a pre-existing buying propensity in the listener.

Stress benefits over features.

"This revolutionary shop vacuum cleaner will suck a golf ball through a garden hose" rather than "It's made of sturdy aircraft aluminum." Make it clear why they should transfer money from their account to the advertiser's account.

Spots that hold their attention are built with the application of simple principles.

Use pressure. "Get yours today!" and "This is a limited time offer, so hurry!" works in many cases to goad buyers into buying.

TELL THEM WHERE TO GET IT

This is tricky. Tell them to enter a phone number into their smartphone or use a simple memorable Web URL. You can buy a URL for a few dollars and have it forwarded to the customer's main website.

MyNewBracelet.com is easily remembered; *schwartzandjonesimports.com* is not.

For local retail stores, use street intersections and "across from the Starbucks" references rather than a five-digit address. Stores rarely have their street numbers posted on the building where shoppers can spot them.

CLOSE WITH A SUMMARY

Use a tagline like: "That's John's Bargain Store for the best selection in camping gear, Elm and Main streets across from Walgreens."

From :25 to :30 you've told them what it is (camping gear), why to buy (best selection) and where to get it (Elm and Main).

Reassure them: "You'll be glad you shopped at John's."

EMBED A TRACER ELEMENT

The best way to test the effectiveness of your spots is to sew a seed like "Tell them you heard about it on WJBP and you'll get a 5 percent discount!" Instruct the counter clerks to ask how the customers heard about the product and keep a log.

ROTATE MULTIPLE SPOTS

Even good spots get really annoying with repetition.

I'm at the point where I'm going to stop listening to CBS Radio News at TOH because I'm sick to death hearing about ProActive Plus-brand tooth whitener. I want to slam the radio.

There is no excuse for not producing at least three spots that use similar pitch and copy but are written and produced so they sound distinctly different. Annoying and boring your listeners is not endearing and causes product avoidance rather than embrace and purchase.

SELL ENOUGH SPOTS TO BE EFFECTIVE

Granted, selling radio advertising is a very hard way to earn a living. Upstarts are proud when they can sign up the local bakery for three spots overnight for

a week. But that is completely useless unless you're pitching sleeping pills to insomniacs.

The hard truth is that advertising is inefficient. You need to do a lot of it for few initial results, then keep on doing it until the cumulative effect kicks-in. Advertising is a long-term proposition and it costs serious money. Only the strong survive. Businesses that can't afford to advertise are doomed to the dustbin of history.

GOOD COPY, GOOD RESULTS

A colleague opined: "Just like having good content in programming is vital, so should the same be in spots. How many people anticipated, not avoided, spots by Stan Freberg and Joe Sedelmaier? Many of their spots have become iconic Americana. Copywriting should not be a task dumped off on interns; it should be the proud production of the best and brightest on the staff. Good ad copy is entertaining and enjoyed, with like-wise good results for the sponsor. Bring interesting personalities and compelling content, and listeners and advertisers will follow."

Good radio commercials make pay-checks possible because good spots get results for our customers: they actually sell products and services and make money for all concerned.

When our customers realize the fruits of their investments in radio, the truth is self-evident: Radio does work!

Jim Potter owns the Little Spot Shop. Read more tips at LittleSpotShop.com.

Comment on this or any story. Email radioworld@nbmedia.com.

LICENSING

(continued from page 23)

with a check. But the process is more like entering labyrinth of tunnels, none of which leads anywhere.



Melodie A. Virtue

Melodie Virtue is an expert in broadcast law at Garvey Schubert Barer, and she agreed that there is no workable solution at this time.

"For the right to reproduce the sound recording, a podcaster needs to secure a master use license directly from the record company," Virtue said. "The record label can charge what it wants and is not required to grant a master use license. Direct licensing is required to use any music in a downloadable podcast, unless the musical work [composition] and sound recording [recorded performance] are in the public domain or made available through a creative commons type of license, or the person using the music owns all of the copyrights in it."

David Oxenford of the firm Wilkinson Barker Knauer, LLP, was asked in an interview by radio pundit Mark Ramsey why record companies don't all get together and come up with a way to allow podcasters to include music legally.

"I think it's inertia," Oxenford said in the interview, available at markramseymedia.com. "We're talking about little bits of revenue, and as we all know, in the Internet world little bits of revenue add up eventually to big revenue. But to take the initiative to get the rights to make these songs available in an easy way and set the pricing schedules and to make songs available to podcast or for other on-demand uses, it's not a simple process. It involves negotiations with the artists and the composers, so I think

the record companies simply haven't gotten around to it."

STUCK IN THE GRAY, FOR NOW

So where do these legal opinions leave my friend David Milberg as he attempts to produce an oldies podcast?

"It is rather simple and relatively inexpensive to obtain the necessary blanket licenses to cover all aspects of streaming," said Milberg. "But the same is not true for music podcasting. While there are some licensors of 'pod-safe' music, the material tends not to be the 'hits' or 'oldies' that are owned by major record companies. It also is unclear if licenses for podcast music sold by the PROs are actually necessary since there is some question as to whether podcasts are 'public performances,' which is what these performing rights organizations license."

Given this conundrum for podcasters, how does Milberg think is it possible that one can go to iTunes and find dozens of downloadable shows that contain popular music?

"I do not know in all instances, but my opinion is that it could be a combination of ignorance and/or indifference to applicable copyright laws combined with a lack of concerted compliance enforcement by copyright owners," he said.

Milberg, in his on-air persona Radio Dave, was a frequent guest on "The Bill Moller Show" heard over WGN(AM), Chicago. On these shows, Milberg talked about the oldies, but only a small portion of each song was heard.

"We only played 20 or 30-second 'snippets' in order to avoid ASCAP, BMI and SESAC fees that would have applied if the songs had been played all the way through," said Milberg. "The station subsequently posted these shows online as podcasts. I assume the theory behind all of this was that these excerpts from the songs fell into the 'fair use' defense exception to applicable copyright laws."

So when Milberg's oldies podcast, "Rare & Scratchy Rock 'n Roll," pops up next year on various sites for downloading, that is the form it will take. Due to the vagaries of copyright law, it'll be "parts of the hits, all the time!"

Ken Deutsch was a disc jockey and program director in the days when things were "groovy" and people said "far out" with no irony.

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“If You Build It, They Will Listen”

Building an LPFM from the ground up

FIRSTPERSON

BY DAN SLENTZ

DOVER-NEW PHILADELPHIA, OHIO — At 6 a.m. on Monday, July 13, WDPE(LP), aka “DNP 102.3,” went on the air. Beforehand, Jody Brogan, the president of the Dover-New Philadelphia Educational Broadcasting board, had often asked “What if no one listens?” My refrain was “If we build it, they will listen.”

There’s been a lot in print about the legal aspects, market research and all the trials and tribulations of building an LPFM radio station. This is about the technical aspects and description of how this station was built in 10 *l-o-n-g* days (16 to 22 hours per day of work). This included everything from mounting the antenna to building the studio and office furniture, wiring the transmitter rack, and of course, wiring the studio.



The Radio Station-Building Slentz Clan: Jerry, Dan, Tyler, Steve with Jody (Slentz) Brogan in front.

station in it. It’s in a nearly 100-year-old J.C. Penney building in what had been management offices and later home to a weekly newspaper. The space consisted of one large area surrounding an office (with a window) and closet. This former office would become the studio, and the closet was rebuilt to become a transmitter room.

The layout has the studio in the rear of the station, visible through large windows. In the studio is a closet with large glass panel. A door designed as an “outside door” (exterior door) seals sound out of studio.

Outside the studio is a “DJ food/drink shelf” (no food in studio). There is a great reception area as you walk in the main door to the right. And to the left is a meeting/public service/underwriting work area. Also in this area is a door for the “transmitter closet” for easy access to the gear without the need to enter the studio.

Technically, like most LPFMs, the station was “financially challenged” to do as much as it could with the biggest bang for the limited buck. That meant quality and dependability came first when choices had to be made.

There were plenty of places to go cheaper, but it



was critical to make sure that no one that heard WDPE said “that sounds like an LPFM.” We’re on the dial just like any Class A station (or Class C for that matter), and nowhere on any consumer radio is there a choice for LPFM, Class A, Class B, noncom, etc. So being at 102.3 MHz meant we’d be between “the commercial big boys.”

I put my years of radio broadcast engineering experience to use in configuring the equipment list, selecting solid performers and what I felt were the best values for the money. (See the sidebar for the gear highlights.)

There are a lot of good manufacturers and many choices. A few items were donated, which accounts for their selection, though I would have probably chosen those items anyhow.

To explain a few choices: The single-bay OMB was a necessity since we were extremely limited to where we could mount it. The city had regulations limiting anything new on the roof and since the transmitter is collocated with the studio, we had to mount it to a security light pole. It hit our height, but no room for a second bay with proper spacing. Surprisingly — no, shockingly — the little one-bay puts out a great signal. The gain is only 0.46, but the headroom on the Nautel VS300 allows the compensation for the ERP of 100 watts when considering the line loss and lack of any antenna gain.

The Inovonics 531N may seem extravagant, but as the station’s consulting engineer, I really wanted the ability to keep tabs on the signal and modulation (along with the competition). Though the station is legal in modulation, we have a perceived loudness of near the competi-

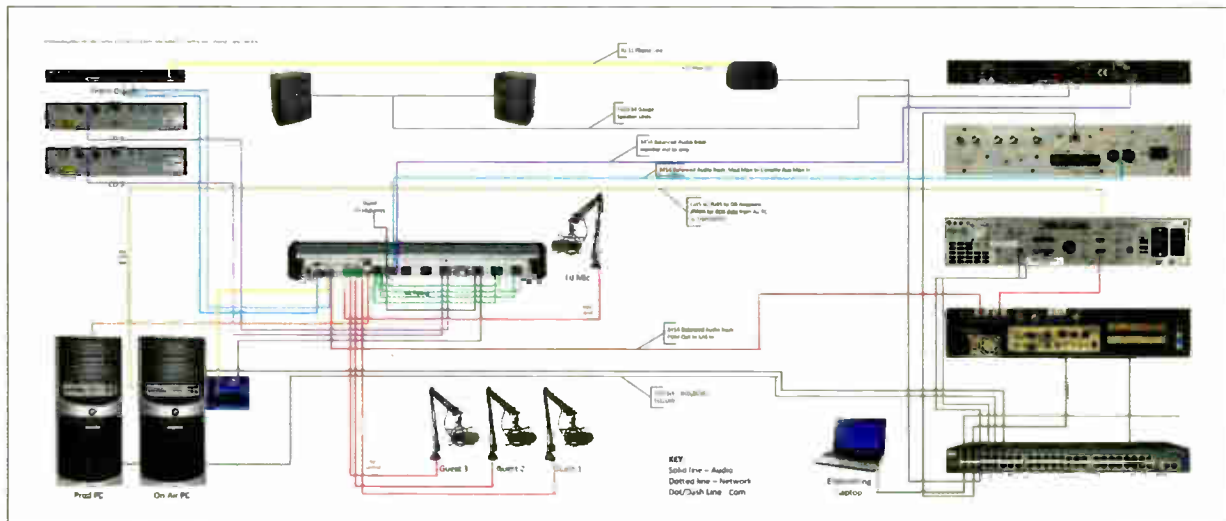


The studio is under construction. Note the Visio wiring diagram on the wall.

Initially, the board had a location for the new station, courtesy of a local businessman with a desire to help. The actual layout was designed over a year prior to the build, with nearly every aspect holding true to the design. I’m someone who “builds on paper first,” and this allowed the actual design and integration to go mostly as planned without any real surprises.

The radio station’s design started with the location, then the actual facility and then the technical integration.

The facility layout was conducive to having a radio



The Visio wiring diagram gave the engineering crew a solid road map to hang on the wall.



After



Transmitter rack closet.

tion (which shows “exceeding the speed limit” in many cases). With the Nautel VS300, it’s easy to keep close tabs on all the technical aspects of the station when I’m not present.

INSTALLATION

For me, a really interesting part of the installation was Audioarts Air-4’s use of RJ-45 (Ethernet) connectors instead of more traditional connectors. As this was a first for me, I had to learn different ways of dealing with RJ-45s. For instance, there was no way I wanted to use solid conductor Cat-5 cable, so I purchased Cat-6 stranded and removed one end and put on the appropriate connector. Though I could have (or maybe *should* have) purchased custom cables, money was tight, and I had about every connector necessary to put on the non-RJ-45 side.

With the stereo, I pulled one pair and saved the jacket from the cable, reinserting it over the second pair allowing a clean installation of the audio pair over the wire. With the Audioarts RJ-45 connection, Pins 1 and 2 are

one pair, while Pins 3 and 6 are the second (4, 5, 7 and 8 are unused)

Physical construction began with a highly-detailed drawing by a seasoned architectural designer. Okay, I did it without the aid of someone with that sort of talent, but my brother (a contractor) helped to transfer my chicken scratch into what I had in my mind.

The console furniture was basically built as a half wall (2 feet x 4 feet) with one side (guest side) solid plywood-covered with black carpet, while the jock side has removable panels to access the 66 punch-down blocks for control and some of the gear interconnects. The countertop was built with two sheets of plywood and trimmed off, then sprayed with a faux granite paint and sealed. All other wood was painted satin black to match the equipment and the monitor bridge (over the console). A hidden “wall trough” was added which led to 4-inch PVC conduit above the ceiling to allow all wiring easy access between the studio furniture and transmitter rack in the transmitter closet.

Walls and color choices match the two local town’s high school colors (crimson, gray and black). Walls were well insulated, so only acoustic foam was added to the walls (and leftover 2 x 4 pieces used for ceiling tile).

The wiring plan was done months in advance. Since I would be the only experienced engineer doing the wiring, I used Visio to draw a wiring diagram with color-coding for all of the cables to help others. For the most part, only Cat-6 was used. My vendor had Cat-6 in every color imaginable, so every type of source had its own unique color. A detailed sheet of which colored Cat-6 ran where was included.

Chad Felbush, our newly designated chief engineer, would prove a quick learner and his IT skills made configuration of the network relatively easy. Being a modern station, many pieces of gear made up our network including the transmitter, EAS gear, engineering laptop, on-air computer and production computer, plus ports for the rest of the station’s PCs.

The station took about two weeks to build from scratch — from our own home-built furniture to the studio, transmitter rack and wiring along with mounting the antenna. Everyone involved pulled many long hours with the “worst” workday lasting 22 hours!

The list of those involved could take a full page and included board members, volunteers, friends and family members.

We finished up Monday morning at about 2 a.m. and launched the station on time, on schedule, and nearly on budget (some of us pitched in) Monday, July 13 at 6 a.m. with myself and brother Steve Slentz having the honor of



The finished studio.

launching the little station that could!

It was nothing short of amazing, maybe a miracle, to see it come together.

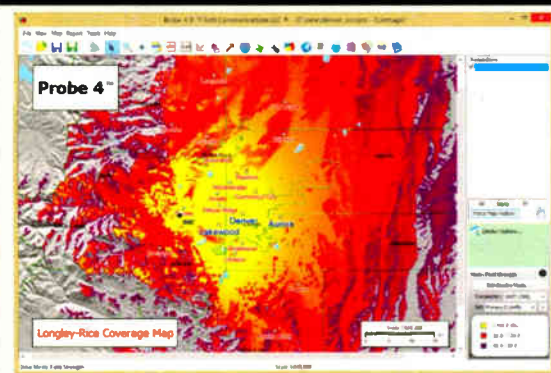
And “did they listen”? Oh yes! In my 35 years of radio, I’ve quite honestly never seen a station catch on as strongly as DNP 102.3 has. It’s on the air 24 hours a day, with live mornings (6–9 a.m.), afternoons (3–5 p.m.) and more live shows launching each week. You can learn more about DNP 102.3 programming and hear some demos at dnp1023.wix.com/wdpe.

Got a facility story to tell? Email Gear & Technology Editor Brett Moss at bmoss@nbmedia.com.

EQUIPMENT HIGHLIGHTS

- Single-bay OMB circular FM antenna
- Andrews LDF4 coax
- Nautel VS300LP transmitter with integrated Orban Optimod 5500 processor card
- Digital Alert Systems DASDEC EAS system
- Inovonics 531N modulation monitor
- Symetrix amplifier
- JBL Control series speakers
- Audioarts Engineering Air-4 console
- ElectroVoice RE 20 mics on O.C. White booms
- Stanton C.400 CD players
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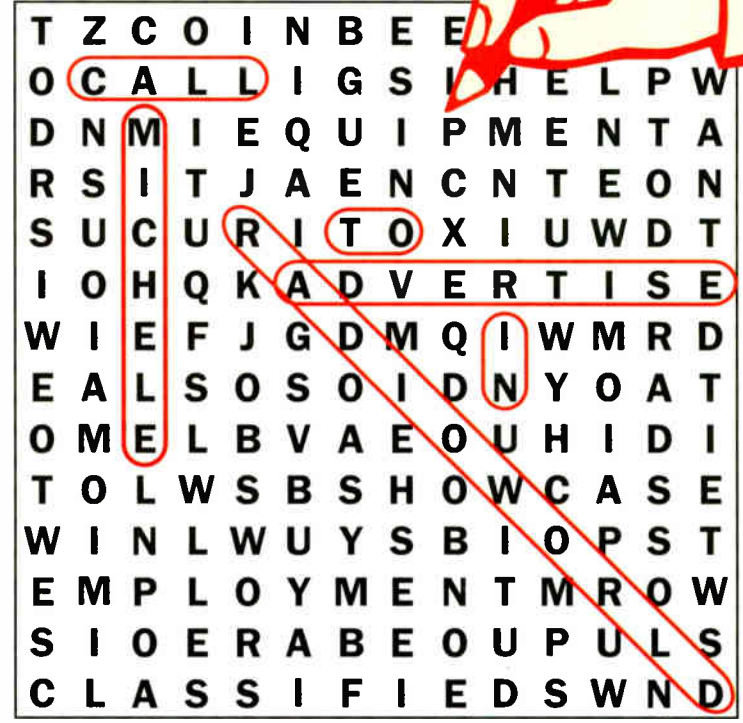
I'm looking for San Francisco radio recordings from the 1920's through the 1980's. For example newscast, talk shows, music shows, live band remotes, etc. Stations like KGO, KFRC, KSFO, KTAB, KDIA, KWBR, KSF, KOB, KCBS, KQW, KRE, KTIM, KYA, etc, I will pay for copies... Feel free to call me at 925-284-5428 or you can email me at ronwtamm@yahoo.com.

Looking for a broadcast

excerpt of a San Francisco Giant's taped off of KSFO radio from 1959, interviews with Willie Mays, Dusty Rhodes & some play by play excerpts, also features a homerun by Willie Mays and Felipe Alou stealing second base, running time is 18:02, also looking for SF Giants games and/or highlights from 1958-1978 also taped off KSFO Radio. Ron, 925-284-5428 or ronwtamm@yahoo.com.

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READER'S FORUM

HD RADIO HISS

I live in Anthony, Fla., a little town just north of Ocala. I love talk radio, and I listen to an AM station on and was happy to find out that they are now on FM using a translator. I noticed at different times of the day that the station would fade to hiss, making it annoying to listen to. I am using a Kenwood receiver with a signal meter on it (yes, a real meter) that reads the same whether the hiss is there or not.

After some extensive investigating I find that an HD Radio station is the culprit. HD hash is extending out on top of 96.3. This same hash is happening to 96.7 from the same station. This one station is blocking out two frequencies. There are about 1,800 AM and FM stations that are broadcasting HD; there are a total of 22,138 of all radio classifications on the air so far.

I checked out some facts on the website hdradio.com, and one fact stated: Q. What happens if I lose the HD Radio signal?

A. If your HD Radio tuner loses the station's digital signal, it will automatically switch over to the analog signal broadcast at the same frequency. There may be a slight break in the sound when this happens.

Solution: HD needs to move to another band, then we will not have to worry about "A slight break in the sound!" It seems this digital problem was created only to be solved by analog. Obviously, the analog signal is far superior than the digital, so why digital?

For a demo, check out <http://1033.webs.com/hdradio.htm>.

I purchased an HD Radio (almost impossible to achieve) for my car out of curiosity and noted:

- FM stations fall back to analog a lot.
- FM HD2/HD3 channels cut out a lot, reception falls off a cliff. As in, the signal is there, and then it isn't. It cuts out entirely. This is annoying. This is progress?
- FM HD has a much shorter useable range than regular FM HD is an inferior system.
- iBiquity has created a legal jamming of analog stations, and the FCC agreed to it.

Just thought I would vent a bit.

Frank Stevens
Anthony, Fla.

REMEMBERING DAVID HULTSMAN

David Hultsman passed away on Aug. 27 following a two-year battle with cancer. I can't say that I've known David Hultsman as long as many of you, but I can say that I've had the absolute pleasure of knowing him well for the past 12 years. We have truly lost a great guy and a true champion.

While affectionately known as "The Mouth of The South," David was also known for his dedication to his employer, his loyalty to his customers and, more importantly, his love for his wife Karen and his family.

David loved to be on the road and took the time to call on every broadcaster and engineer he could. Not because it was his job but because those people either were, or would become, his friends. Many had technical problems David could help with and many just needed someone to talk with.

While David could listen, he could also spin a great story. David always left customers feeling good. He often did that for me when we would have our "what's up" phone call every Monday morning, and I can tell you that talking to David was a great way to start a work week!

During the 2014 NAB Show David was given a plaque for attending 50 consecutive NAB shows, a true indication of his dedication to the industry (Sept. 9, 2015 issue, page 5).

Shortly after his passing I received an email from Adil Mina, former VP of sales and marketing for Continental.

Adil knew David well and wrote: "David was a very special person who contributed a lot to broadcasting and not only in the U.S. but worldwide. I have known Dave very closely for more than 35 years. We are almost the same age and always talked about it. He was loved and respected by all our competitors. He was one of the best sales people who ever worked for me and CEC. I very much doubt that many were more loyal to the company than him. He had a CEC logo on his heart. My sincere sympathies to his dear wife and family. He will be missed by thousands of broadcasters all over and especially by Mike! May he rest in peace and may his memory be eternal."

Yes, Adil, I will miss David, as will you, and we can take comfort in knowing that we are not alone.

Mike Troje
Sales Manager
Continental Electronics
Dallas, Texas





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Sporting a sleek new profile, the D-76 comes standard with ample mic preamps, plenty of stereo busses, and a comprehensive monitor section that provides separate feeds to control room/headphone and studio monitor outputs — plus headphone jack and built-in cue speaker.

It has four stereo busses, dual-domain outputs, sample rate conversion on all digital inputs, and interchangeable input module daughter cards for easy analog-to-digital conversion in the field. Its modern design features backlit controls and meter

bridge with full-scale, bargraph digital peak plus VU metering and automatic timer and clock.

Individual plug-in modules make installation and service a breeze. The D-76 can be ordered with an optional SUPERPHONE module, which supports two callers. It can also be ordered with the optional IP-76 plug-in module for interfacing to the WheatNet-IP Intelligent Network.

This new console has everything you have come to expect of an Audioarts console — like ease of use and rock solid reliability (including a KILLER power supply, built by Audioarts).

It is laid out in a sleek new design that is both affordable and practical for modern radio stations of all sizes.

Contact Audioarts Engineering for more info on the D-76 Digital Audio Console.



- Modular hot-swap plug-in design
- Optional IP-76 module provides connectivity and additional I/O through WheatNet-IP network
- Optional SUPERPHONE module with dual caller support
- StudioHub+ RJ45 connectivity
- Inputs can be analog or digital, depending on daughter card installed
- Any combination of analog and digital line inputs
- Input channel A/B source select
- External rackmount power supply
- Universal opto-isolated mic and line control ports on all input modules
- Sample rate conversion on all digital inputs
- Optional dual failsafe power supply
- Digital clock (can be slaved to ESE time code)
- Cue function and auto-dropout
- Connectorized faders and monitor pots
- Connectorized channel ON/OFF switches
- CR and Studio Monitor outputs with separate four-buss source selection plus independent external 1 & 2
- Both Program and Switched VU meter pairs
- Four microphone preamps standard, with option for four additional
- Digital timer with autostart and manual control
- Two on-air tally relays
- Built-in headphone amp with concealed output jack
- Built-in cue speaker with amplifier and external cue output
- Direct digital VU-plus-peak LED metering displays

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