



RADIO**WORLD**

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Steve Mills Focuses on iHeartMedia's IT Outcomes

We asked the company's CIO to share insights into his management philosophies

RADIO IT MANAGEMENT

BY PAUL McLANE

Steve Mills joined iHeartMedia as its chief information officer a little more than a year ago. This is one in a series of occasional interviews I've launched to help readers learn more about CIOs who work in and around radio. I asked my questions via email. Text edited for clarity.



Steve Mills

Radio World: What are the unique challenges that a CIO at a major 21st century media organization with a big radio broadcast component must face?

Mills: Leading the transition to a digital world. This includes things like reen-

gineering business processes and supporting systems to operate more in real time and less in batch mode; developing capabilities to view traditional broadcast metrics like spots and mentions as audiences and impressions; providing our customers and account teams with interactive tools for measuring results, etc.

Also, introducing central management into a broadcast radio environment that has traditionally been managed at the station or market level. This is a big shift in culture as well as a big change for processes and tools.

RW: What attributes in a professional résumé are media companies looking for in a CIO?

Mills: In the case of iHeart, I think the most important attributes — and these

(continued on page 4)

Lessons of a Major Guy Line Project

Here's what we did after a nasty windstorm damaged the insulators of a Minnesota AM

TECHTIPS

BY MARK PERSONS

A violent, straight-line wind came through Brainerd, Minn., in the summer of 2015. Suddenly, operating parameters changed on the KLIZ(AM) 5 kW ND day and 5 kW three-tower directional night antenna systems. Not serious, but enough to notice.

Apparent transmitter efficiency

decreased because of a shift of a few ohms in day tower impedance. Night tower phases changed 2 degrees and ratios about 3 percent. Tweaking phasor controls to get licensed phase and ratio resulted in normal night monitor point readings. Still, something was amiss.

A tower crew was brought in to inspect for damage.

From a high vantage point they found that about a dozen of the original

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Fig. 1: A partially shattered guy-line insulator.

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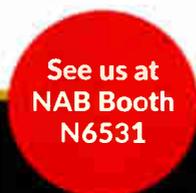
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A Little Flavor of Radio at CES

Among the booths was an interesting dashboard project from Gracenote

BY JAMES CARELESS

Virtual reality appliances, Alexa and self-driving cars gobbled up the spotlight at CES 2017, the consumer electronics show held this winter. Here are three radio-related items that might have slipped past you.

IHEART EXPANDS OFFERINGS

Industry biggie iHeartRadio is offering paid iterations of its streaming music service, competing more directly with Apple and Spotify. It positions these new offerings as the first to add "on-demand functionality and interactivity to live radio."

A notable feature is a "replay" function that lets a listener replay a song he or she just heard on a live radio stream.

At CES, the company officially launched "iHeartRadio Plus" and "iHeartRadio All Access Powered by Napster," aimed at desktop and mobile computing platforms. It had previewed these services last fall.

For \$4.99 a month, iHeartPlus subscribers can replay any song they hear on any iHeart audio stream and save it to their own playlist for extra listens later. The Plus service also lets subscribers skip as many songs as they want on the company's custom Artist Stations, and search and play music from an online

library that promises millions of tracks.

For \$9.99 a month, iHeartRadio All Access Powered by Napster includes the same features plus a personal music collection and library linked to radio content. The user can build his or her own personal music library. There is no playback cap, and the user can reorder, delete and sequence a playlist and manage unlimited playlists.

The free version of iHeartRadio, which launched in 2011, also continues to be available.

The company promotes these new offerings for their "ability to enhance the live radio experience with on-demand functionality to discover and save music all in one place." It says this is a natural extension of its radio roots and assets.

"Seventy percent of listeners that use streaming music services say that FM radio is where they first discover new music and then purchase it or add it to a playlist," said Chris Williams, iHeartRadio's chief product officer.

SONG TITLE AND ID

Since 1999, Gracenote has helped in-car entertainment systems to identify and display CD titles, relevant metadata and cover art. It recently was acquired by Nielsen.

At CES 2017, the company unveiled



iHeartRadio says its new paid streaming services add on-demand functionality and interactivity to live radio. Note the replay button at bottom.

Radio Station ID. It uses Gracenote's "music fingerprint" recognition technology to provide drivers with station/song information and high-resolution station images.

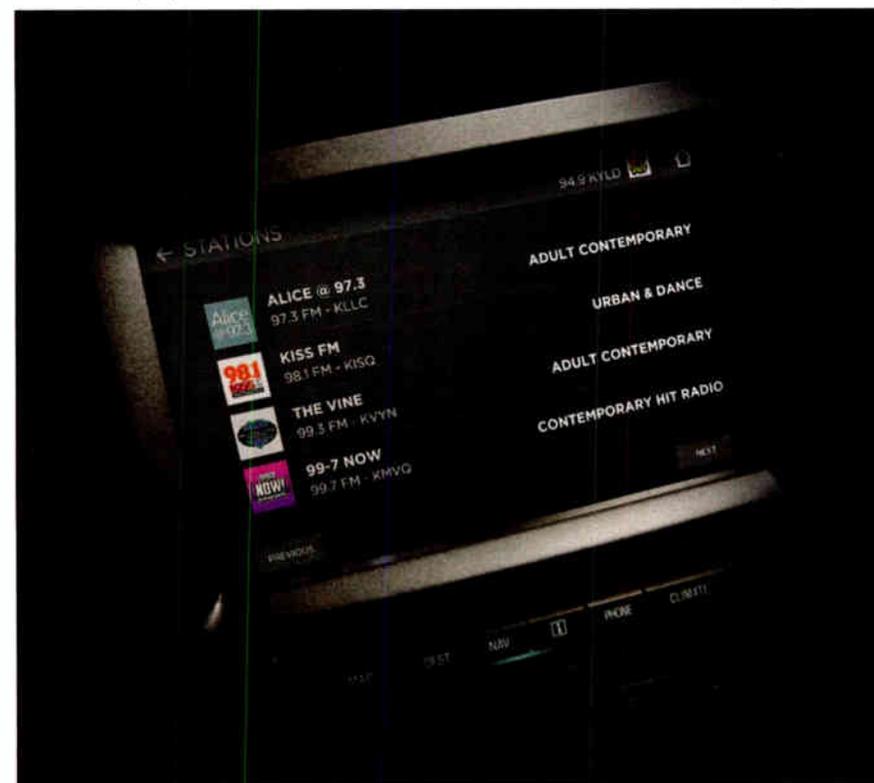
Radio Station ID also helps motorists stay tuned to their preferred music or talk genres as they move along the highway by tuning automatically to radio stations with similar formats and music. This idea of creating a system of format-related station "handoffs" has been discussed before in relation to various technical platforms but never really caught on in the United States. According to a CNET article, this planned system combines GPS, Gracenote's music fingerprint technology and its database of radio stations.

Radio Station ID is a software product designed to be sold to automakers for loading onto in-car entertainment systems they install in their vehicles. The company has not yet announced a carmaker partner for it.

"This first-of-its-kind product eliminates the need for drivers to 'scan the dial' as they move outside of radio signal range, by automatically presenting the available stations most similar to their presets based on location and preferences," said Brian Hamilton, Gracenote's general manager of music and auto.

"As the driver goes in and out of radio signal range, the car's infotainment system automatically tunes to local radio stations following preferred formats and genres. This enables a seamless and safe user experience in which the driver can always find the stations playing the music they're in the mood to listen to, even in unfamiliar areas."

(continued on page 5)



Gracenote unveiled Radio Station ID. It uses "musical fingerprint" software to provide drivers with station/song information and high-resolution station images.

STEVE MILLS

(continued from page 1)

are not specific to media. I think they apply to any modern CIO role at a large company — were hands-on understanding of new technologies and trends and the sorts of transformation they enable; experience in leading change within a large, established enterprise; ability to understand business priorities and apply them to IT decision-making; and bias towards speed and getting to short-term results with maximum impact.

RW: How does the CIO of iHeartMedia interact with its broadcast engineers and engineering tech team?

Mills: The broadcast engineers and engineering tech team at iHeart report into me as CIO. The boundary between IT systems and engineering systems in our markets is pretty blurry, and the jobs of IT and engineering folks on our team also overlap. In particular, the systems that support programming and playout, as well as the tools used by the programming teams and traffic teams, are all IT systems. This makes it a pretty natural fit for engineering to sit beside “traditional” IT teams and work side-by-side with them.

RW: What philosophies do you bring to the job of CIO?

Mills: Before starting a project, be very clear on the reason we are doing it, the value it brings and how we will measure it. Focus on outcomes and follow up after to make sure we got the value we expected.

Break all big projects into small chunks with clear business value. The goal should be to deliver something at least once per quarter on each major workstream.

Speed wins. It is better to have something good now than something perfect later.

Continuous interaction and collaboration between IT and business teams make for much better outcomes.

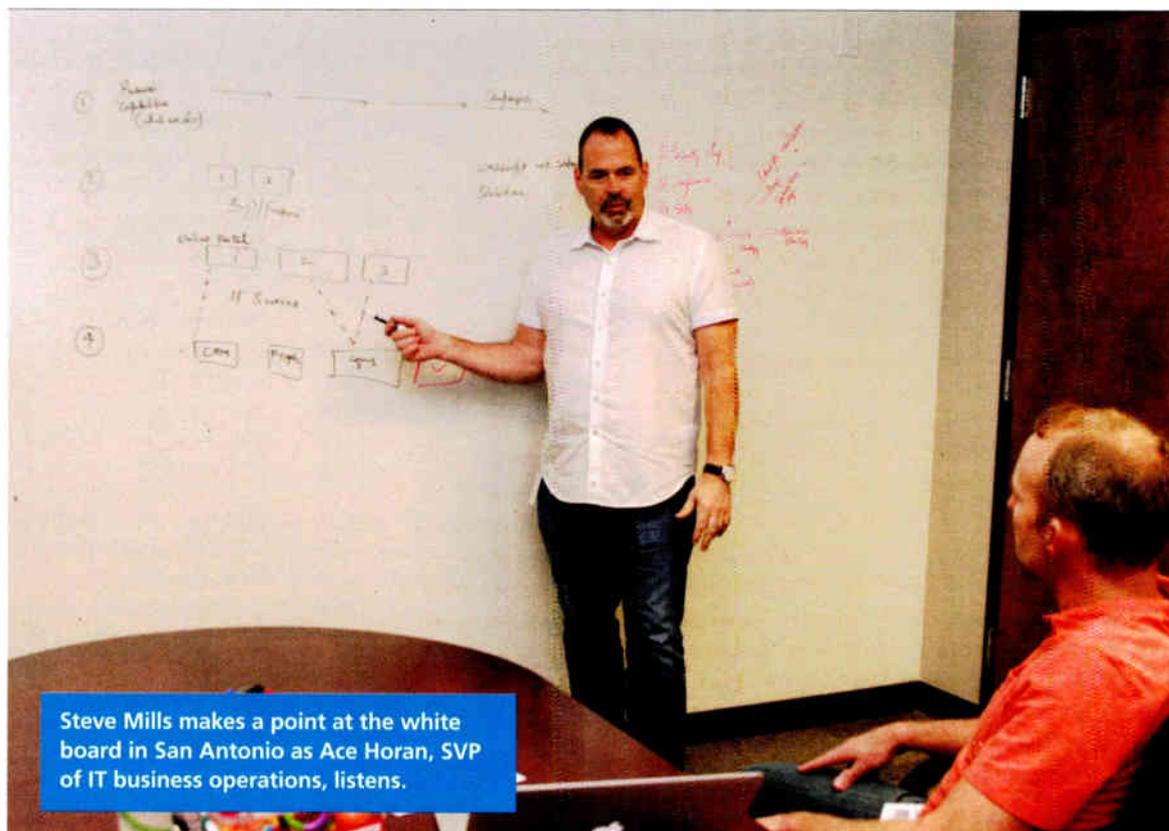
Find quick wins at the intersection of what is easy to do and what is impactful. Keep delivering these while working on the big stuff in parallel.

Sponsor lightweight “shadow IT” inside the business teams. They are much happier and more productive when they can self-serve and do not have to come to IT for everything they need. SaaS platforms and lightweight reporting and workflow tools enable this.

Continuously evaluate IT operating costs to ensure we are operating as efficiently and effectively as possible. My favorite ways to do this: vendor management, problem management, automation, self-service.

RW: In coverage of trends in information management, we hear a lot about enterprise-wide planning. What does that mean in your job?

Mills: At iHeart, it means things like understanding which business processes and systems need to oper-



Steve Mills makes a point at the whiteboard in San Antonio as Ace Horan, SVP of IT business operations, listens.

ate across our broad portfolio and factoring these out — for example, finance, HR, legal, real estate. Also, looking horizontally across our portfolio of businesses and finding economies of scale that can ensure a cost-efficient operation. This includes things like vendor management, shared services and back-office systems.

RW: What is the scope of the iHeartMedia IT operation, broadly? Looking to assess the scope.

Mills: I would think of it as: thousands of employees, 175+ global markets, 850 broadcast stations reaching more than a quarter of a billion listeners a month with broadcast alone, as well as a massive digital footprint. All of our IT metrics are scaled to support this.

RW: Cybersecurity is on everyone's mind in media and beyond. What can you share generally about your approach or mindset?

Mills: As you can imagine, any discussion of that could compromise our efforts.

RW: What major software tools across the enterprise has the company found that it feels have helped with operational efficiencies?

Mills: We are using a SaaS IT service management tool that has been very impactful. Formalizing the way

we manage incidents, issues and changes and improving repeatability and metrics has made us more operationally effective and efficient.

We have also rolled out a variety of productivity and workflow tools that are really helping business teams to be more effective.

The combination of cloud, agile development and continuous integration and deployment, along with the tools that support them, have been transformative for our development teams. We get new capabilities to market in weeks instead of months or years. It is a big mindset shift and a powerful one.

You can read Radio World's 2016 profile of FCC CIO David Bray at radioworld.com/bray.

MORE ON STEVE MILLS

According to the company's 2015 hiring announcement, Steve Mills oversees all aspects of the information technology structure for iHeartMedia and Clear Channel Outdoor, “to ensure the alignment and optimization of the company's overall technology systems with the business priorities of its multiplatform assets,” which include iHeart's many radio stations, iHeartRadio, national events and CCO's numerous digital billboards.

The company said his hire was part of an increasing emphasis on technology solutions, “everything from programmatic advertising to data collection and analysis.”

He has three decades of experience in IT, enterprise systems and software engineering. He was CIO of Motorola Mobility and of cloud hosting solutions provider Rackspace Hosting, and held executive positions at T-Mobile, BearingPoint and Intelligent Technologies. He holds a Ph.D. in computer science from Southern Methodist University.

NEWSROUNDUP

HACKING: Change your default passwords on audio streaming devices and other networked gear in your air chain. The FCC issued a reminder following broadcasts of an anti-President Trump song on some low-power FM stations. “We believe that the reported cases involved unauthorized access to equipment manufactured by Barix, which some licensed broadcasters use for studio-to transmitter (STL), remote broadcast (remote) and similar audio connections,” the FCC staff wrote. In addition to creating and changing passwords, it urged a policy of resetting them when station staff change. “We also recommend that broadcasters investigate whether additional data security measures, such as firewalls or VPNs configured to prevent remote management access from other than authorized devices, in some cases, could be implemented to preserve this potentially critical part of the broadcast transmission chain.” If you suspect unlawful access, notify the FCC Operations Center at FCCOPCenter@fcc.gov.

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RADIO AT CES

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TUBE GOOD TO BE TRUE

Echoing the wood-grained elegance, fine craftsmanship and audio warmth of vintage tube-amplified receivers, radio engineer and tube amplifier designer Dejun Zeng launched Airmart Audio Technology Company in Shenzhen, China, and started making exquisite wooden-cased, tube-amplified modern radio receivers.

At CES, Airmart announced the opening of its North American subsidiary Muzen. It showcased its Classic 1 AM/FM/Bluetooth tabletop receiver (suggested retail price \$899) and Tube Queen AM/FM/shortwave/Bluetooth tabletop receiver (SRP \$6,999), both of

**Muzen's Classic 1 radio has FM, AM and Bluetooth.**

which use tube amplifiers.

As you might guess from the price tags, the units are marketed with an emphasis on quality materials and handmade engineering. Muzen also is offering a range of lower-priced solid-state radios in styles that echo the look of the 1930s to 1960s. For instance a travel-size receiver retails for \$139.99.

"Our product line offers consumers the design, craftsmanship and quality of an era gone by, with the technology and innovation of today," said

Michael Moore, Muzen's North American general manager.

Muzen's strategy is to offer North American consumers "nostalgic" radios that sound as good as they look. "So many of the vintage design products on the market today are plastic, low-cost products designed merely to provide a unique look but not very good sound quality," Moore said.

A Muzen AM/FM/internet/Bluetooth radio that won a 2017 CES Innovation Award "has the ability to let the consumer select 10 preset stations from different service providers," said Moore. "Once selected, the preset stations can be changed by using the tuning dial on the actual radio." He said this is the fifth award that Dejun Zeng's radios have won at CES over the years.

The company plans to start shipping its Classic 1 and Tube Queen radios for North America this spring. Its internet radios are to begin shipping in the second half of the year.

NEWS ROUNDUP

AMC-18: Major satellite-delivered content providers are resident on the new AMC-18 satellite and are informing clients that it's time to reorient satellite dishes to the new 105 degrees west location. Learfield, Orbital Media Networks, Premiere Networks, Skyview



Networks and Westwood One, along with dozens of sublessees, have been sending notices that downlink clients have until June 30 when the AMC-8 satellite goes dark. An AMC-18 migration website has new channel settings, program schedules and other info; see www.amc8migration.com.

VEGAS FM: Beasley Media Group closed on its purchase of an FM translator signal in Las Vegas. It acquired K268CS from Southern Nevada Educational Broadcasters for \$700,000 in a purchase announced by broker Media Services Group. The organizations reached an agreement last summer, at which time they told the FCC that Beasley will rebroadcast the HD2 signal of KCYE(FM). K268CS airs at 101.5 MHz and had been associated with KKVV(AM). The broker believes it was third-highest cash price ever paid for an FM translator.

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Leveraging Visual Radio for Fun and Profit

Radio professionals can learn from the experiences of these three organizations

BY JAMES CARELESS

“Visual radio” is more than a webcam streaming live footage of a radio station’s morning show. Properly executed, visual radio can be a compelling, multi-camera production that wows listeners and viewers and makes serious money both for its producers and the stations that stream visual radio content online.

Here are three examples of how broadcasters are putting this approach to work, as reported in the new Radio World eBook “Visual Radio.”

PAYING VIDEO SUBSCRIBERS

Despite its name, the syndicated “Free Beer & Hot Wings Morning Show,” heard on Townsquare Media station WGRD(FM) in Grand Rapids, Mich., provides listeners with neither free ale nor chicken flaps. Hosts Gregg Daniels and Chris Michels chose the name after deciding it would attract more listeners than “The Gregg and Chris Show.”

But to fans who pay \$5.95 a month (less with yearly or biyearly memberships), “FB&HW” does deliver HD-quality multi-camera video of the show in action, both live and on-demand. Many fans are willing to pay to see this content.

Down the hall in the same Townsquare Media production complex, WLHT(FM) morning show hosts Connie and Curtis also are captured on camera for viewers. However, because this footage is free, Townsquare Media shoots it using lower-resolution USB cameras and posts their antics to a dedicated channel on YouTube.

“Video is a pretty big deal for these programs,” said Market Engineering Manager Mike Maciejewski. “Both of them have thousands of followers, including paying viewers on the ‘Free

Beer & Hot Wings’ site. Being able to see their favorite radio hosts in action really matters to our listeners, as the numbers clearly prove.”

The FB&HS morning show has high-quality video production equipment

of the studio. These replaced a pair of consumer-quality webcams.

The feeds from all four HD cameras go into a PC loaded with vMix switching software. The switching between cameras is controlled automatically using an Arduino micro-controller customized by Maciejewski that follows the audio. It is sourced from the morning show’s Wheatstone LX-24 console.



Four HD cameras feed a PC loaded with vMix switching software. Switching is automatic using a customized Arduino micro-controller that follows audio and is sourced from the show’s Wheatstone console.

due to the subscriber base, who are paying to see their broadcast heroes in action and expect quality akin to what they see on their home HDTVs.

To do the job, WGRD installed four fixed, zoomable Marshall 1080pHD-SDI TV cameras in the FB&HW studio, each of which covers a different view

“I wrote a program for the Arduino controller that allows it to cope with multiple audio sources intelligently,” said Maciejewski. “For instance, if the two hosts are talking all over each other, the Arduino will call up side-by-side camera views of them both. If everyone is laughing, the software will select a wide-angle group shot.”

The video production system for the Connie and Curtis morning show is similar, except that the video is shot using three web-quality fixed USB cameras.

“Again, we control the switching with an Arduino micro-controller production, but because there are fewer cameras we use a program call xSplit Broadcaster for the switching software,” Maciejewski said. “The feeds are also stored during the broadcasts, with clips selected afterwards to post on YouTube.”

Gearing up for visual radio pro-

duction wasn’t without its challenges for Townsquare Media. “Not only did I have to learn how to produce and stream/record live multi-camera TV automatically, but we also had to modify the FB&HS studio to improve its sightlines, so that the cameras had unobstructed views,” said Maciejewski. “But the results have been well worth it, given how many people now watch both shows on video.”

At present, Townsquare Media has no plans to shoot video of its other radio

shows in the Grand Rapids cluster. But at the corporate level, the company clearly is serious about creating video content; it recently hired Andy Meyer as vice president of original programming and head of video. He is former vice president of development/executive producer at Emmy-award winning Tremendous Entertainment and served as vice president of original programming for NBC Sports Network (formerly Versus) and Fuse Media.

SPORTS SIMULCAST

Sports outlet 106.7 “The Fan” WJFK (FM) in Washington uses five broadcast-quality HD cameras and a professional video switcher — in this case, a NewTek TriCaster — to stream “The Sports Junkies” as visual radio online.

WJFK, owned and operated by CBS Radio, has gone one step further with visual radio. Since September 2016

(continued on page 8)

RADIO LEARNS TO BUILD ITS VIDEO PALETTE

The accompanying story is excerpted from the Radio World eBook “Visual Radio.” Video elements are no longer a novelty for a growing number of radio broadcast operations. These professionals use streaming and social media video tools to diversify their platforms and create new touch points with consumers. How are they doing it and what can we learn from their experiences?

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the station has been simulcasting its video stream on cable television in the D.C., Maryland and Virginia region via Comcast SportsNet Mid-Atlantic (CSN), which now controls the cameras remotely and adds production elements.

Under the deal with CSN, "Sports Junkies" hosts John Auville, Eric Bickel, Jason Bishop and John-Paul Flaim are seen live weekday mornings and in replay weekday afternoons on CSN, CSNmidatlantic.com and the NBC Sports app. Video clips from the Sports Junkies are also being used on CSN's TV, online, mobile and social media platforms including daily high-light episodes.

All of this comes from a WJFK radio studio that was rebuilt to look good on TV and mobile, as well as sound good on radio.

"Our CSN simulcast has grown our video reach not just in Washington, but in the mid-Atlantic region," said Chris Kinard, program director for WJFK as well as a sister AM of the same call letters that goes by the moniker CBS Sports Radio 1580.

"It's also raised the visibility of our overall brand and the morning show. And, with access to high-quality video clips, we have greatly increased our production of short clips of the show, which get a lot of traction on social media and our website."

The TV simulcast of the Sports Junkies on CSN is in line with WJFK's overall content strategy, which "is to make our content available on as many platforms as possible," said Kinard.

"[Even] before the CSN simulcast, our morning show was streamed live and then re-aired in full until the afternoon show. Then the afternoon show was streamed live. We would [then] rotate the shows every evening and overnight."

Today WJFK is as much a streaming visual radio station as it is a broadcast radio station. In addition to multi-camera coverage of its morning and afternoon drive shows, the station shoots and streams video from its DC Lottery Live performance space. This is where "celebrity guests and musical acts perform for live, intimate audiences, and we stream the performance on our website, *TheFanDC.com*," Kinard said.

Generating multimedia content has changed WJFK's approach to hiring. Rather than radio-only talent, "we look for a diverse set of multi-platform skills for all positions, including both on and off the air," he said. "Job responsibilities and requirements are shifting as quickly as technology advances, and we look for people who are able to adapt to the



CBS sports outlet 106.7 "The Fan" WJFK(FM) in Washington uses broadcast-quality HD cameras and a professional video switcher for "The Sports Junkies." It is simulcast on Comcast SportsNet Mid-Atlantic as seen here; CSN controls the cameras remotely and adds graphics and b-roll. WJFK's afternoon show stream is produced in-house.

changing needs and trends."

The best part: Visual radio is making money for this CBS Radio sports station. "We have had success selling a presenting sponsor of the video streams that include on-air and on-screen recognition," said Kinard. "We were also able to sell signage in our studio, and the visual element has allowed us to add value to food drops and product integrations." The sign placements are designed to be swapped out easily, to change both show and advertiser identities on camera as needed."

The cluster's success in achieving cable TV simulcast of a morning show, plus making money from presenting sponsors and signage in its video streams, is a visual radio model that many radio broadcasters might wish to emulate. For such stations, Kinard

recommends developing a visual radio model that is unique to their own content and formats rather than simply aping WJFK's approach.

"I think every station is different and should tailor its goals and strategies to the strengths of the station and talent," he said. "Some shows are more visually compelling than others. Some talent is suited for a live video stream, while others may be great at producing post-show videos. Or perhaps there are specific benchmarks or segments that would translate well to video."

As for WJFK's plans? Having taken the Sports Junkies to CSN, Kinard sees no reason why the station's other visual radio broadcasts shouldn't turn up on TV as well. "I think our shows all have the potential to be simulcast on TV." Better yet, "there could also be OTT

opportunities down the road, either on our own or with partners looking for compelling, original, exclusive, local content."

PAINLESS ENTRY

For many radio broadcasters, the concept of "visual radio" can be unsettling. If they'd intended to work in television production, they'd be in that medium.

But wait a minute: Visual radio doesn't have to be the same as television, even though it works with images. That is because visual radio content can be grounded in the spoken word narrative style that is at the heart of radio story-telling, rather than the "visuals come first" approach of broadcast TV.

This is a lesson that Slavik Boyechko and Travis Gilmour have been teaching to public radio broadcasters across the United States. As partners in the Emmy-award winning production company Video Dads (because both shoot video and change their children's diapers) and in Gear Dads (an equipment review website), these former PBS employees know how to "keep the radio" in online visual radio content. More importantly, they know how to teach these skills to nervous radio broadcasters who frankly might prefer to keep pictures out of their story-telling.

"Radio is a narrative-driven medium," said Gilmour. "The good news is that you can add visuals to this medium — specifically in terms of short form visual radio content aimed at YouTube and similar sites — without turning it into TV."

To prove this point and calm nerves, Boyechko and Gilmour lead their radio students through three levels of visual radio production.

"In the first stage, the radio person

(continued on page 11)



Video Dads Travis Gilmour and Slavik Boyechko (rear, 7th and 9th from left) pose with students at WSKG in Binghamton, N.Y.

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—Chris Tarr, Director of Technical Operations, Entercom, Milwaukee, Wisconsin

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—Mike Modrey, CBT, The Jim Pattison Broadcast Group, Alberta, Canada

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—Dennis Hyatt, SVP Engineer, Max Media, Denver, Colorado

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NextRadio Highlights Audience Measurement

Its new Dial Report tool moves the company deeper into the world of data attribution

MEASUREMENT

BY RANDY J. STINE

NextRadio is promoting a new audience measurement tool that it says will allow radio sellers to offer advertisers proof of who heard their ads when listening to FM radio through smartphones.

The NextRadio hybrid radio app allows users with radio-enabled Android phones to tune in local FM stations; its developers say their new Dial Report digital audience measurement service provides useful analytics and insights about an advertiser's on-air campaign by measuring results and listener behavior.

"The Dial Report provides a digital measurement report of analog radio usage and is intended to be a tool for radio sellers. It's a recap of analog investments by advertisers," said Paul Brenner, CEO and president of NextRadio. "The information we grab from the smartphone allows us to then aggregate the data and measure audience."

The service can provide location-based data, demographics and radio

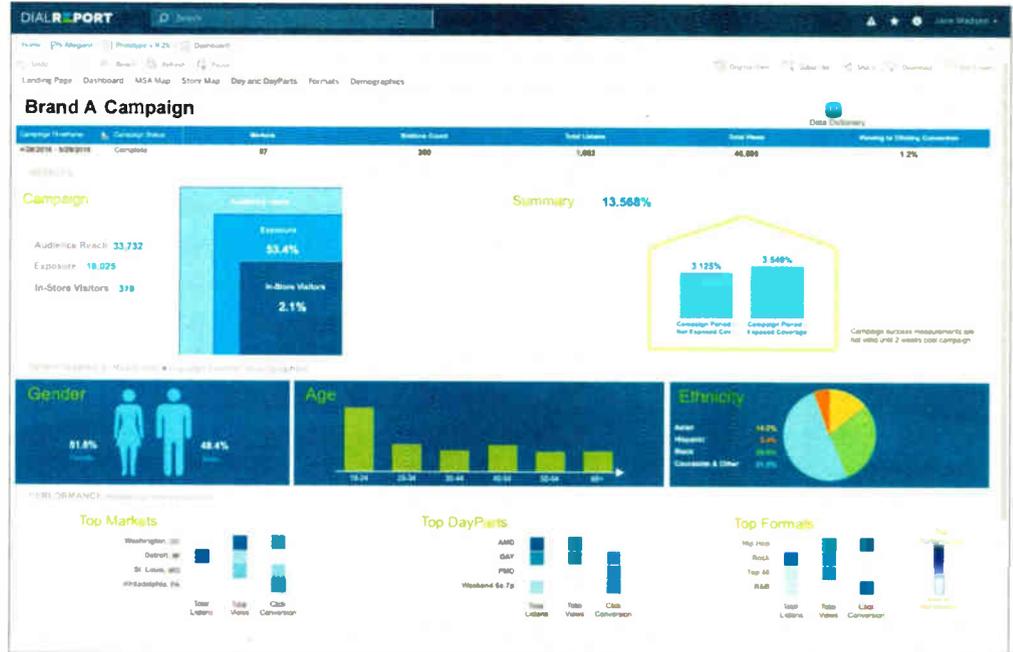
listening data within 48 hours of spots airing. Users will be able to determine campaign listens, views, interactions, listener proximity and in-store traffic, according to NextRadio.

"The Dial Report provides meaningful radio data that agencies and brands can use to prove the value radio spots bring to their marketing efforts. Being able to see the proximity of a listener is unprecedented in the radio industry," Brenner said.

He said the report works to paint a demographic profile of NextRadio listeners with quick feedback to radio sellers for sharing with clients.

"We can monitor the listener and come up with data on the listener. We know what station they were listening to and when they were listening. We know their gender and age. The data collected can be used to satisfy the huge demand advertisers have for data attribution."

The NextRadio app was developed by TagStation LLC, which is owned by Emmis Communications, with support from NAB Labs. TagStation is a cloud-



Dashboard view from the Dial Report.

based software platform that allows radio stations to manage album art, metadata and enhanced advertising on various devices.

Brenner said NextRadio is working with Katz Radio Group — which represents most of the major radio groups and is owned by iHeartMedia — and with advertising agencies interested in the Dial Report.

The app launched in 2013. Emmis views it as an important part of the industry's efforts to boost the reach of terrestrial radio. They say it provides listeners with visual and two-way features, and adds digital capabilities including such data attribution for advertisers.

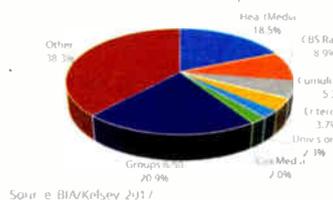
"Return on investment is what advertisers want, and the Dial Report measures campaign results and listener

NEWSROUNDUP

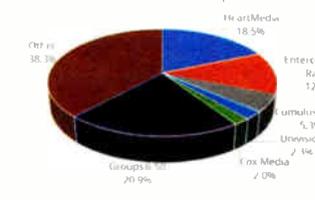
TRANSLATORS: The commission was poised to give AM stations more flexibility in siting FM translators. A proposal was presented by Chairman Ajit Pai for a vote planned in late February. The current rule requires that an FM translator rebroadcasting an AM must be located so that its 60 dBμ contour is within the smaller of the AM station's 2 millivolts per meter daytime contour or a 25-mile radius from the AM transmitter. The FCC had proposed to change this to the greater of the 2 mV/m daytime contour or 25-mile radius but with a limitation that the translator's 1 mV/m coverage contour could not extend beyond a 40-mile radius of the AM site. The rule to be voted on dropped the 40-mile limitation and says the protected contour for an FM translator is its predicted 1 mV/m contour. If the FCC takes this path, it would be accepting an argument made by NAB and others that the 40-mile limitation could be unduly restrictive.

CONSOLIDATION: Finally answering the question of what will become of the radio business at CBS, Entercom said it will take over those assets in a "tax-free merger," pending approval by Entercom shareholders and regulators. The company will be called Entercom and headquartered in Philadelphia,

2015 Over the Air Advertising Radio Groups Revenue Shares Pre Acquisition



2015 Over the Air Advertising Radio Groups Revenue Shares Post Acquisition



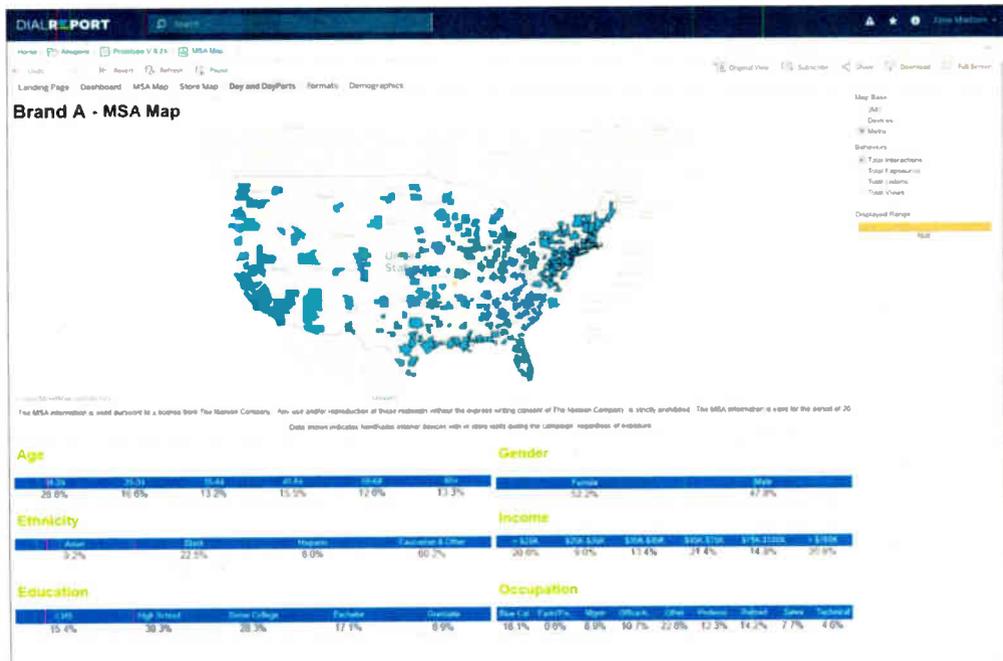
though with "a significant ongoing presence" in New York. It will have 244 stations as well as digital assets and events, with stations in 23 of the top 25 U.S. markets. Entercom President/CEO David Field expects approximately 15 station divestitures will be required in markets including Los Angeles, Boston, Sacramento, San Francisco and Seattle. CFO Steve Fisher expects \$25 million in efficiencies through elimination of corporate overhead and combining radio facilities in overlapping markets, in the 12 to 18 months after the deal closes. Entercom said it will become the "largest pure-play radio station owner in the U.S.," home to 45 professional sports teams, 100+ local sports talk shows and seven of the most-listened-to U.S. all-news stations. Research firm BIA Kelsey gave a look at the impact on the list of top-earning U.S. radio groups with the accompanying graphic. The company's Mark Fratrick took a positive position: "What has emerged [assuming the deal goes through and gets regulatory approval] is a stronger radio industry."

PASSING: Ilpo Martikainen, founder of studio monitor company Genelec, died in late January at the age of 69 due to a long-term illness. He and Topi Partanen co-founded Genelec Oy in 1978 with the release of the S30 active monitoring



loudspeaker, developed at the suggestion of Juhani Borenus, an acoustician at YLE, the Finnish Broadcasting Co.

MORE NEWS: Rep. Doug Lamborn again introduced a bill to strip federal funding from National Public Radio and the Corporation for Public Broadcasting, according to the Denver Post, which noted that he has put forth the proposal before but may have better luck with President Trump in the White House. ... Should broadcast stations still have to run print ads for job openings? NAB and others told the FCC no, that the time has come to update EEO rules to reflect today's technological and employee recruitment landscape. ... NAB Pilot reported that FM chip-enabled smartphones are gaining in popularity. "In the third quarter of 2016, Pilot's analysis shows that the number of top-selling smartphones sold with FM reception capability enabled by at least one carrier in the U.S. has for the first time matched those sold without FM capability," Skip Pizzi blogged ... The Voice of America noted its 75th anniversary.



Maps allow the user to select markets and see demographic profiling based on a chosen measurement such as in-store visits, brand awareness and call-to-action.

behavior for advertisers that enhance their on-air radio campaign with the NextRadio app,” Brenner said.

TIMELY TWEAKS

Industry observers told Radio World that advertisers want this type of analytical information.

Mark Fratrick, senior vice president and chief economist for research firm BIA/Kelsey, said the report gives terrestrial stations an ability to provide advertisers the sort of data they get from other online and digital platforms.

“And the 48-hour turnaround is very important. That quick feedback will allow advertisers to tweak a message in a very timely fashion if they have to. It should help make radio more competitive,” Fratrick said.

He thinks radio is uniquely positioned to take advantage of the more detailed data NextRadio can provide. Stations have sales staffs; they have relationships. “But now they have to get people thinking of radio beyond just listening on air,” Fratrick said radio sellers currently get similar feedback from

their online sales of website banners and client video views.

The Dial Report has gained the attention of advertisers and agencies, said Erica Farber, president/CEO at the Radio Advertising Bureau.

“The dealmakers are watching this carefully and NextRadio in general,” she said. “There is no question the more data radio sellers have, the better off they are. It helps to position stations as far as brand consideration and purchase cycles, and helps to reset the advertiser’s understanding of the role radio can play.”

The data from the new service will help local, regional and national advertisers, Farber said, who all desire the same information for their marketing plans.

“It’s all about collecting rich data. Advertisers are asking for analysis that shows who they are reaching and how often they are reaching in a specific audience with their message. NextRadio presents another channel for advertisers to use radio to reach consumers.”

One advertising analyst expressed

skepticism of the impact the Dial Report will have on advertisers, who are increasingly comfortable with utilizing digital media.

“Measurement is the key reason advertisers are now enamored of digital media and perhaps the main reason they’ve lost

sold without it for the first time. The vast majority of phones sold without were Apple iPhone, according to the report. Brenner said NextRadio remains “focused on telling our story and sharing updates with Apple.”

On another front, the app developer now has settled its debt with Sprint,

Being able to see the proximity of a listener is unprecedented in the radio industry.

– Paul Brenner

faith in radio,” said Gordon Borrell, CEO of Borrell Associates. “But it’ll be an uphill battle for the Dial Report to significantly impact the analog radio industry. Agencies will have to learn to trust and embrace the data,

and that will take time and education.”

Research by his firm, which tracks and analyzes trends in local advertising and licenses advertising data to some 1,000 media companies, shows advertisers “are not necessarily interested in how big an audience is, but how many of their potential customers are listening and how the platform can deliver ads to only those people,” he said.

SETTLED WITH SPRINT

The app itself has a broader footprint now. NextRadio developers say 63 million Android phones have FM chips unlocked and are therefore compatible with NextRadio; they expect the number to reach about 83 million by the end of this year. It has agreements in place with Sprint, AT&T, Verizon and T-Mobile to activate FM chips in smartphones. However, Apple notably is still not on board with iOS phone activation.

A recent NAB Pilot report found that in the third quarter of 2016, the number of smartphones sold with FM reception capability equaled the number

Brenner said. NextRadio had agreed to pay the cellular service provider \$15 million per year beginning in 2013 to embed the app on smartphones it sold, but at the end of 2015, NextRadio was \$14 million in arrears to Sprint, according to SEC filings by parent company Emmis Communications.

NextRadio declined to provide details of the settlement but said it is “in good standing” with Sprint. Last year Brenner told Radio World that after the agreement ended in August 2016, “NextRadio will not be paying any cell carriers to activate the chip in smartphones. Instead, the new business model going forward will be a revenue sharing formula” tapping the revenue generated by TagStation.

NextRadio is closing in on having 4,000 radio stations on board with TagStation, Brenner said, for which they pay an annual fee, and “expects to announce a major group deal yet this year that will make a big impact.” Another 7,000 stations participate with logos only, at no cost.

The company is eyeing more international expansion in 2017, Brenner said. The hybrid app launched in Mexico, Canada and Peru in 2016. He sees Colombia, Brazil and possibly Argentina being added in 2017.

Brenner said NextRadio is “now focusing more heavily on the connected car integration.” NextRadio and HD Radio developer iBiquity, now part of Tesser Technologies Inc., announced in 2015 an effort to cooperate on a single auto platform.

VISUAL

(continued from page 10)

produces a conventional radio story in audio, and then takes it to a easy-to-use video editing program, like Final Cut Pro 10, to add slides that relate to the narrative,” said Boyechko. “In the second stage, we ask them to shoot B-roll/cover footage (shots not of the person talking) to illustrate that narrative further, without moving away from the story-telling radio format. In the third phase, the radio person starts shooting their interviews on video; using them along with cover footage and stills to create a truly visual story.”

In the “visuals come first” world of conventional televi-

sion, a lack of relevant footage can hamper what the storyteller can talk about. That’s a limit that radio producers don’t face, because the spoken word and natural sound can harness listeners’ imaginations to create pictures their minds.

So how can a radio producer transition to visual radio, without surrendering their narrative to available imagery and losing this advantage?

“The key is to use what you have,” said Boyechko. “It can be visually powerful just to show text of the words being spoken by the announcer, and bolster them with sound effects.”

Added Gilmour, “This means that you never have to compromise radio’s narrative approach when you go visual. You don’t have to conform to the norms of television production, even though you are producing audio-visual content for the web.”

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Got a Tip to Ward Off Rodent Infestation?

Here's how one station stopped an infestation of mice in an ATU enclosure

WORKBENCH

by John Bisset

Read more Workbench articles online at radioworld.com

If there's a topic that gets Workbench readers talking, it's critters at the transmitter site.

Bob Meister in Hamden, Conn., read about the infestation of field mice in an electrical panel (Feb. 1 issue). He shared some additional "before" photos and described how he put an end to an infiltration five years ago at a station he serviced.

Bob was helping to clean out an

AM antenna tuning unit enclosure on a nighttime-only tower. This ATU is about 3x3x3 feet and must weigh 300 pounds. It's elevated on bricks inside a rebuilt elevated doghouse.

All of the wires and cables — RF coax, 240V for the phasor contactor coils, low-voltage wiring for the tally and interlock circuits — come through holes in the bottom of the cabinet. You can see the coax coming in near the bottom of Fig. 1 next to the box of mouse bait, which the mice apparently enjoyed.

Additional wires enter at the rear of the ATU, below the contactor, behind the coil labeled L-14. The mice just

climb up the wires and cables, through the holes in the bottom of the cabinet, and have a nice dry home for the winter. You can see one mouse that didn't make it in the second photo (Fig. 2), next to the Delta TCT RF sampling transformer.

The beautiful aqua color of the copper ground strap under the tower lighting choke is "patina" caused by rodent urine. It was pungent when Bob opened the door and started vacuuming out the nests.

After he cleaned the ATU with a small inexpensive shop vac (which he threw into the dumpster afterward), he sealed the two 1-1/2-inch entry holes from underneath using three layers of overlapping 2-inch-wide aluminum foil tape — the kind of tape that *should* be used on duct work, not the gray cloth/vinyl tape that's commonly called duct tape. Bob wrapped a layer of tape down each cable as well. He could barely reach the hole at the rear of the ATU. The metal is fairly thick but would not have supported steel or copper wool, much less spray foam. Bob didn't bother

with tape on the inside.

Five years later, there's no sign of mice inside the cabinet or, for that matter, the doghouse.

Technical consultant Lewis Dye Collins also commented on the rodent nest we showed that had been hidden behind an electrical box panel.

Lew writes that every transmitter engineer should trot down to the closest Harbor Freight store (www.harborfreight.com) and purchase an infrared thermometer. It doesn't cost much and is useful for all sorts of things. It can be used to diagnose "hot" connections inside circuit boxes, coaxial elbows or transfer switches, or blower/fan motors.

With that in mind, Second Opinion principal engineer Greg Dahl writes about an add-on for your smartphone or tablet. Manufactured by FLIR (www.flirone.com) and seen in Fig. 3, the FLIR One is a plug-in module that turns your iOS or Android smartphone or tablet into a thermal imaging camera for under \$250.

Fig. 4 shows an engineer's arm pointing to a heat-producing transformer

(continued on page 18)

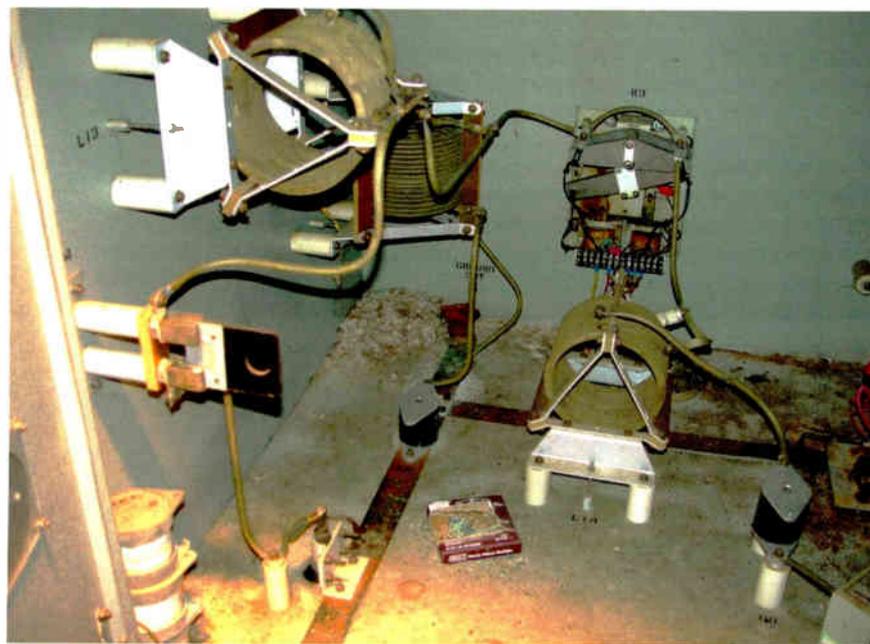


Fig. 1: The inside of an ATU makes a perfect home for rodents.



Fig. 2: Urine can damage the ATU components, as can nesting material.



Fig. 3: The FLIR One fits in the palm of your hand ...

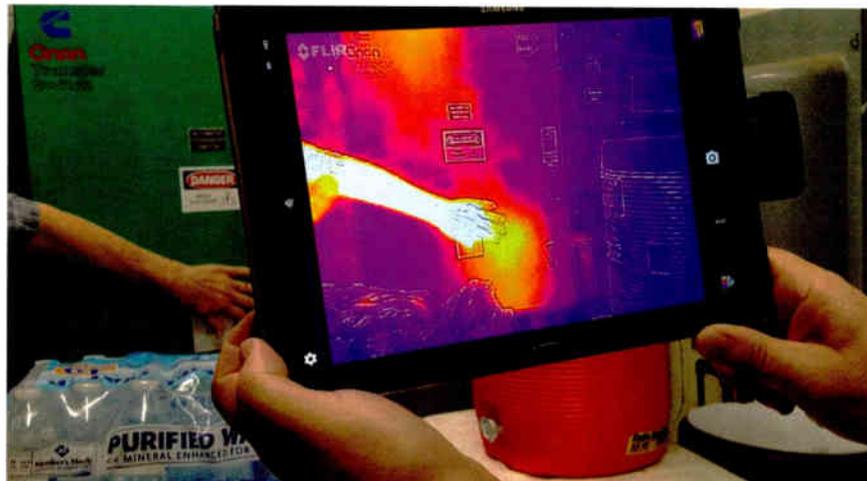
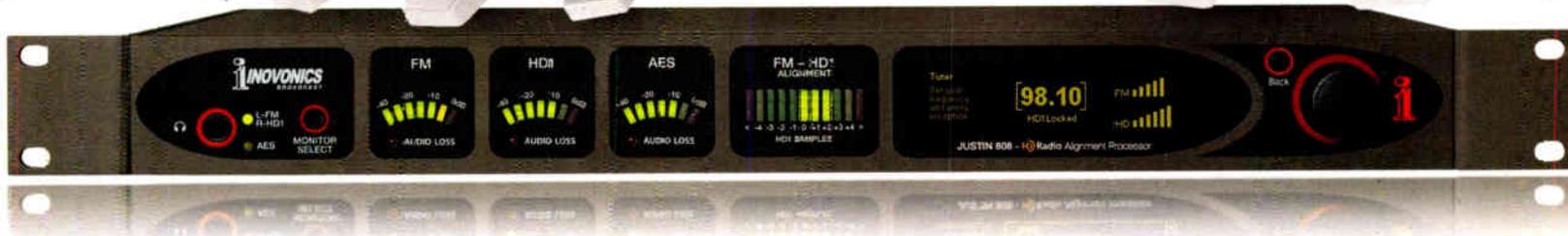


Fig. 4: ... and provides a visual display of heat-generating components.



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— Sam Caputa, Director of Engineering, Emmis Communications.

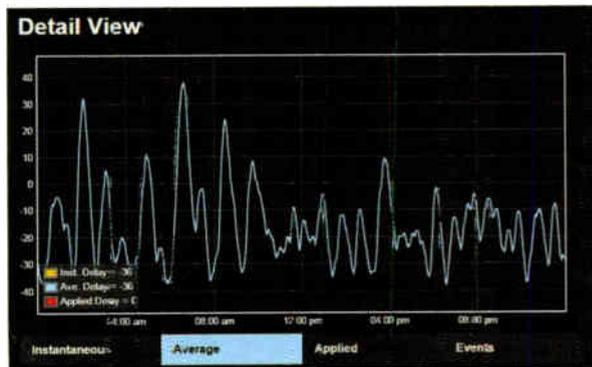
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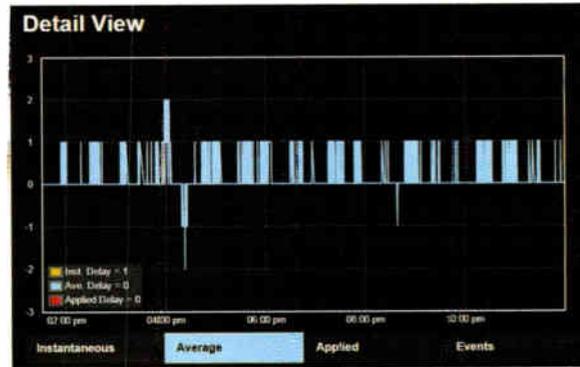
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INSULATORS

(continued from page 1)

guy line insulators were damaged or outright broken on the 380-foot tower at the center of the array. The violent wind had whipped the lines mercilessly.

At least one insulator broke away entirely, causing metal guy line sections to be electrically connected, rather than insulated from each other. These are



Fig. 2: Insulator half gone from a guy line.

sometimes referred to as “Johnny Ball” or “egg” insulators.

It is a good thing that insulators are designed and built so that failure will not result in guy line separation. The photos you see were taken when the damaged insulators were finally on the ground for close-up inspection near the end of the project. It is important to note that a cracked insulator can arc over, especially when the crack fills with debris and water.

The repair was a big job. It was determined ultimately that all guy lines and insulators on the tower had to be replaced. The insulators are spaced at one-tenth or less wavelength intervals. At 1380 kHz, that is 71 feet, so there are quite a few.

Not all tower contractors know the requirement to put insulators in guy lines at the correct intervals. You, as the engineer, must watch over the project to make sure it is done right.

Time went by because the insurance company had to agree to the repair, then supplies were ordered and a tower con-

tractor was hired.

I measured AM monitor points just before the tower crew started the repair. It was a reference point in case something went wrong. I could pin any new problem on the work, not something that might have happened a month or more prior.

Since KLIZ is a multi-tower array, I was able to divert AM power to the north tower, which is 180 feet away. I

A cracked insulator can arc over, especially when the crack fills with debris and water.

did that at 1,000 watts instead of the 5,000 for which the station is licensed. That was to keep the tower crew safe. I also grounded the unipole feed on the troubled tower to keep AM RF voltages to a minimum while workers were on it. Grounding was by a heavy cable with large alligator clips (as described in my Radio World article in the July 6, 2016, issue).

KLIZ is non-directional day, as mentioned, so it worked out using a single shorter tower in the array during the day, even if it was not the one normally used. By sunset, the plan was for the station to go directional, as required by FCC rules.

The tower requiring work has two FM transmit antennas. The FM transmitters had to be reduced in power or completely shut down for much of the project. Station management and programming weren't happy about it, but



Fig. 3: Insulator completely missing from a guy line.

what could they do? Safety comes first.

The procedure involved installing and tensioning a temporary guy line to a slightly higher location on the tower than the original guy. Then the original line was taken down and a new line hoisted in its place. That new line had to be tensioned while tension was being released from the temporary line. It was a slow job that took three men a week to complete.

The first day ended in the installation of a temporary guy line that did not have

(continued on page 18)



Fig. 4: Workers on the tower near an FM antenna.

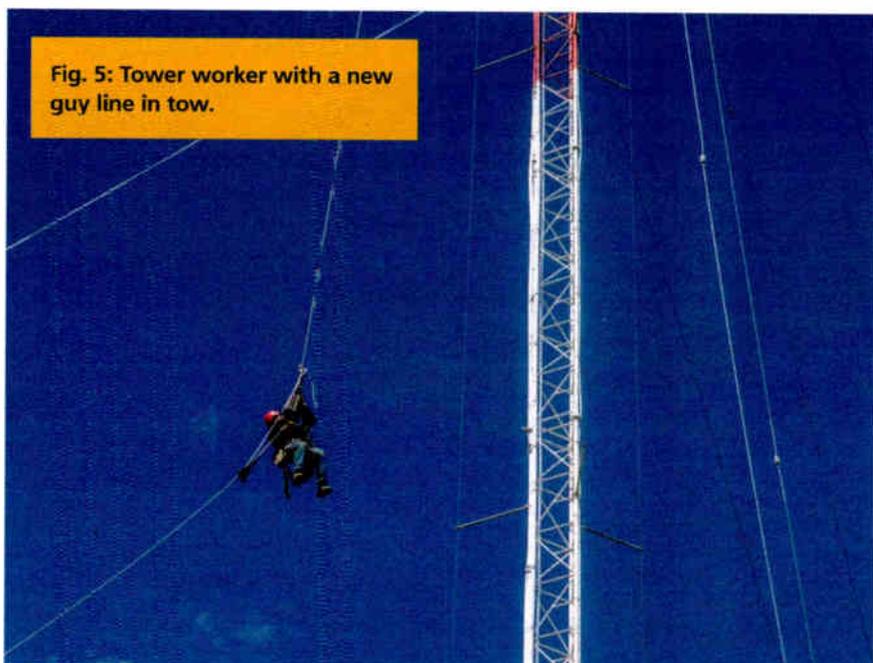


Fig. 5: Tower worker with a new guy line in tow.

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WORKBENCH

(continued from page 12)

inside a generator transfer panel. Using the video mode permits a "moving" video image of the systems under inspection. The hotter the source, the whiter the viewed image.

Imagine filming the inside run of your rigid transmission line, monitoring the heat of elbows and bullets ... then comparing the results every six months to a year, in order to spot heating trends. Another diagnostic idea is to stand in the transmitter room and "view" all conduit, electrical boxes or equipment. You can also measure hot spots inside an AM phasor or ATU.

Contract engineers should consider this as a service to be provided to customers. The fact that the image can be saved makes the results especially useful. Don't limit the measurements to the transmitter site. Viewing studio electric

boxes and air conditioners/compressors/air handlers can spot trouble before a massive failure occurs. The cost of the module can be recouped from the first job, with subsequent jobs being highly profitable.

Check with the station's insurance company to see if this kind of service would reduce insurance premiums. If so, that's another incentive for the station to pay you for this service. Larger contract firms may want to offer the service to members of state broadcast associations.

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

INSULATORS

(continued from page 14)

insulators. Directional operation that night was impossible because the tower became, electrically, an odd length that could not be compensated for in the phasor system. So that was a lesson learned the hard way. From

ing up on the ground. One essential element in this lesson is that thinking ahead will help avoid problems later.

All was well after the repair work was done. The towers stood tall at sunset for everyone to admire. They have been there for 48 years and should be around for a while longer, providing broadcasting to the area.

This article is not just about what I

PEOPLE NEWS

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Derek Rohloff

Tagstation

Named head of automotive

Ananda Leeke
MMTC

Chosen as director of digital policy

Darren Davis and Suzanne Grimes
Radio Advertising Bureau

Named members of the board of directors

Matthew Berry
FCC

Chosen as Chairman Pai's chief of staff



Kenneth Weinstein
Broadcasting Board of Governors

Elected acting chairman of the board



Jesus Lara

Univision

Hired as general manager of digital, content and entertainment



Diana Wilkin

Share Rocket

Tapped as president of broadcast



Fig. 6: Guy lines properly tensioned.

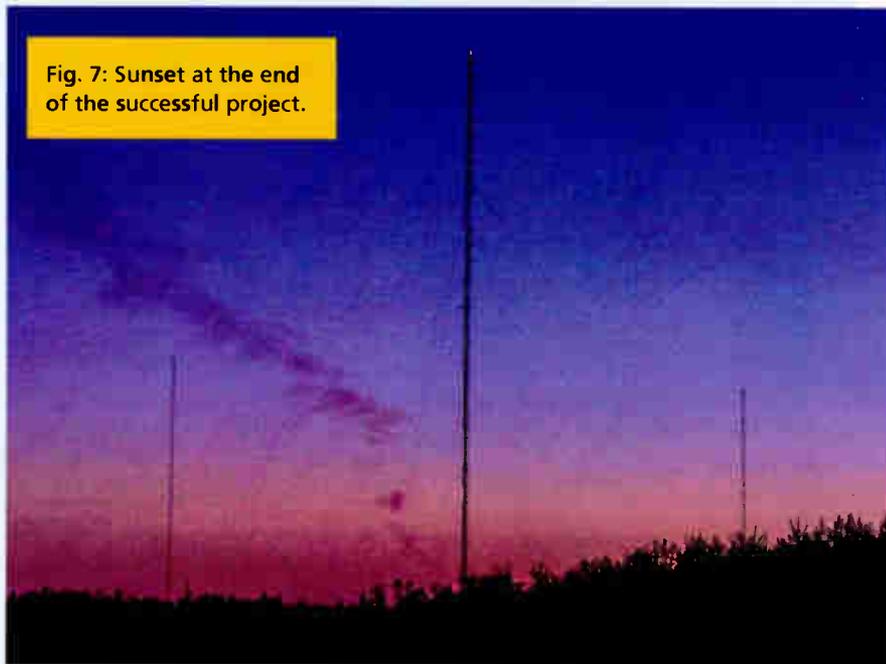


Fig. 7: Sunset at the end of the successful project.

then on, any temporary guy line was insulated from the tower so it would not significantly distort the AM directional night pattern during the project.

Guy lines droop slightly, but that is normal when they are tensioned properly. Good engineering practice dictated that I confirm all AM operating parameters. Fortunately, they had returned to normal before I released the tower crew to go home. That included measuring AM monitor points while the crew was still clean-

did, but about what you should do in a case like this. Also, if you have an AM tower that has changed impedance, it might be good to pull out binoculars to see if one or more of the guy insulators is broken, especially where a guy line meets the tower. It makes perfect sense to check everything.

Mark Persons, W0MH, is a Certified Professional Broadcast Engineer and has more than 40 years' experience. His website is www.mwpersons.com.

Photos © Mark Persons

HIGH CAPACITY EVENT STUDIO TRANSMITTER LINKS



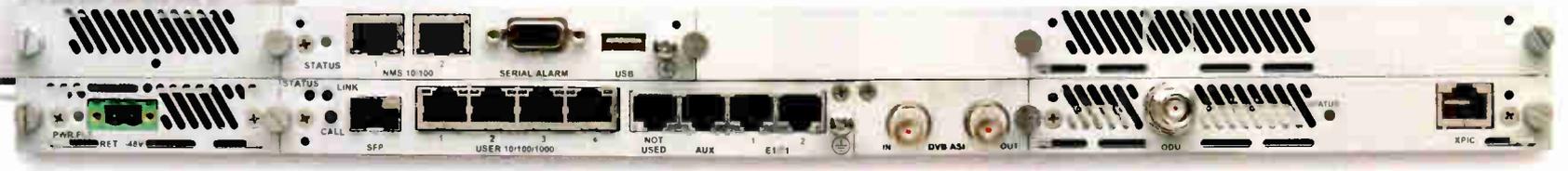
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indoor unit



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World Radio History

“Millennial” Speaks to the Creator’s Peers

Megan Tan’s podcast was born in a closet in Maine but has grown up a lot



NEWSMAKER

BY JAMES CARELESS

Broadcasters who despair of connecting with millennials — now defined as Americans born between 1982 and 2004 — should sit down and listen to Megan Tan’s popular and highly regarded “Millennial Podcast.”

Produced since 2014 by Tan in Portland, Maine — she moved there after graduating from Western Kentucky University with a photojournalism degree but no clear plans — “Millennial” has become an influential hit with that generation. This includes achieving up to 300,000 listens a month through major streaming sites such as iTunes, Soundcloud, Stitcher and Tunein.

In 2016, the podcast was selected for distribution by PRX’s Radiotopia, a curated podcast marketplace that offers Tan and other independent audio producers ways to earn money from their content. She has sponsors through Radiotopia — including FreshBooks accounting software, Squarespace web design and Blue Apron meal kits — whose pitches she works into her content in a seamless, personal way typical of the medium.

This podcast that began as a project for Tan’s friends and quickly spread by 20-something word of mouth has been winning praise and exposure in the mainstream media.

“‘Millennial’ is a consistently engaging podcast,” The Guardian’s Priya Elan wrote two years ago; Elan reviewed and helped to popularize the program. “Tan’s audio autobiography feels like an authentic study of the twenty-something condition in 2015; caught between an economic landslide and an uncemented sense of self, millennials, we are told, are defined by their

contradictions.” The Atlantic signaled its approval by ranking “Millennial” 15th in its 50 best podcasts of that year.

“COMING OF AGE”

How does Megan Tan get so much attention for a show whose narration she records in her closet? The explanation is at www.millennialpodcast.org: “Millennial is a podcast about coming of age.” Its original mission: “Millennial is a podcast about what people never teach you — how to maneuver your 20s” but an updated summary reflects Tan’s aim to make the podcast more universal, she explained in an email. (The oldest millennials are now 35.)

In this vein, Tan’s 32 podcasts to date cover topics such as making the right life decisions (“How do you know which ones will lead you to become the person you want to be in the future? And which ones may screw everything up?”); marriage (“After four years of being in a relationship, my boyfriend and I have never talked about marriage. But after sitting down with my family, all of that changes”) and what she calls “Have and have mores” (“How do you come to terms with your own financial status when your peers are living lives you can’t afford?”). In her third season, Tan traveled to Cuba — a departure from her previous autobiographical work.

“I wanted to produce the kind of audio content that I love consuming,” Tan told Radio World. “I love audio stories that are really well told, and that is what I have been trying to do with the ‘Millennial.’ I chose this

theme not just because of my own stage in life — I relate to life as millennial — but also because there is so little out there to help 20-somethings make their way through growing up.”

Collectively, Tan’s roster of topics deliver what she promises: to assist her listeners in figuring out how to direct their own lives, by sharing how she and people around her are dealing with theirs. The results are resonating with Tan’s growing audience and media outlets who have noticed what she is up to.

DEFT PRODUCTION

Tan recorded the voice track of her first two seasons in a closet. “I was in there with a microphone, my laptop with my script on it and a Tascam audio recorder,” she said. “The closet made sense acoustically to me, because of all the sound-dampening padding.”

Listening to Millennial’s first podcast, you can hear the effect of “closet dampening” in the opening words: “Growing up, I loved school. Even now, when I walk into an office supply store, I get a rush of adrenalin. The smell of new book bags just trigger these anxious



Welcome to Season III.

and excited feelings that remind me of getting excited about my first day of school.”

That said, it doesn’t take long for Tan’s deft, NPR-quality production skills to come to the fore: When she mentions her mother laughing at her daughter’s love for school, you hear her mother’s laughter rising up in the background, followed by a seamless audio clip from Tan’s mother that takes the narrative further; followed by yet more mixes of narration, sound effects, on-site audio and music that makes sense in context.

This is the genius of the podcast, from a production and content standpoint: Tan may be putting this podcast together at home but her production skills and sense of the mix match the best audio produced by NPR, the BBC and Canada’s CBC Radio. In this way, Tan connects with millennials’ desire not only for content that is relevant to them but also for a polished level of production and presentation that they are accustomed to.

LESSON FOR BROADCASTERS

These elements — listener-relevant content from a host/producer, aided by professional quality mixing

(continued on page 23)

It's Time to Take Your Show on the Road

It's not too late to plan for your 2017 radio tour broadcasts

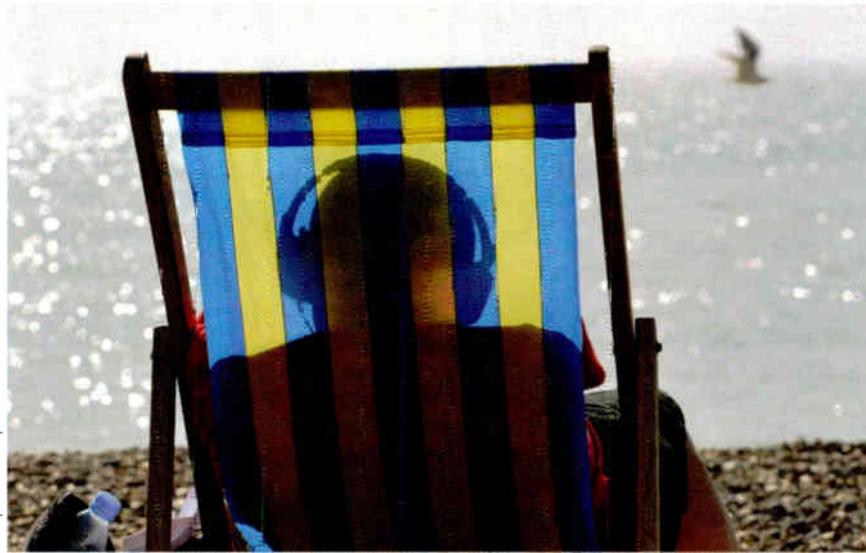
Recently, I spent an interesting week on the road for business. From the thrill of seeing the new and unusual to the agony of losing my wallet, I had a lot to talk about — for better and for worse.

For the first time in ages, I actually felt like getting behind a microphone because I had real stories to tell.

When was the last time you took your show on the road? Sitting in a studio without the occasional excursion can become routine and lead toward a “sameness” in approach. It's not too late to plan now for your 2017 radio tour broadcasts! Here are a few thought starters.

How often? Once per quarter for a major live-on-the-road broadcast is enough to leave an impression on your regular listeners. In between, getting the show out once per month locally is certainly worth scheduling.

Who goes? Morning shows are the best vehicle for road tripping. The audience is accustomed to hearing more chatter in the morning and will totally enjoy the character development as the on-air team describes what's taking



istockphoto/loversnap

place. If you have a team of four, I say go for it and take everybody. The more people on the trip, the greater the likelihood that the shared experiences will be compelling.

What is your purpose or premise? While these on-the-road shows do take a great deal of planning, it's much

easier if you're wrapping the broadcast around a concert, cultural festival or other major event. Because you have a pre-planned theme, it's easy to describe during pre-promotion and at the actual broadcast (like the Super Bowl, the CMAs, the Grammys, Bonaroo, etc.)

It's also likely that at huge events, you will have better access to celeb-

PROMO POWER



Mark Lapidus

rities. I have also heard of and participated in many broadcasts from fun vacation spots.

For example, you could spend two lovely days in Cleveland at the Rock & Roll Hall of Fame, describing the museum and the city, talking with people who can tell stories about inductions, or pre-recording some phoners with inductees. Follow the stars to Los Angeles and spend a day or two sightseeing and celebrity-seeking in Hollywood. Or search high and low in Philly for the best cheesesteak in the world.

Part of the fun is your team simply laughing about the previous day's events and telling tales about how the show members have been dealing with each other. Regardless of where you go, record sound everywhere to use in the show and take pictures and video for social media and your website.

Who pays? While it takes effort, it is quite possible to obtain local advertisers to sponsor your road trip. Think outside

(continued on page 22)

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Two Young Men With a Radio Dream

Montauk station WELJ(FM) is run by a pair of 20-year-olds

STATION OWNERSHIP

BY KEN DEUTSCH

By age four Mozart was playing violin and piano. Pablo Picasso was an established artist before he was 15.

Matthew Glaser and Andrew Adams may not be *quite* so young; yet it doesn't feel like a stretch to call them prodigies as well.

Both are age 20 and still in college, but they are business partners and majority owners of WELJ(FM), a Class A FM with 6 kW power broadcasting at 104.7 MHz and licensed to Montauk, N.Y., at the eastern end of Long Island. They acquired the license last year from Joule Broadcasting, a spinoff trust of Cumulus Media, which had most recently aired a "NASH Icon" format on the frequency.



The lads believe they are among the youngest people in the United States to own a commercial FM. They selected a market a little over 100 miles from New York City, one known as a playground for the rich and famous.

The pair had attended Smithtown High School East in St. James, N.Y.,

about 70 miles from Montauk. "The creation of Bold Broadcasting was an idea that Andrew and I had back in high school," said Glaser. "But we wanted a media company that would have a broader reach than just radio.

"We believed that corporations and members of the community needed different ways to interact beyond what most media firms focus on. We produce the Long Island Summer Festival, which gets about 20,000 attendees a year, and this is another avenue for us. Bold Broadcasting can use events like this in the marketing mix across the spectrum."

RADIO IN HIS BLOOD

Glaser comes by his interest in radio naturally. His father Michael was a chief engineer with Barnstable Broadcasting in the Long Island area for 16 years and is now with Cumulus in New York.

"It's genetic," said Glaser the younger. "My father took me to visit his stations several hundred times, and I guess radio has just been a part of my life." (Adams too is related, though more distantly, to a radio engineer.) But Glaser the elder had no hand in helping his son raise money for his incursion into the field.

ROAD TRIPPING

(continued from page 21)

the box to devise an unusual sales package that includes mentions in all pre- and post-promotion.

How about creating a contest during which one lucky pair of winners gets to join the trip? Listeners can register on your sponsor's website or by text messaging an entry that generates a bounce-back coupon from the sponsor. Provide bumpers in and out of breaks during the shows plus live reads; you might even bring along the sponsor and

"We have owned other companies prior to this one," said Matthew Glaser, including the festival as well as an events production company, Bold Entertainment. "Andrew and I funded a portion of WELJ, and we also had venture capital involved in the purchase."

Adams said they identified the opportunity through public listings. "We negotiated it ourselves, only had an FCC attorney for some legal help." They declined to discuss the sale price for the license, which several published reports placed at \$197,000.

PROGRAMMING AND PROMOTIONS

The team began selling airtime last fall. The station went on the air with all-Christmas music in November and switched to an "easy favorites" format at the end of December, according to Adams, who serves as promotions manager in addition to his full-time gig: He is a senior at SUNY Plattsburgh, studying marketing, while Glaser is a senior at Stony Brook University in New York, studying political science.

"I didn't have broadcast experience prior to getting involved with WELJ," Adams said. "But we have a great team working beside us, real professionals. For example our program director is Keith Allen, who launched WBZO(FM) on Long Island, known at the time as B103. Our station will become a staple in the community and a place for people living in the East End to interact with us online and at our events."

Glaser said that, while the station is automated for now, WELJ plans to unveil a lineup of live air talent in the spring.

"Over the last two decades, radio has become over-commercialized and has not been done the way it should be," he said.

"We're not just all about the commercials; we are about building the community. That's something a lot of stations don't do. We see the value of giving back, and I think that's why we'll be successful." Asked where ad business will come from and whether it will be seasonal, Adams said in a

his/her spouse to watch the broadcast and bond with your team.

Another approach is to trade the biggest expenses of the trip such as hotel, air and rental cars. If you work for a big company, maybe a pal in your destination's market will actually let you run trade on her airwaves — and you'll return the favor someday.

Three tips before you travel: 1) Take a picture of your driver's license and store it in your email. 2) Leave that extra credit card at home. 3) Don't lose your wallet!



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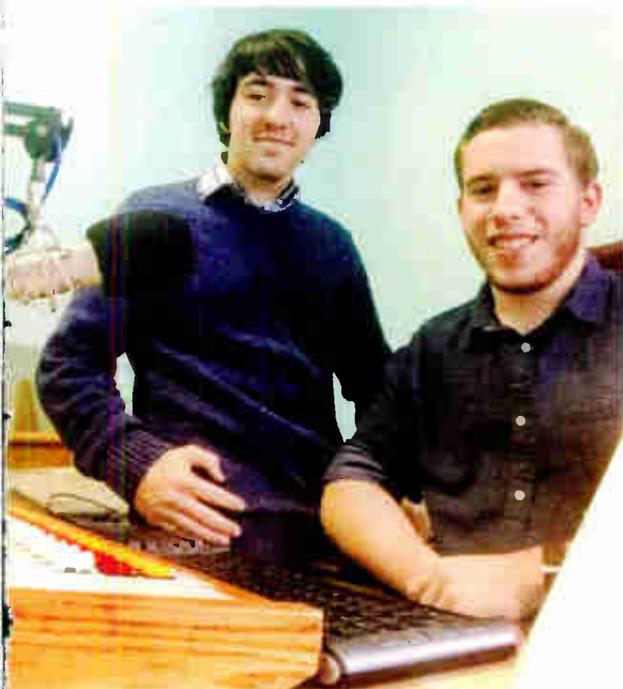





February 2017
From the Publishers of Radio World



GM JOURNAL



Matthew Glaser and Andrew Adams

followup email. "A lot of advertisers thus far have approached us looking to reach second home owners and the higher income market of the East End. We think the advertisers will be seasonal but the overall business will not."

At the new WELJ, social media will definitely be part of the mix.

"Our festival is in its third year, and we have about 4,000 people on its Facebook page," said Glaser. "My partner and I are good with digital

media, and we'll offer it to our clients, as well as using it to attract our own audience. Normally, station websites have an events page, contests and pictures of the artists. Maybe a 'listen live' button. But our website, *welj.com*, is an information hub. You can listen live, but in the coming weeks and months, we are rolling out an arts section, partnerships with journalists, shopping, dining and real estate sections, too. We want people to take us with them online, even if they can't pick up the station."

Has their age presented any problems for these entrepreneurs?

"Well, it does tend to be difficult when we try to expand into other media because people think we're quite young," said Glaser. "Regarding the people with whom we want to do business, I'm younger than some of their kids! The biggest challenge we have is demonstrating our abilities and our competence, but I think that everyone, from local store owners to large institutions, is learning that Andrew and I are very capable."

WELJ's studios are in East Hampton not far from the transmitter, while the production studio is 45 minutes away. "That's just a product of the expense of living here," he said. "But we'll be revealing a new studio soon, and it'll have a vibe to match our music. We also have a 30-foot mobile studio that we'll use for live broadcasts across the east end. I want to show our community that young people like us can have a good head on their shoulders."

Ken Deutsch says he too is live and local and can be seen by anyone who cares to look around the beaches of Sarasota, Fla.

MILLENNIAL

(continued from page 20)

and excellent story-telling by a person with solid presentation skills — have helped drive the podcast from being an idiosyncratic personal project to a popular podcast.

But what also keeps "Millennial" successful is Tan's evident refusal to let popularity go to her head. Thirty-two episodes on, she's still producing it at home, "rather than going corporate in some big impersonal studio," she said. This includes Tan voicing her narration in the closet, even though she is now earning enough money to make the podcast her full-time career.

"I like living where I am, telling the stories that matter to me and my listeners, and keeping complete editorial control over the 'Millennial' podcast," Tan said. "Hopefully 20 years from now, I'll still be telling compelling audio stories about dealing with life's challenges and people will be listening — because we never really stop growing up."

This dedication to authentic audio story-telling is at the heart of the podcast's success. It remains as clear in episode #29, titled "You Can't Go Home Anymore," which asks, "The plan is to grow up and chase after your dreams, but what if getting closer to your goals means moving farther from your family?" — as it did in the premiere podcast.

Tan proves that young listeners will flock to high-quality, well-produced audio programming if it actually speaks sincerely to them. Broadcasters who assume that millennial listeners are a lost cause take note: if you provide honest content that resonates with them, they will come.

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Mix-Minus ... for a Mixer

Does the term ring a bell? Learning the radio basics for those who might be new to the industry

BROADCAST BASICS

BY DAN SLENTZ

One in a series of occasional articles about basic broadcast concepts, for new LPFM broadcasters and others who may be unfamiliar with industry terminology.

A "mix-minus" is a mix of audio channels minus one (or more) of them — subtracted for reasons that will become apparent. It is an important component of broadcast audio. Personnel involved in engineering for on-air broadcast or certain recorded radio program production must

understand the practice.

Telephone audio plays an important part in radio. But using a telephone with a nontraditional audio board — the typical inexpensive multipurpose audio mixer — can be a little challenging, and confusing to a novice. Many people who are newer to radio operations or engineering may not understand this concept of mix-minus and how it's used with a phone coupler, also called a hybrid.

TELEPHONE LINE

The coupler is a device that takes sound from the caller and returns audio to the caller. It grabs or "seizes" the phone call when selected and acts as the interface between the actual telephone line and the console or mixer.

Traditional broadcast (standard radio) consoles often have built-in, dedicated mix-minus outputs. These can be assigned so the caller only hears the sound from certain mics or audio sources (though never their own voice) via the coupler.

When a coupler is connected to an audio mixer, you'll need to provide a console output to a caller so they can follow what is being said and respond. But you do not want to loop back (or "return") the caller's own voice back to them; doing so would create an audio feedback loop.

Most phone couplers provide a short burst of noise when connected to the phone line that acts as a reference for equalizing the audio from the caller for the best quality sound.

Couplers offer a control labeled "null" that helps keep the return audio (to the caller) from remixing back in with the caller's own voice on the coupler output. If the null didn't occur, you'd hear the same program material and mics going to the caller "bouncing back" into the console/mixer but sounding tinny ("phone-like"). The null



This setup allows a standard mixer to be used with phone couplers to provide a mix-minus to callers. Note Aux settings.

Plug-Ins Made With Love

FREESOFTWARE

BY CURT YENGST

Tokyo Dawn Records is a small indie label based in Munich. It's also the home of Tokyo Dawn Labs, where they create their own VST plug-ins, with an emphasis on mastering audio.

Presented here are three free versions of their Nova dynamic EQ, VOS SlicEQ mastering EQ, and Kotelnikov stereo buss compressor. All plug-ins have paid versions, which are relatively inexpensive (each under \$100), and add a few more features.

The Nova dynamic EQ is an interesting tool in that it is both an EQ and a compressor. At first blush, the interface looks no different than your garden-variety software parametric EQ. It operates in the same fashion, allowing the user to drag one of four bands into any desired curve. But this plug-in also allows each band to adjust the final loudness based on compression settings like threshold, ratio and make-up gain. The graphic representation of the EQ curve also indicates how much compression is taking place along that curve. It's a multiband compressor with a twist! It includes sum/difference (M/S) processing, A/B comparison of settings, and an integrated spectrum analyzer.

The VOX SlicEQ has an interface modeled after the vintage Pultec mastering EQs. Its three bands provide variable frequency and gain, with low and high bands offering a choice between slope or notch adjustment. One key feature is the mode selector, which allows users to emulate one of four distinct EQ flavors from German, Russian, British and American designs. Also included are a high-pass filter, output stage adjustments, M/S processing and A/B comparison.

The Kotelnikov stereo compressor is a wideband mastering EQ with a extra features for surgically processing a final mix. One standout is the stereo imaging sensitivity adjustment. Where most stereo compressors offer a "link" switch to affect both channels equally, the Kotelnikov makes this stereo linking a variable control. The release control is divided into two separate controls, peak and RMS, allowing for better handling of signal transients. Another handy feature is the Delta button. This allows users to hear the difference between the original and compressed signals. Better put, it lets you hear what the compressor is taking out. Like the others, it includes M/S processing and A/B comparison.

All plug-ins are 32- and 64-bit compatible; and there are Mac versions available. They all come with a decent compliment of presets that serve as good starting points. The interface is clean and intuitive, but each also includes a "help" button. Activating this and mousing over any control brings up a text bubble explaining that control's function. Short training videos are also available at the website: www.tokyodawn.net/tokyo-dawn-labs.

These are very well executed plug-ins. Happy mastering!



Tokyo Dawn Nova Equalizer



Tokyo Dawn SlicEQ



Tokyo Dawn Kotelnikov Mastering Compressor

control helps keep this minimized.

So now we know the phone coupler returns sound from the console's mix-minus to the caller, equalizes the callers audio to the console and provides a null control of audio to/from the coupler.

Some stations find themselves using standard audio mixers as opposed to radio consoles. These mixers are designed for use in a small recording studio, mixing a band or use in a radio program production studio; they were not built for use in a live radio studio environment.

They lack features like speaker muting and monitor, and they also don't provide automatic mix-minus returns for phone couplers.



The Telos Hx1 hybrid provides the phone interface for the mixer at WDNP(LP).

But this does not mean you can't use a mixer with a phone coupler; it's just a matter of figuring out how. Keeping in mind that a mix-minus is the mix without the caller's own audio, it's easy to use a mixer's "aux sends" to make your own mix-minus.

Here's how. Connect your Aux 1 output to send that audio to your caller. Then turn up all the Aux 1 pots that you want to send to the caller other than the one from the phone coupler's channel (which would send that the caller's own voice back to them — defeating the purpose of the mix-minus). If you add a second phone coupler, you can feed that phone coupler from your Aux 2 send and send that output (less their own Aux 2) to that caller.

If you want the callers to hear each other, just be sure the Aux 2 pot for Caller 1 is turned up and turn up Aux 1 for Caller 2. This allows each caller to hear the other without getting their own voice returned.

The picture of a mixer surface shows how Aux 1 and Aux 2 would be adjusted to allow each caller to hear the other but without returning their own audio (assuming that the phone coupler for Caller 1 is wired to Aux 1's output and the phone coupler for Caller 2 is wired to Aux 2's output). As phone sources are mono, a single mono pot can be used.

The author is a longtime radio/TV engineer. He helped found WDPE(LP) in Dover/New Philadelphia, Ohio.

Free Convolution Reverb From LiquidSonics

FREE SOFTWARE

BY CURT YENGST

U.K.-based LiquidSonics offers "charityware" versions of their Reverberate convolution reverb and Filtrate linear-phase paragrahic EQ.

What is "charityware?" It is essentially a free download; but instead of the developer asking you to send a suggested donation to them, should you enjoy their product, LiquidSonics asks that you make a donation to Cancer Research UK. The donation is optional and the software fully functional.

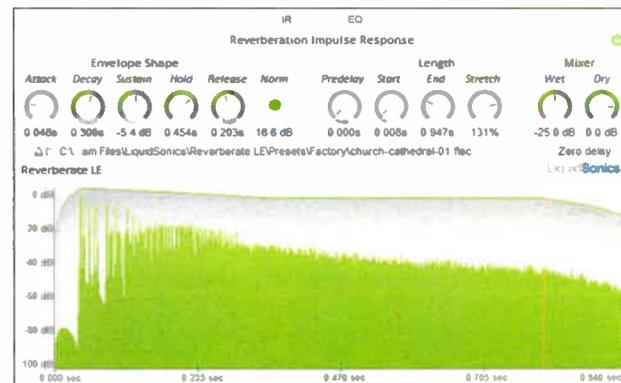
CONVOLUTION REVERB

First up is Reverberate LE, the convolution reverb. For the uninitiated, a convolution reverb works by digitally simulating an actual space. This is done by sampling a sound impulse response captured in a physical space, like a cathedral or a concert hall, and performing a mathematical operation (a convolution) on audio fed into the processor based on that response.

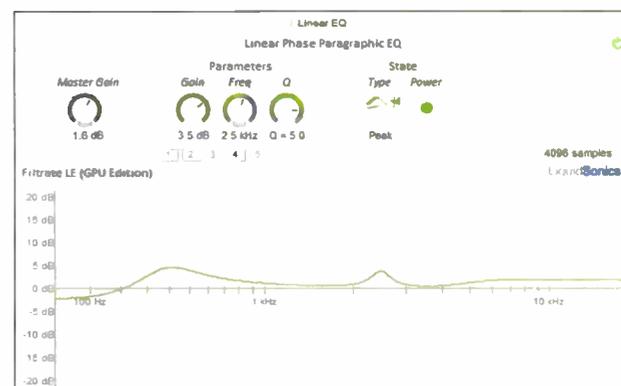
The result is a more natural-sounding reverb, as the effect is based on how the sound would behave in the real environment. What's more, impulse responses based on actual specific locations can be imported into the plug-in. Want to sound like you're in Carnegie Hall? There's an app for that!

Reverberate LE comes with a few preset impulses but can also import additional impulses from commercially available libraries. In addition to the presets, the interface offers controls for creating custom reverbs, including shaping the audio envelope as well as traditional reverb controls like reverb time and pre-delay. Also included is a tab for a five-band paragrahic EQ to alter the tonal quality of the effect.

Speaking of EQ, LiquidSonics' Filtrate LE is a five-band, linear-phase equalizer. Its sparse interface offers the three basic parameters for each band: frequency, gain and bandwidth. There is also a selector for the type of EQ curve for each band — peak, cut or shelf — and a master gain control for final level. Below the controls, a graphical representation of the selected EQ curve is presented.



Reverberate LE Convolution Reverb



Filtrate LE Equalizer

I was unable to find any manuals for these plug-ins on the site, but fortunately the interface for each plug-in is intuitive enough. I found the virtual "knobs" a little confusing at first. They are operated by holding the left mouse button and then dragging the mouse in a circular pattern around the outside of the knob. Making finer adjustments is accomplished by moving the pointer farther away from the knob, creating a wider arc. Most other interfaces I've come across involve moving the mouse either up and down or left and right. Aside from that, both plug-ins were stable, easy to use and sounded very good.

Both VST plug-ins are Windows 7- and 8-compatible and can be downloaded at www.liquidsonics.com.

Curt Yengst, CSRE, is a frequent contributor.

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MARKET PLACE

USB Warmth: Want to get some of that some of that famous tube "warmth" without having to go to the trouble of having to record in a recording studio that has a rackmounted tube preamp? Try Behringer's new MIC500USB, a tube-based preamp with a USB interface.

The tabletop-style MIC500USB uses the venerable 12AX7 tube in its signal path to caress signals. XLR and 1/4-inch inputs provide multiple pathways in for microphones and line sources. Features include 48 V phantom power, a 20 dB pad, a phase reverse, limiter and a low-pass filter.

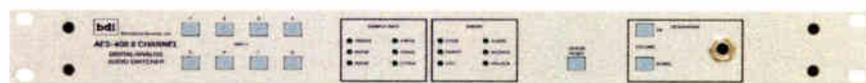
There's also onboard digital EQ customized for specific instruments and vocals. Gain and output controls drive the MIC500USB. Behringer offers several free software instruments and plug-in downloads, including at press time, the Tracktion DAW program. Price: \$59.99.

Info: www.behringer.com



Switch This: Adding to its switcher offerings, Broadcast Devices Inc. has released the AES-408, an eight-channel digital/analog switcher.

On the rear panel are four AES3 digital inputs and four +4 dBm analog inputs. The analog inputs can be changed to -10 dBm unbalanced inputs.



Outputs consist of two AES3 digital and one +4 dBm analog.

It also offers a headphone output with volume control. Remote control is via standard GPIO and RS232/RS485.

It has detection for sample rates (32-192 kHz) and errors, e.g. parity, audio, silence, etc.

Ethernet control can be added via the BDI INT-100 Internet Interface Kit. Other options include dual power supply operation and 75 ohm BNC digital I/O. Price: \$1,595.

Info: www.broadcast-devices.com

Adam's S: Germany-based speaker maker Adam Audio is releasing a third generation of its flagship S Series of powered monitors.

The line contains two- and three-way monitors. Low-frequency and midrange drivers are new designs as are the waveguides for the company's hallmark ribbon tweeters, themselves also tweaked.

Improvements are in the Extended Linear Excursion woofer, including a new magnet assembly; the midrange driver received similar enhancements; redesigned woofer reflex bass ports; onboard DSP is upgraded with a new SHARC processor. In addition, the cabinets have undergone reconstruction, the company says, to minimize vibration and add some heft.

Models in the line include the two-way S2V with a 7-inch woofer and 300 W onboard digital amp for the LF driver and a 50 W Class A/B amp for the tweeter; the three-way S3V with a 9-inch woofer, 4-inch carbon composite midrange dome/cone hybrid, 500 W digital LF amp, 300 W digital



midrange driver amp, and 50 W A/B amp for the tweeter; the three-way S3H (for horizontal orientation) with dual 7-inch woofers, 4-inch carbon composite midrange dome/cone hybrid, dual 500 W digital LF amps, 300 W digital midrange driver amp, and 50 W A/B amp for the tweeter; the three-way S5V with a 12-inch woofer, 4-inch carbon composite midrange dome/cone hybrid, 700 W digital LF amp, 300 W digital midrange driver amp, and 100 W digital amp for the tweeter; and the three-way S3H (for horizontal orientation) with dual 10-inch woofers, 4-inch carbon composite midrange dome/cone hybrid, dual 400 W digital LF amps, 300 W digital midrange driver amp, and 100 W A/B amp for the tweeter.

Adam Audio Chairman David Angress said, "Under its new management, Adam Audio has reenergized every aspect of the company, and our R&D team has been working behind closed doors to create this third-generation S Series line."

Info: www.adam-audio.com

Monitoring Diva: DEVA Broadcast has announced an addition to its range of FM monitoring devices, the DB4402 dual FM monitoring receiver, which offers monitoring and logging capabilities as well as simultaneous audio streaming in one tool.



The DB4402 is designed to allow users to set alarms for RF, MPX, pilot and RDS signal through email, SMS or SNMP, while TCP/IP and GMS connectivity offers remote control, operation and listening to the radio signal from any location. The unit features a DSP-based core, oscilloscope and RDS/RBDS decoder.

Info: www.devabroadcast.com

Connecting Points:

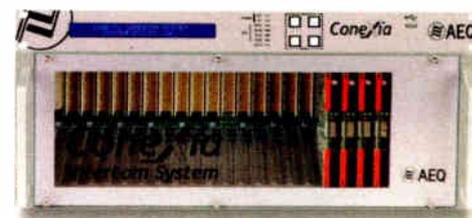
AEQ has released the Conexia platform, a full-featured intercom system that the company says can also serve as the centralized management of audio signals for radio and TV studios.

The Conexia is based on the Kroma Intercom master controller and AEQ audio matrix with a capacity of up to 1024 x 1024 crosspoints and a modular card structure. The company says the system is able to integrate intercom and broadcast audio sources into the same matrix, with internal sampling at 48 kHz at 24 bits, and that it is fully redundant. AEQ also points out that it is compatible with all Kroma intercom terminals and can expand its interface with Kroma accessories and AEQ cards.

An optional feature available for the Conexia system is the AEQ Phoenix family of audio codecs. These codecs are suitable for a range of telecommunications infrastructures and integrate via Conexia's management software CrossMapper.

AEQ reports that the Conexia intercom system has been put in place in a number of broadcast stations around the world.

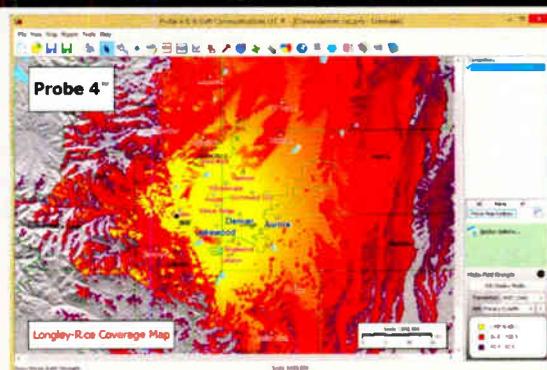
Info: www.aeqbroadcast.com



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Wanted: real plate reverb. abgrun@gmail.com.

AUTOMATION EQUIPMENT

WANT TO SELL

DIY-DJ Version 2.0 is now available. Over 500 copies of DIY-DJ, a Linux based radio automation system, have been distributed and now version 2.0 is available. Voice tracking, join satellite feeds, do unattended sports and remote events, temperature announce, scheduler,

some college football games that are on cassette tapes, approx 100 to 125 games, time period of entire collection os from the 1950's - 1970's, BO. Must purchase entire collection. Contact Ron, 925-284-5428 or ronwtamm@yahoo.com

WYBG 1050, Messina, NY, now off the air is selling: 8-channel Harris/Gates console; 250' tower w/building on 4 acres; collection of very old 78s dating back to 1904; 12' satellite dish on concrete base; prices drastically slashed. 315-287-1753 or 315-528-6040

WANT TO BUY

Collector wants to buy: old vintage pro gears, compressor/limiter, microphone, mixing consoles, amplifiers, mic preamps, speakers, turntables, EQ working or not, working transformers (UTC Western Electric), Fairchild, Western Electric, Langevin, RCA, Gates, Urei, Altec, Pultec, Collins. Cash - pick up 773-339-9035 or ilg821@aol.com.

2" plastic "spot" reels 6.5 or 8" diameter, as used for quad video. Wayne, Audio Village, 760-320-0728 or audiovlg@gte.net.

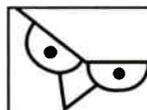
Equipment Wanted: obsolete, or out of service broadcast and recording gear, amplifiers, processing, radio or mixing consoles, microphones, etc. Large lots preferred. Pickup or shipping can be discussed. 443-854-0725 or ajkivi@gmail.com.

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, KDLA, KWBR, KSFX, KOBY, 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.

Looking for KFRC signoff radio broadcast from 1930 Andy Potter, running time is 0:22 & also the KLX kitchen the program guest is Susanne

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Caygill, a discussion of women's affairs with a long promotion for Caygill's appearance at a local store. Anne Truax, Susanne Caygill, running time is 13:44. Ron, 925-284-5428 or email ronwtamm@yahoo.com.

Looking for KTIM FM radio shows from 1981-1984 if possible unscoped. R Tamm, 925-284-5428 or ronwtamm@yahoo.com.

RECEIVERS/ TRANSCEIVERS

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Johnson Electronic SCA880 module, 67/92 Khz, 417-881-1846.

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AM Stereo radio. Call 417-881-1846.

RECORDING & PLAYBACK HARDWARE

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1960s-vintage MacKenzie Repeater machines, magazines, spare parts and manuals, complete or "parts" machines considered, James, 870-777-4653.

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5 KW	1995	Harris HT5 w/DIGIT
5 KW	1992	BE FM5B
10 KW	2002	Harris Z10CD, solid-state
20 KW	2002	Harris Z20CD, 2x Z10 Combined
21.5 KW	1990	Continental 816R2B, SS IPA
25 KW	1982	Harris FM25K with DIGIT
35 KW	1991	BE FM35B

Used AM Transmitters

5 KW	2003	BE AM5E
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Tap Your Entrepreneurial Spirit

Selling radio time? Aim to be the high-priced, high-value supplier

COMMENTARY

BY JAMES B. POTTER

In the course of my advertising business, I chat with stations about their strategies for success and their excuses for low-level achievement.

The reasons vary, but the key takeaway is found between the lines: lack of entrepreneurial drive and sense of partnership with their customers. Many stations are in denial that they have anything to do with their problems.

Their main excuse is low spot rates that don't allow frills or frosting, such as account executives who get to know their customers and their needs.

Ask why spot rates are falling, and you get familiar answers: competition from social media, an eroding listener base, too many other stations in town all owned by one consolidator, etc. But this is barking up the wrong trees.

Decades ago, stations romanced advertisers with care and respect for the ensuing value-for-value exchange. There were attractive suitors from other stations, so it was important to be a top-notch professional.

Many salespeople became seasoned veterans who supported families on their base, commissions and residuals.

Key air personalities sold their own shows by calling on advertisers personally and writing orders. Being on the radio was a big deal. Radio was important. Having the local morning man stroll into your bakery was an honor.

But as the years passed, stations changed hands and the veteran salespeople retired. The entrepreneurial drive got lost in the shuffle. Radio debased its own currency with syndicated programming, lost community prestige and started down the slippery slope.

It has nothing to do with competition, and everything to do with the lack of respect for the value proposition of radio advertising.

It astonishes me that some stations believe they can succeed in luring a teenager away from McDonald's by offering him/her a 5-percent commission with no base on spot sales at \$2.50 per each. That won't cover gas across town, and most of them wash out in a few days. It's a waste of everyone's time.

What are they thinking? That's all they can afford. Nonsense! It's conventional wisdom that the sales force should be the highest paid in the station.

The real root cause is management that doesn't have enough skin in the game to make it painful when they fail, combined with a general sense that the station is



iStockphoto/sankalpmapa

just a cog in a big wheel. Getting a spot on the radio is the main objective and the only obligation the station has. Beyond that, it's not their concern. The time gets billed and paid, and it's on to the next little one-shot conquest.

How very sanitary and short-sighted.

Unless the advertiser succeeds, their business is in jeopardy, and the radio station is in danger along with the advertiser. But when stations develop a sense of

partnership with their advertisers — when they genuinely care about their success and work to fine-tune the advertising campaigns to make it happen — the process works and everyone prospers.

Yes, of course, that takes more work than just bringing in a signed sales order with a few copy points and heading out the door to the next commission.

Spot rates can be raised over time by showing just how well radio actually does work for advertisers. Good radio programming and quality commercials drive customers into stores. Commercials that perform

Some stations believe they can succeed in luring a teenager away from McDonald's by offering him/her a 5-percent commission with no base on spot sales at \$2.50 per each.

well inherently are worth more, therefore stations can charge more for demonstrated results with testimonials as part of the contract.

Stop the race to the bottom by competing on price alone rather than performance. All radio stations are not the same like bananas in a bunch. Aim to be the high-priced high-value advertising supplier. Start to regard your advertisers like royalty and express gratitude for their business. Take that to the bank!

But you have to care enough to put your heart and soul into your station as though your life depended on it. Or go work at McDonald's.

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

Comment on this or any article. Email radioworld@nbmedia.com with "Letter to the Editor" in the subject field.

READER'S FORUM

HD RADIO

Responding to "Mike Cooney: Excellence in Engineering," RW Dec. 7, 2016:

So in the story about Mr. Cooney and Beasley group, once again the drumbeat of going all-digital radio FM and maybe AM is trotted out without explaining the real pros and cons.

It's sorta like the drumbeat of the mainstream media in the past election. They got it wrong, and I suspect IBOC is wrong also.

Ever since I got into radio in November 2000, AM IBOC is a technical mess. FM IBOC is sketchy as well. It appears to be driven by moneyed interests, and iBiquity (who sold it to someone else) and people have sunk too much money into a bad deal to let it go.

"Whoever knows why this man shouldn't be married to this woman, speak now or forever hold their peace." Speak up, dammit.

I'm a hostile audience, but no one has ever explained why digital AM/FM is any good and worth the investment. It's a hard assignment, but like the Wall Street Journal pro and con analysis articles on whether the U.S. should keep the 100 dollar bill, it would be well worth the read. C'mon, let's see the two sides, give out some real facts.

*Jim Jenkins
Owner/General Manager
WAGS Radio
Bishopville, S.C.*

WRITE TO RW

SEND A LETTER TO THE EDITOR:

Email radioworld@nbmedia.com with "Letter to the Editor" in the subject field. Please include issue date.

READER'S FORUM

AM REVITALIZATION

I want my semi-local AM stations to be available 24/7 in Brooklyn and Manhattan.

During the day, I get 1410 WHTG with noise, but at sundown it's "bye bye." WHTG then becomes useless noise, with no station coming through. WHTG should be allowed to boost up to at least 1 kW and stay non-directional 24/7.

Another station in my location, 1250 WMTR, at sundown has to switch to a dumb-down pattern that trims the lobe that would hit Brooklyn and Manhattan better. Again, it wouldn't hurt to let WMTR boost daytime power and go nondirectional 24/7.

Both these stations are coming out of New Jersey and serve us with music programming that is no longer available on AM or FM stations licensed in New York City. The protection of stations from hundreds of miles away — forcing the less-powerful, more-local stations to become unintelligible when the sun goes down — is ridiculous and annoying.

*Ernie J. Nardi
Broadcast Technician
MSG Media
New York*

The future of our FCC is beginning to look promising. David Honig's excellent recent commentary in Radio World is good reading. Hopefully the comments by President Trump and his outreach to the minority community will also be reflected in the people chosen to fill the vacancies on the commission.

Commissioner Ajit Pai is one of the few who really understands and supports radio broadcasters.

My confidence level in our country, and our industry and some new faces at the FCC is such that my partner and I have submitted a proposal to buy a station of our own, and we had put that purchase on hold this summer while we waited for the results of Nov. 8.

*Cal Zethmayr
General Sales Manager/
Host of "The Z-FILES"
WAAZ(FM)/WJSB(AM)
Crestview, Ft. Walton Beach, Pensacola, Fla.*



Responding to "FM Class C4 Would Bring Welcome Relief," RW Oct. 12, 2016:

I don't think AM owners should turn in licenses for cash. And I don't think we should shorten the AM band to 535-to-1005 either — both ideas mentioned by the MMTC.

What I do agree with is to lessen the regulatory fees for AMs and to lessen the daytime and especially nighttime interference standards. No audience members have been known to complain about nighttime interference between two Class Bs (for example), which would be increased by lessening the nighttime standards.

AM is not going to die in 10, 20, 30 (etc.) years as long as AM owners put compelling programming on them, such as ethnic programming, or formats that aren't carried on other in-market stations. And if AM stations can stay away from Dr. Feelgood's

Quack Remedies hours, that will help immensely!

If 1,000 AM stations in the USA shrivel up and die, then that's what happens. That would be a natural survival of the fittest, and there's no better way to thin out the herd. Planning a way to thin the herd will not work. Just let it happen naturally. Even if/when that happens, AM radio will not be a failure, as there will be 3,400 of them left, doing just fine.

Listeners to my AM stations tell me that they like the music I play on AM better than if they heard it on FM. They say, "AM gives it a nice, warm sound."

*Bob Bittner
Owner
WJIB(AM), WJTO(AM), WJYE(AM),
WLAM(AM), WLVP(AM)
Bath, Maine*

Responding to "AM Radio Will Grow and Change, Just Like America," radio-world.com:

Notwithstanding Thom Callahan's L.A. market numbers, which seem encouraging, AM remains an afflicted medium. The affliction is man-made electrical noise.

The FCC recently took comments on what might be done but, in large measure, the prevention horse has left the barn.

European manufacturers (and U.S. manufacturers who wish to sell in the EU) must contain noise within any manufactured electrical device that connects to the electric grid, whether by good circuit design or filtration. American manufacturers are required to meet a much looser standard, and utility companies seem not to be very concerned with noise radiation at all.

Make no mistake, the broadband hash that afflicts medium-wave and high-frequency communications comes at the expense of electrical ratepayers. To radiate an electromagnetic field takes energy. The hash from the electric grid is broad and pervasive. But because utilities are generally rate regulated, inefficiencies in the distribution grid are simply passed on to customers as a cost of doing business. There is little incentive to fix anything.

Perhaps most telling is the decision to build the smart utility meter network using the 900 MHz and 2.4 GHz wireless spectrum under Part 15. These customer meters are directly connected to wires leading back to concentration points in the electrical distribution system and eventually to the utilities' generators. You'd think those existing wires would be an ideal way to manage the network but they aren't. Why? Because of the overwhelming hash present. Certainly power line communication is a well-established technology. Indeed most of us in a certain age bracket remember campus radio stations that operated using carrier-current distribution.

Maybe the answer is for broadcasters and other spectrum users to begin to petition denial of microwave license renewals and other wireless infrastructure belonging to utilities on grounds that they knowingly interfere with other licensed communication, most notably broadcast AM. I seem to remember a Communications Act that forbids that sort of thing.

*Frank McCoy
Chief Engineer
Salem Media Chicago
Chicago*

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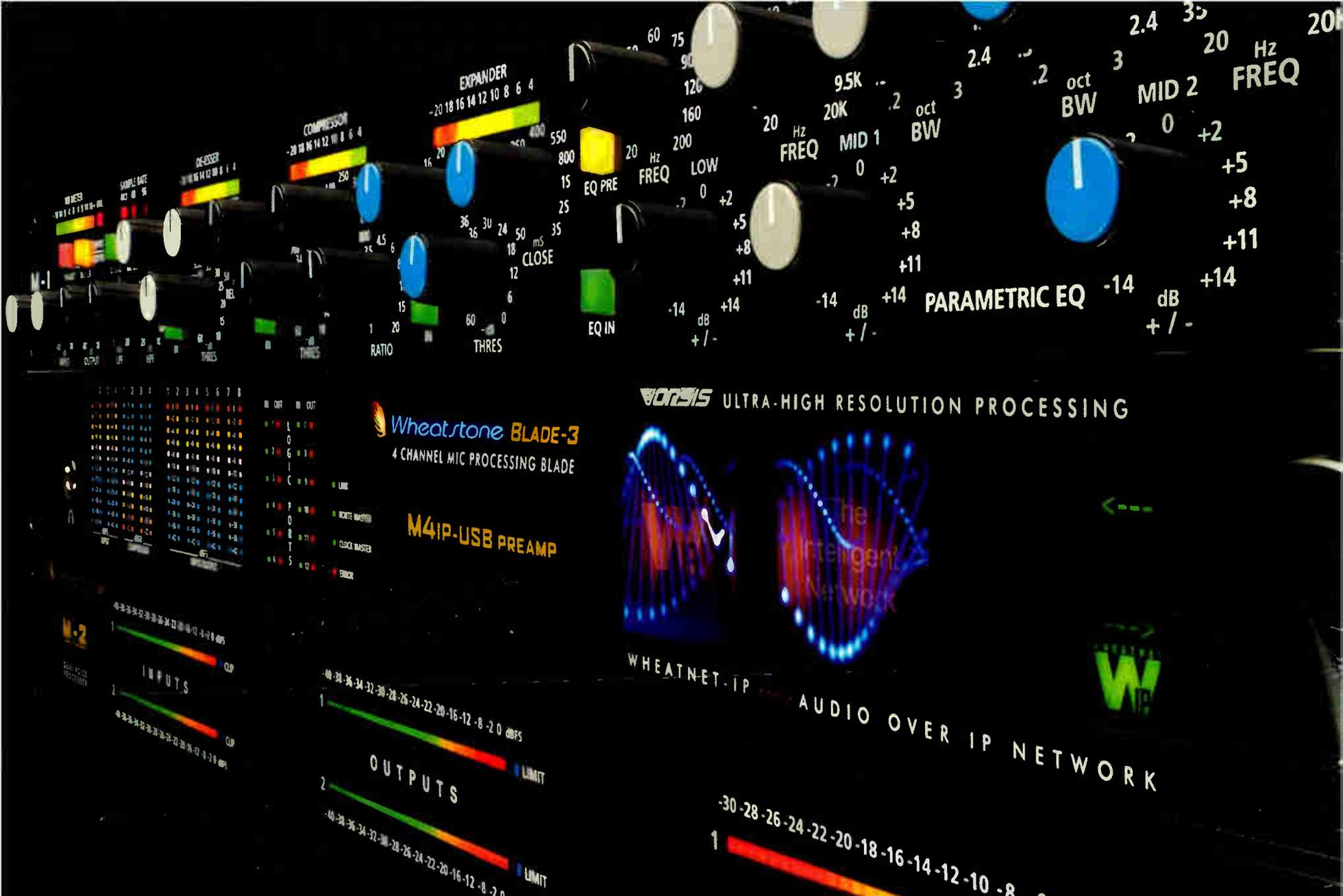
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Wheatstone M-Series Voice/Mic Processors

M-1: single channel with knobs and buttons • M-2: dual channel with multiband compression • M4-IP USB: four-channel networkable BLADE-3

Learn more at wheatstone.com/superhuman-voices

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N6531

