NewBay Media

RADIOWORLD

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NextRadio Seeks Revenue Tipping Point

As its Sprint deal comes to a close, the company pursues ad-funded business

BY RANDY J. STINE

The developers of the NextRadio application feel they are out of start-up mode. They believe their efforts to monetize the "hybrid radio" app will take hold in 2017 as more wireless providers activate chips enabling FM tuners in their smartphones to receive local radio signals.

The project appears to be at an important time of transition. To date, NextRadio has been an expense rather than a revenue generator for the radio industry, which has paid millions of dollars to Sprint to help kick-start its rollout. That seminal three-year agreement expires this month, and NextRadio has been in arrears with Sprint; it is working with broadcasters and others to fund its multimillion-dollar obligation. Now it hopes to build a business around ad revenue sharing; it recently secured its first national advertiser.

The NextRadio app shows a Home Depot ad.

"WHAT RADIO MUST DO"

The app was developed by TagStation LLC, owned by Emmis Communications, with support from NAB Labs; it combines local FM radio listening with online interactivity. Proponents view it as part of industry efforts to boost terrestrial radio's reach, to provide users with visual and two-way features, and to add digital platforms for advertisers who desire data attribution.

They believe the ability to target listeners and measure results will spur

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Sangean Renews Its HD Radio Family

Vince Marsiglia discusses why the company is introducing three new receiver models

DIGITALRADIO

BY PAUL MCLANE

This discussion is with Vince Marsiglia, sales & marketing manager for Sangean America Inc.

Radio World: *Sangean just introduced a new tabletop HD Radio. What prompted this introduction?*

Marsiglia: With over 27 million vehicles on the road listening to HD Radio, 35 percent of all new cars shipping with HD Radio from all 36 manufacturers in over 200 vehicles, 2,300+ HD channels serving 270 major markets in all states, HD Radio becomes a huge opportunity for Sangean, as consumers are looking for ways to listen to

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Relief for Tower Owners and Migratory Birds

FCC Biologist Joelle Gehring says it's possible to be both cost-effective and bird-safe.

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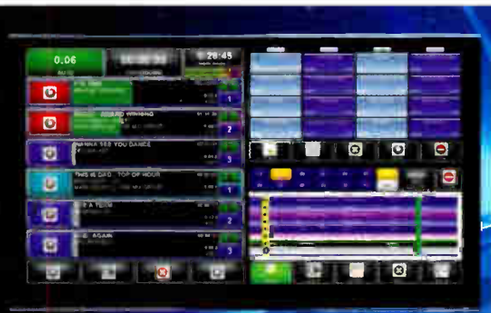

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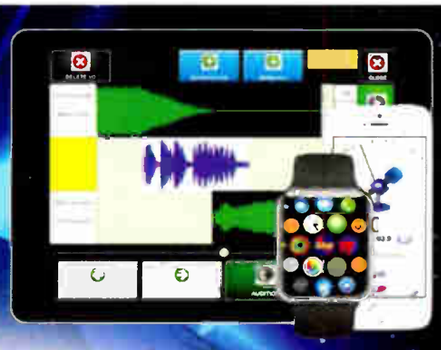

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NewBay Media

SANGEAN

(continued from page 1)

HD Radio outside of their cars.

RW: How would you characterize consumer interest and demand in HD Radio products?

Marsiglia: Consumers are finding that more of their favorite content is available on more channels with more selection and better sound quality on HD Radio channels. Radio is still the No. 1 media outlet for consumers; HD Radio is the first major sound improvement to the medium since the introduction of FM Radio in the 1940s. Consumers are excited about better sound quality, improved reception, more programming, and traffic with no fees or subscriptions. They are also excited with the ability to interact with HD Radio with their smartphones by utilizing the iTunes Tagging feature.

RW: The tabletop radio market seems to have been pretty quiet for some time, when it comes to new models. Do you agree; and if so why do you think that is?

Marsiglia: Sangean's tabletop radios have always done well over the years. We currently offer 10 tabletop models. More consumers are interested in AM/FM radios that have Bluetooth or internet radio solutions. Sangean has those solutions. Now with HD Radio the consumer has more choices than ever on what, where and when they listen to their music, sports programming news etc. This is a very exciting time to be in the radio business.

RW: What are the key differentiators for this new model, over others on the market?

Marsiglia: Sound quality. HD Radio provides better audio quality with digital sound and improved reception. Sangean's 40+ years in manufacturing world-class radios has given us an edge to improve sound quality in all our tabletop radios.

HD Radio needs to be heard as it's intended. With HD FM, the sound is equivalent to CD-quality sound, and AM now sounds like FM. In order to benefit from these sound improvements, the consumer needs a good-quality radio; that's where Sangean comes in because most HD Radios on the market just do not perform as they should when it comes to sound quality.

RW: Does it have AM as well as FM?

Marsiglia: Yes, our engineers were able to isolate the noise associated with AM transmissions in HD. All three new HD Radios from Sangean incorporate AM HD, unlike most of our competitors.

RW: Is this targeted to the U.S. consumer or are there other targets too?

Marsiglia: Sangean America targets consumers in the U.S. as well as Canada. Canada now has HD Radio in most metropolitan areas and is growing, giving us more opportunities in the HD Radio category.

RW: What other HD Radio models and types should we know about?

Marsiglia: We have a component HD tuner, the HDT-20, being released in August. With the HDT-20, consumers will be able to connect it to their existing stereo system to enjoy HD Radio. In September we'll launch a portable HD Radio, the HDR-16, allowing consumers to take HD Radio with them wherever they go.

The tabletop HDR-18, upper right, has a walnut cabinet and retails for $169.99. Component HDT-20, lower right, is $199.99 and ships this month; in September Sangean will launch the portable HDR-16 at left for $159.99.

RW: How many HD Radios in total has Sangean sold over the years?

Marsiglia: Our last introduction of HD Radio was in 2006, before being offered in most vehicles with very little consumer knowledge or interest. We had three models: two component HD tuners, the HDT-1 and HDT-1X, and a tabletop HD Radio, HDR-1. Sangean sold over 50,000 units, with many of them still in use today.

RW: Much attention has been paid in our industry to HD Radio in the car. Do you expect to expand Sangean's HD Radio dashboard offerings?

Marsiglia: Sangean will continue along its path and mission to offer consumers the best-in-class radio solutions for the home and on the go, and leave the big guys to cater the aftermarket car audio business with their HD Radio products.

RW: What else should we know?

Marsiglia: Our HD Radio series will be available at most major online retailers and selected Brick & Mortar locations like Fry's Electronics, ABT, Datavision and a host of others.

NEWS ROUNDUP

NEWS ROUNDUPS: Michael Hendrickson will receive the Robert W. Flanders **SBE Engineer of the Year** award. ... **The Radio Advertising Bureau's Dallas-based office relocated to Irving, Texas.** ... Longtime broadcast trade publisher **Jim Carnegie** died, according to the website of his former publication Radio Business Report. ... **San Francisco Public Press** and **San Francisco Community Radio** will share an LPFM frequency at 102.5 MHz. ... The SBE Nominations Committee recently put forth candidates for next term. They are Jerry Massey for president, James Leifer for VP, Tim Anderson for secretary and Andrea Cummis for treasurer.

World Radio History

DaySequerra and Its Hopes for Orban

I talked with David Day about why he decided to acquire the well-known processing company

The world of broadcast audio processing has changed immensely over the decades, yet it remains characterized by a handful of familiar brand names, companies whose products have great impact on how your station sounds, whether the audio reaches listeners over the air or via streamed signal.

Now one of the most recognizable brands is under new ownership. Orban has been acquired by DaySequerra and its majority owner David Day.

The new company, Orban Labs Inc., will be headquartered at DaySequerra's offices in New Jersey; it will design, market and sell ATI-, DaySequerra- and Orban- branded products worldwide. The acquisition includes U.S. and European operations of Orban; the combined company will have 34 employees in the United States and seven in Europe.

The seller is CRL Inc., which owned Orban since acquiring it from Harman 16 years ago. Terms were not announced. The acquisition was subject to approval by shareholders of CRL Inc.; that was considered a formality and was pending as I write.

PRODUCT CARDS

Both companies make audio products for radio, TV and internet broadcasters.

DaySequerra gear is used, among other things, for digital radio processing and monitoring, loudness measurement/control and sending multichannel surround audio over stereo. Its lineup includes tuners with TimeLock that help HD Radio broadcasters manage diversity delay; another of its successful products is the Market Area Monitor, of which 3,500 have shipped. Tech partners include ALC Networx, Apple, Audinate, DTS, Fraunhofer and Ross Video. It also owns Audio Technologies Inc., originally acquired in 2003; ATI makes infrastructure components like distribution amps, amplifiers and mixers.

Orban is best known for its Optimod processors and codecs used in FM, AM, DAB, streaming and production/mastering — and of course for Bob Orban himself. He will stay with the business he launched in 1967 when he sold a stereo synthesizer to WOR(FM) in New York and which took off in 1975 when he and John Delantoni established Orban Associates and introduced the Optimod 8000 processor for FM. He will continue to be based in California, directing Orban Labs' engineering.

Jay Brentlinger, president/CEO/chairman of seller CRL Inc., becomes DaySequerra vice president of sales for the Americas. "He's already working on several really important deals for us," Day said. Also prominent is DaySequerra Vice President of Business Development Mike Pappas, a veteran radio engineer and consultant who is now a minority investor in the parent company.

The acquisition came about when Day got to know Brentlinger through the Broadcast Industry Group, a marketing alliance they helped launch in 2014. DaySequerra employees also were working with Bob Orban on integrating their TimeLock system with his HD Radio processors.

Mike Pappas

Jay Brentlinger of CRL and David Day of DaySequerra sign the Orban purchase agreement in CRL's offices.

Day said the transaction wasn't particularly complicated. "Jay has bought and sold stations; I was in mergers and acquisitions for 12 years, so we both knew how to do this and what it would take."

"ORBAN INSIDE"

The combination of DaySequerra and Orban engineering brings symbiotic benefits, he said; merging them was "an essential element in this deal. ... opportunities like this don't happen very often. Our combined technology will facilitate tighter integration in the broadcast radio and TV air chains to help our customers improve their quality of service, so you'll soon see TimeLock as part of our 'Orban Inside' strategy."

Might David Day butt heads over engineering issues with Bob Orban, a past recipient of the NAB Radio Engineering Achievement Award? Will DaySequerra's product development group in New Jersey get along with the Orban engineering team in the Bay Area?

"I'm not showing up to the party late and telling Bob Orban and his team what to do, that's for sure," Day told me firmly. "What we're going to do is put the finest minds together, and we're going to put them on the biggest projects. We've got several big ... company-changing projects that we've been working on; you look at it and you go, 'Boy, wouldn't I just love to have Bob Orban tell me how to solve this problem.' Now I can ask.

"Bob is very energetic and very excited. He told me, maybe two weeks ago, that he really thinks that some of his best work is in front of him. I think some of the things that we're working on now are very important and are going to change radio and TV for the better."

DaySequerra now has closed Orban's Scottsdale facility, though two employees will stay local for service and to oversee the startup of ATI and Orban contract manufacturing in the Phoenix area. ATI previously had production operations in Nogales, Ariz.

The acquisition also should help DaySequerra expand distribution, particularly internationally.

Though in the radio processing space there's little overlap between DaySequerra and Orban products, both are familiar names in television.

DaySequerra boxes can be seen in remote TV trucks at the Olympics and supporting 5.1 channel surround sound HDTV broadcasts of "Dancing With the Stars" or the Grammys. Yet in the past, when Day traveled to France, England, Germany or Japan to make sales pitches to the likes of the BBC, NHK and Orange, he had to spend time explaining what DaySequerra is — whereas in Germany, "Orban is legislated to go in their nationalized TV stations. Or you look for distributors and you try to expand. In Abu Dhabi, for example, the [distributor] from Orban isn't going to take on a competitive audio processor, no matter how good it is. We're a relative newcomer in the DTV space and Orban's been there for a long time."

Similarly, though ATI products sell well in southeast Asia and South America, it's not easy to get a new distributor's attention by walking in with a digital distribution amplifier. By comparison, the name Orban helps open doors. And now, "If it's a country that's adopted HD Radio, [the distributor] can sell them DaySequerra HD Radio modulation and TimeLock monitors; they can sell them

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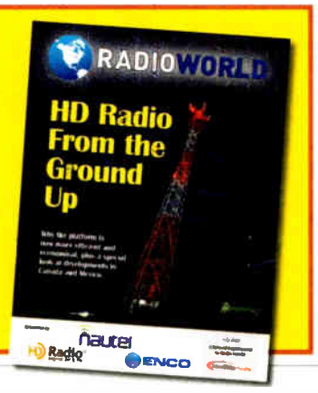
FROM THE EDITOR

Paul McLane

What should someone know who has watched HD Radio from a distance and now wants to get started?

Read Radio World's latest ebook at radioworld.com/ebooks.



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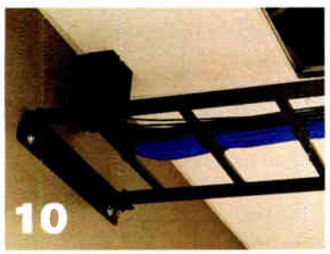

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Orban audio processors on the radio and the television side; and they can sell them ATI boxes for all of those uses."

With that international awareness in mind, DaySequerra at this year's IBC conference will begin to introduce products under the Orban brand. Eventually, all of its DTV audio processors and most of its other gear will carry the Orban name, though mod monitors will keep the DaySequerra badge.

COMPETITION

Orban is not of the scale it was when the San Francisco Bay-area headquarters alone employed 114 people under Harman; the company and its radio manufacturing environment have both seen great changes since, including a proliferation of processor competition, a U.S. economic recession and a soft commercial radio revenue market that affects station capital outlays.

Debt too was part of the Orban story. In 2000, Circuit Research Labs Inc. acquired it for $10.5 million from Harman Pro North America, according to Radio World reporting at the time; but CRL was burdened by the obligations and eventually worked with Harman to restructure the debt. The two finally closed on the purchase agreement in 2007, when CRL made a last $1.5 million cash payment.

In recent years, Orban has relied a good deal on Euro-based manufacturing, customer service and support. In 2002 it had acquired assets of German firm Dialog4 System Engineering. After that, Ludwigsburg, Germany, became its European headquarters. In 2006, Orban brought many of its California functions to Arizona; more recently it consolidated engineering functions further to Scottsdale and Ludwigsburg. By 2015, approximately 80 percent of Orban production was done in Germany, according to a Radio World story.

I posited to Day that the Orban brand doesn't have the reach it enjoyed two decades ago. He agreed only to an extent.

"It's certainly true of the big box processors. Omnia is formidable competition; Wheatstone is an important competitor. [But] when I go to XM/Sirius, or when I get to visit other streaming companies outside the U.S., all I see is racks and racks and racks of Orban streaming cards.

"If you're talking about terrestrial radio, absolutely there's much more competition now than there was 25 or 30 years ago," he continued. "In fact, at the last NAB, there was one guy working out of a dry basement in the Netherlands who put together the PC software for a pretty nice radio processor. The minute you've got software as competition, you're going to have more competitors able to get started, at least, in the business."

But he sees the industry evolving dramatically, with savvy manufacturers changing their business models to suit.

"If you just look at what Nautel's thinking about, or you look at what Lawo proposed with virtual radio, there's all kinds of new opportunities that we're focused on. Not that we're, certainly, walking away from traditional radio, because we're not; but traditional radio is expanding in ways that even it didn't realize it was going to do 15 years ago. ... We're going to show the industry that we're going to do things just a little bit differently."

> **"There's some really good radio** still out there in front of us."
>
> –David Day

The purchase is an investment in radio itself; and Day rejects much of the "common wisdom" he hears about the medium. He points to the acquisition of HD Radio by DTS Inc.

"Some people looked at that and they said, 'How come that makes sense?' It makes sense the very minute you start thinking [that] you want to bring an internet experience and put it in the car. Starting with moving maps, real-time weather and traffic, that's what radio can do. And along with DTS, GatesAir, Lawo and Nautel, we think that's just another beginning for radio.

"Radio now may not be following a linear path like it has for the last 40 years. People think that it's going to be outmoded or somehow it's going to be irrationalized and marginalized because of that; I really think just the opposite."

The radio industry is going through a disruptive cycle, he said; but thanks to the reliability of over-the-air signals, it remains a viable investment. And that, he said, makes Orban a very good investment too.

"There's some really good radio still out there in front of us," he told me. "That's our vision."

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World Radio History

NEXTRADIO

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new Samsung S7 and S7 Edge smartphones released across all carriers beginning in August.

But sometimes its progress is overshadowed by the lack of having industry biggie Apple on board with iOS phone activation, industry watchers said.

The NAB remains optimistic that Apple will eventually jump in with NextRadio on its iPhones. "We need to get Apple on board. FM chips have already been activated by Apple on their nano devices, so doing so on their smartphones should not be a heavy lift," Wharton said.

Brenner said he has had discussions with Apple but that there is "no open dialogue at this moment." The company, he said, "is probably less incentivized to do anything that threatens Apple Music and Beats 1 listenership. However, if we continue the success with Android phones, I think we'll see opportunities develop with Apple in 2017."

The data NextRadio can supposedly deliver will be critical to its success.

– Peter Leitzinger

Apple did not reply to a Radio World request for this article. The company has been notoriously tight-lipped about NextRadio and the question of iPhone FM chip activation. Recent speculation in the tech industry that Apple would release its forthcoming iPhone 7 without a headphone jack has gained a lot of media attention; NextRadio uses the headphone cable as an FM antenna to improve reception on smartphones.

NextRadio has faced skepticism at times; consultant Mark Ramsey of Ramsey Media once called consumer enthusiasm for the app "a mirage" and wrote, "If consumers clamored for FM radios built into their gadgets wireless companies would be only too happy to provide them. And they wouldn't have to be paid to do so, as Sprint is for NextRadio."

But University of Indianapolis communications instructor Scott Uecker told the Indianapolis Business Journal this year he remains optimistic NextRadio can continue to gain momentum citing the interactive nature of the app as "a very big draw" for people in their teens. (Emmis is based in Indianapolis.)

"Those who say this is just about pushing the radio signal to the cellphone are missing the additional experience that [NextRadio] brings," Uecker said.

Peter Leitzinger, associate research analyst for SNL Kagan, a division of S&P Global Market Intelligence, sees NextRadio as an emerging technology that just hasn't busted out yet.

"The wireless carriers have always pushed back a bit because giving away free FM radio cuts into their ability to sell data. But I think people are going to eventually begin look for phones with this feature and it should be a big boost to radio," Leitzinger said.

Leitzinger, who studies broadcast radio and TV and Internet radio for the research firm, said the app is unique in that it offers older technology embedded in an expensive and powerful smartphone.

"So the traditional challenges of radio will always remain. Reception can be an issue, along with static. That becomes a problem for NextRadio considering the number of streaming options now like Spotify and Pandora. I would think NextRadio's strength will be in urban markets with lots of signals and early adopters."

"Advertisers are becoming much more digital-savvy. The data NextRadio can supposedly deliver will be critical to its success. The ability to target advertising to certain people in certain areas is what marketers love," Leitzinger said.

Gordon Borrell, a digital advertising analyst and CEO of Borrell Associates, said NextRadio's digital platform has the ability to attribute data which is what advertisers are looking for.

"It's absolutely vital to the bigger sales because larger advertisers and their agencies require proof of audience more than ever. It's even important, but perhaps not as vital, with smaller or direct local advertisers. They've been conditioned to expect data with every advertising buy," Borrell said.

The researcher said he thinks NextRadio developers have done a good job of generating excitement about the product and a fair job of getting it into the marketplace.

"The app has a four-star rating [out of a possible five] on the Google Play store, so it has its fans," Borrell said. "However, more people learned about Pokéman Go in one day than NextRadio could generate in several years, so it's not quite yet the phenomenon the radio industry had hoped for either."

COSTS

Activation of FM chips in smartphones has been an important goal for NextRadio. It secured sufficient backing from others in radio to promise Sprint $15 million per year beginning in 2013 over three years and to share revenue with the carrier; Sprint in turn agreed to embed the app in at least 30 million FM-enabled wireless devices on its wireless network over that period. A consortium of radio broadcasters including iHeartMedia, Beasley, CBS Radio, Greater Media, Radio One, Hubbard Radio, Townsquare Media, Bonneville and Entercom Communications has contributed to the payments to Sprint. In all, some 40 radio broadcast groups have paid into the fund, Brenner said.

"This doesn't include hundreds of medium and small broadcasters who have done barter deals through Westwood One and even more stations that continue to run promotional inventory for NextRadio," Brenner said. "We've had immense support from all corners of the industry."

According to an Emmis Communications filing with the SEC earlier this year, NextRadio was in arrears with Sprint by $14 million at the end of 2015. It is working with the broadcasters and others, including NAB, to fund the remaining debt.

Brenner said the amount due "is now lower than that" as NextRadio works with broadcasters to make sure they fulfill their obligations. "We have had to get a bit creative [with payments] in the homestretch," Brenner said. "But it's being taken care of." Sprint did receive revenue-share dollars from the Home Depot campaign.

A spokesperson for iHeartMedia who asked not to be named said the company continues to be the top supporter of NextRadio.

"We have been the biggest financial backer [relative to the Sprint payments] of NextRadio and have contributed more financially than our share of the radio industry. Additionally, we have contributed more interactive stations and audience to NextRadio than any other company and have also lobbied on behalf of NextRadio with all major constituencies," according to the spokesperson.

After the agreement expires in August, Brenner said, "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, he said.

Brenner said he expects the Sprint relationship will be extended under terms similar to those in place with AT&T and T-Mobile. Those revenue-sharing agreements provide carriers with a portion of the enhanced advertising sales in return for activating FM radio on smartphones or preloading the app.

In 2017, he said, "I think you will see a big ramp-up in the number of cell phones supported in the market, followed by talk of revenue potential and advertiser interest."

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

BEHIND NEXT

The following radio broadcast groups have contributed financially to the NextRadio Sprint payments. Brenner said most paid according to a formula based on their revenues.

ABC/Disney
Alpha Broadcasting LLC
Arbitron/Nielsen
Beasley Broadcast Group
Bonneville International Corp.
Buckley Broadcasting Corp.
Capitol Broadcasting Co. Inc.
CBS Radio
Cherry Creek Radio LLC
Cox Media Group
Crawford Broadcasting Co.
Cumulus Media Holdings Inc.
Delmarva Broadcasting Co.
EMF
Emmis Communications
Entercom
Entravision Communications Corp
Federated Media
Greater Media Inc
Hearst Television Inc
Hubbard Radio LLC
iHeartMedia Inc.
Jerry Lee Radio LLC
Katz
Lincoln Financial Media Co.
Midwest Communications Inc.
NextMedia Group Inc.
Palm Beach Broadcasting License LLC
Press Communications LLC
Qantum Communications Corp
Radio One Inc
Renda Broadcasting Corp.
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World Radio History

Are Your TFT EAS Units in Compliance?

Also: Why it's a good idea to check your RF sites regularly — and bring binoculars

WORKBENCH
by John Bisset
Read more Workbench articles online at radioworld.com

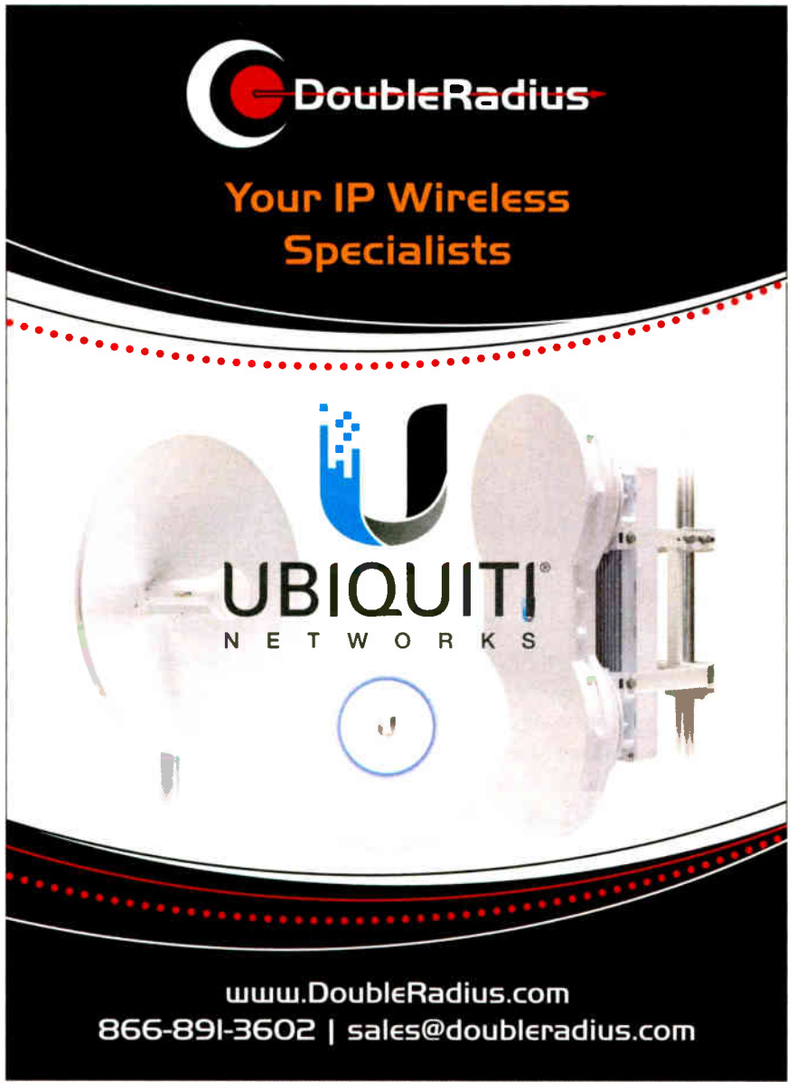
There have been a number of questions about whether TFT EAS units comply with current regulations. As you recall, TFT recently closed its doors; but former employee Darryl Parker has tried to help former clients when he can.

Darryl writes that all TFT EAS products supported recognition of the FIPS code "000000" from the very first unit.

Way back in 1994, its design engineers recognized that, although the company had portion codes that could be extended to all of a state FIPS code, as well as a county/parish FIPS code, there was no designation for "All United States."

With FCC permission, he said, TFT integrated that FIPS code (000000) into the first EAS Model 911. Type-Acceptance requirements at the time called for all the Event Codes, including NPT, to be included. Those, of course, were in the first EAS Model 911 delivered more than 20 years ago. Thus, no changes or upgrades are necessary to any TFT unit for current compliance.

While at TFT, Darryl prepared a document that outlines the steps necessary for auto-forwarding of NPT Event Code messages with an accompanying FIPS code of 000000. All TFT units can manually forward any EAS protocol message received. For a copy of this PDF document, send a request to *darryleparker@comcast.net*.



Here's yet another reason to visit your transmitter sites periodically — and to bring a pair of binoculars with you.

Steven Donnell discovered a new "tenant" that had appeared suddenly just above one of his Shively FM antennas, visible in Fig. 1. Steve had noticed a slight increase in standing wave ratio, an indication of power mismatch. The SWR indication was not enough to warrant immediate alarm. Still, a closer inspection found this new occupant.

Turns out it's some type of IP radio antenna. Steve has identified the owner; the antenna will be relocated soon.

He also told the owner that he would be happy to reduce transmitter power while the tech is working on the tower so he won't fry his brain too badly, like he did the first time.

Fig. 1: A good reason to view your FM antenna periodically with a pair of binoculars. The unexpected tenant is visible above the Shively bay.

Albuquerque, N.M., broadcast engineer Bob Henry did a stellar job identifying the equipment shown in Burt Bowman's remote studio from the Wooster Fair in Ohio.

Fig. 2: Were you able to identify the gear?

Bob identifies the microphone as a Shure SM58. The "stick" type of dynamic microphones didn't appear on the scene until the early '60s. The SM58 was manufactured in 1966, and it had the steel mesh ball-type windscreen like the one in the photo.

The black box sitting next to the microphone stand is an Audiolab Electronics TD-1A bulk tape eraser, needed for wiping reel to reel or tape cartridges clean before recording. It was introduced in 1959 with the founding of Audiolab Electronics. This was the first commercially available AC tape degausser. A later model, the TD-1B, had a black top surface.

The turntable is an RCA Type 70-D series, seen in Fig. 2A.

Bob writes that the RCA 76-C console was made in the early 1950s. He calls attention to the wear marks on the console, near the pots and switches (near Burt's left hand). This would indicate that the board had been well used over the course of time. That particular model was built in 1951, and it was not uncommon for stations to hang on to their older broadcast equipment for 20 years or longer.

The older gear was definitely made to last.

The days of sloppy data cable layouts are over!

Broadcast engineer Matt Aaron

(continued on page 12)

Fig. 2A: A workhorse RCA Type 70-D turntable.

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World Radio History

What to Do With 5,600 Studs Terkel Shows?

Lessons from working to bring archive to life at the WFMT Radio Network

PRESERVATION

BY TONY MACALUSO

The author is director of syndication for WFMT Radio Network, which creates and distributes popular arts and culture audio programs. WFMT Radio Network is part of local station WFMT, which served as Terkel's professional home for 45 years.

Many radio stations have troves of old archival tapes stashed on shelves or hidden in closets, quietly imploring the already too-busy staffs to give them a second life and to let them speak to the future.

Radio, at its best, has an immediacy and clarity that allows a listener to travel back in time. The potential uses of radio archives are enormous and intriguing. With television or film, archival images immediately make us notice the difference: how people's appearances or settings or gesture have changed over time and how camera technology has evolved.

Radio archives, on the other hand, have a timelessness that can put a listener right back in the presence of people long gone. Voices of decades gone are suddenly with us again, ghosts speaking directly from the past, with urgency and intimacy, as though they never left.

This power of audio to speak across time combined with new digital technologies and platforms that are just becoming available, whether smart phones or podcasts or transcription tools, make this a potential golden age for radio and other sound archives. Universities, foundations and inventive new non-profits are beginning to fund radio archive projects with greater enthusiasm. As a result, those old tapes on the shelves of radio stations can become the raw material to be used by teachers, journalists, historians, artists, museum curators and of course contemporary radio producers in ways that were hard to imagine a decade ago.

I am excited to share a few notes from our experience here in Chicago building Studs Terkel's complete radio archive in recent years with the aim of helping other radio stations think about the potential for their own archives in new ways and, pragmatically, to share details on some of the resources we've been fortunate to discover along the way.

Studs Terkel was known for interviewing both celebrities and everyday people. He is shown here, at right, interviewing an unknown woman around 1950.

Courtesy of the Chicago History Museum

WFMT 98.7 and the WFMT Radio Network have the good fortune of being the broadcast home of legendary oral historian and radio host Studs Terkel for 45 years. He left behind a staggering archive of 5,600 radio programs, mostly on reel-to-reel, when he died at the age of 96 in 2008 (still fully charged, eagerly awaiting the results of that presidential election that happened four days after he died).

Studs expressed a strong desire that his audio archive might somehow be used in the future, a desire that our staff and other partners have embraced.

While the ultimate form of Studs's radio archive is still evolving, we are eager to share a few ideas and technologies that we have discovered during the first few years of trial and error in the hopes that other radio stations pondering making their own archives more accessible can benefit from our experiences and perhaps even collaborate in years to come.

Fortunately, we are far from alone in making audio archive experiments: organizations such as WNYC, NPR, Pacifica Radio and especially the umbrella Radio Preservation Task Force, give us a bustling batch of friendly neighbors to confer with.

So here's a brief history of how Studs' giant radio archive has grown in recent years.

Three years ago, in the autumn of 2013, the WFMT Radio Network started a conversation with the Chicago History Museum (Studs had the foresight to move his tapes there when he retired in 1997 — he cared greatly about his

(continued on page 14)

WORKBENCH

(continued from page 10)

offers the tip in Fig. 3 as a neat method of getting a run of Cat-6 cables from the cable tray into the ceiling. Note the conduit at left. One of Matt's contract clients had a cabling company run the Cat-6.

Ben Dawson, P.E., principal engineer at the firm Hatfield and Dawson, makes us aware of a useful radial-finding resource. It's a three-image PDF that you can download at *http://tinyurl.com/rw-hatdaw-ground*.

The desensitization technique described is important if you are looking for radials and station power is more than a few hundred watts. The field meter loop has to be lined up with the direction of the radial, and will pick up from the antenna as well and often be out of the range of the meter unless it's de-sensed.

The Hatfield-Dawson grip (Fig. 4) is made from cupboard door handle hardware. The thread in the FIM is 1/4-20 to fit a standard camera tripod.

The websites of professional consulting companies like H&D (*www.hatdaw.com*) are excellent resources for useful engineering information. Spend some time checking them out.

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

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

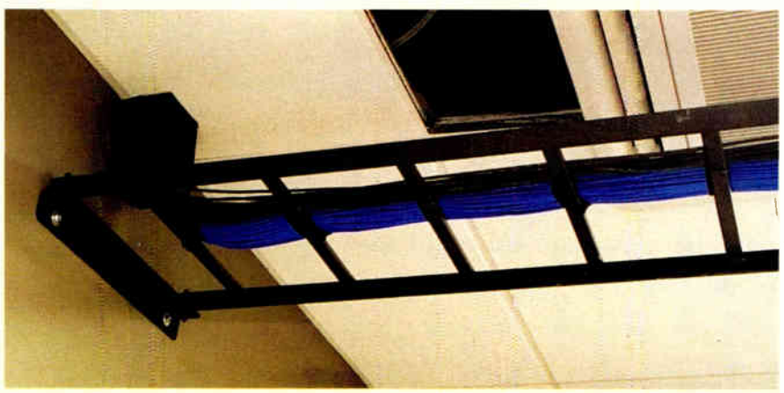

Fig. 3: A square conduit at left channels Cat-6 cable into the plenum ceiling.

Fig. 4: Hatfield-Dawson grip provides convenient carrying hardware.

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World Radio History

WFMT

(continued from page 12)

archive) about finding creative ways to make the radio archive more accessible to the world. Since then, the WFMT Radio Network has come to specialize in producing and syndicating radio programs on the arts and culture to stations around the United States and, more and more, internationally.

What do you do with 5,600 Studs Terkel radio shows? We're talking about shamelessly intellectual, stream-of-consciousness, against-the-grain of today's overproduced media sound-bite parade, including voices of the celebrated (Martin Luther King, Bob Dylan, Simone de Beauvoir, Louis Armstrong and thousands more) and the non-celebrated working people, wrestling with big social issues and discovering new ways of thinking live, in-the-moment programming.

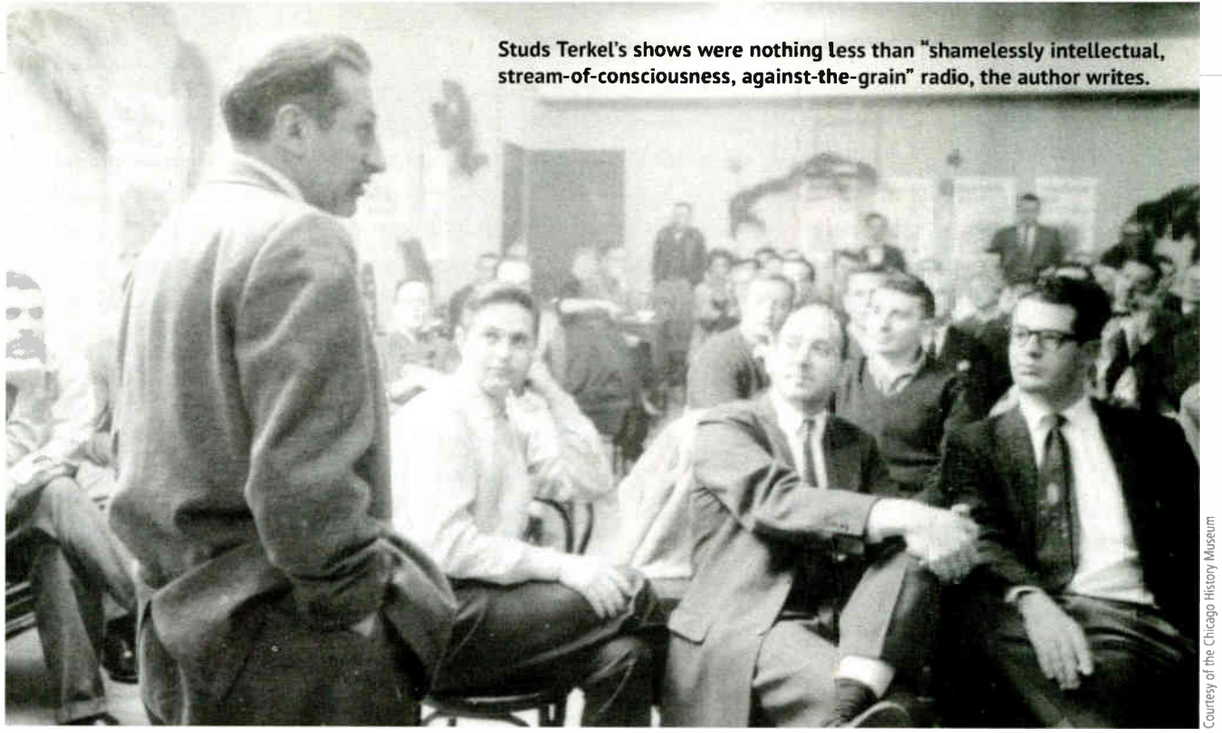
These programs are sometime meandering, always vivid and full of radio "mishaps" — cigarettes being lit against the mic, a sense of exuberance and lack of a safety net.

The archive also includes audio docs made in the field — South Africa, the Soviet Union, Italy, France, China, the Jim Crow South — masterfully curated music or poetry shows, chronicles of a blizzard or the public's reaction to a new Picasso sculpture showcased in the heart of Chicago that was arranged by old Mayor Daley.

The saga of how Studs' radio archive is being developed is too long to cover in full here, and the long-term plans are still taking shape. But it may be helpful to share a few aspects of what we're doing so that others pondering ways to make use of your own radio archives could react to and consider them. We're also open to trading notes and ideas.

FUNDING

For any station contemplating taking the stash of old tapes and transforming them into a living, accessible audio archive, funding is obviously a key question. Ideally building an audio archive helps define a station, underscoring a station's unique history and generating enthusiasm amongst donors, board members and other community partners. WFMT / the Radio Network were fortunate that general manager Steve Robinson and other leaders saw the value of Studs Terkel's Radio Archive. Likewise, we benefited immensely from the fact that the Chicago History Museum was able to partner with the Library of Congress to digitize the reel-to-reel tapes on which almost all of Studs's programs were stored, work valued at over $900,000, without which the idea of building an online digital archive would still only be a daydream.



Studs Terkel's shows were nothing less than "shamelessly intellectual, stream-of-consciousness, against-the-grain" radio, the author writes.

Courtesy of the Chicago History Museum

Of course, not every archival radio collection will generate such outside technical support (Studs Terkel's reputation and the range of people he interviewed makes his collection somewhat unique), other opportunities for funding exist. We were fortunate to receive a $60,000 planning grant from the National Endowment for the Humanities in the summer of 2014, and in January-February of 2016, we embarked on an ambitious Kickstarter campaign with a goal of $75,000. The Kickstarter was successful (raising $87,000) and also generating a bundle of very helpful press coverage about the archive (Time magazine, Rolling Stone, Slate, The Chicago Tribune, Brain Pickings and many other media-produced stories).

We could produce an entire article about the lessons, tribulations and benefits of running a Kickstarter to support a radio archive and are glad to share what we learned with others. For the time being, perhaps the most important idea we came away with was that the general public is seemingly most inspired to donate because they have reason to believe that young people/future generations will have opportunities to only listen to voices from the past but actively re-use audio in various creative and educational ways and also that donors are keen to come visit and learn about building an archive first hand (tours and visits to meet radio producers and archive staff were surprisingly popular and led to high level gifts to the Kickstarter). That said, as with all Crowdfunding, building an audience ahead of time is clearly key.

The long-term funding for the Studs Terkel Radio Archive continues to evolve and in the next year or two we intend to have a much greater understanding of the landscape of potential funding sources, not only in the United States but globally.

BUILDING THE FOUNDATION AND PARTNERSHIPS

While there are many aspects of the archive that might be of interest to RW readers, for the remainder of this article I will focus on sharing details on some partnerships and technical experiments that we're undertaking that might be useable by other radio archives. Each of these has its own story, full of narrative twists and turns and fascinating people and anecdotes, and other information.

Thanks to the funding described above, we were able to hire a pair of trained archivists: Allison Schein who now oversees archive management for WFMT as a whole as well as the Studs Terkel Radio Archive and also Grace Radkins, our digital content librarian who has pioneered various ways of reusing and re-contextualizing audio content, many examples of which can be seen on our blog: *http://studsterkel.wfmt.com/blog/*.

One of the most important steps in laying the foundation for the project was to form a Studs Terkel Radio Archive Advisory Committee that includes people from various partner organizations who have an interest experimenting with how to use Studs' audio. These include:

- **The Great Books Foundation** — They specialize in, among other things, creating marvelous educational curriculum, until now based on written content, but they're eager to explore what it means to use audio.
- **National Radio Preservation Task Force** — Helping us connect with scholars and technical experts around the country.
- **Illinois Humanities** — Our local state humanities council organizes public events and helps us connect with long-term cultural programs.
- **Chicago Collections** — A new consortium of historic archives at various museums, libraries and universities.
- **The Studs Terkel Center for Oral History** at the Chicago History Museum
- **The Black Metropolis Research Consortium** — Studs was very much at the forefront of breaking down color barriers in music, culture and society in general.
- **Lois Baum, Tony Judge, Sydney Lewis and Adrian Marin** — A quartet of individuals who worked directly with Studs and who are managing the Studs Terkel Estate.

This committee has a critical mandate which is to meet and hash out a long-term vision for the archive plus evaluate and advise on key decisions. Part of developing that long-term plan has been to map out four main components of the archive:

1. **The online collection** itself, carefully organized, divided into 40+ categories to make it easy and fun to explore. Eventually we'll have accurate transcripts (some are already done) so people can search within the programs, and all sorts of interesting tools, some being pioneered on Studs' archive such as:
   a. **Hyperaud.io Pad** — A browser-based remixing tool that allows for both video and audio manipulation

(continued on page 18)

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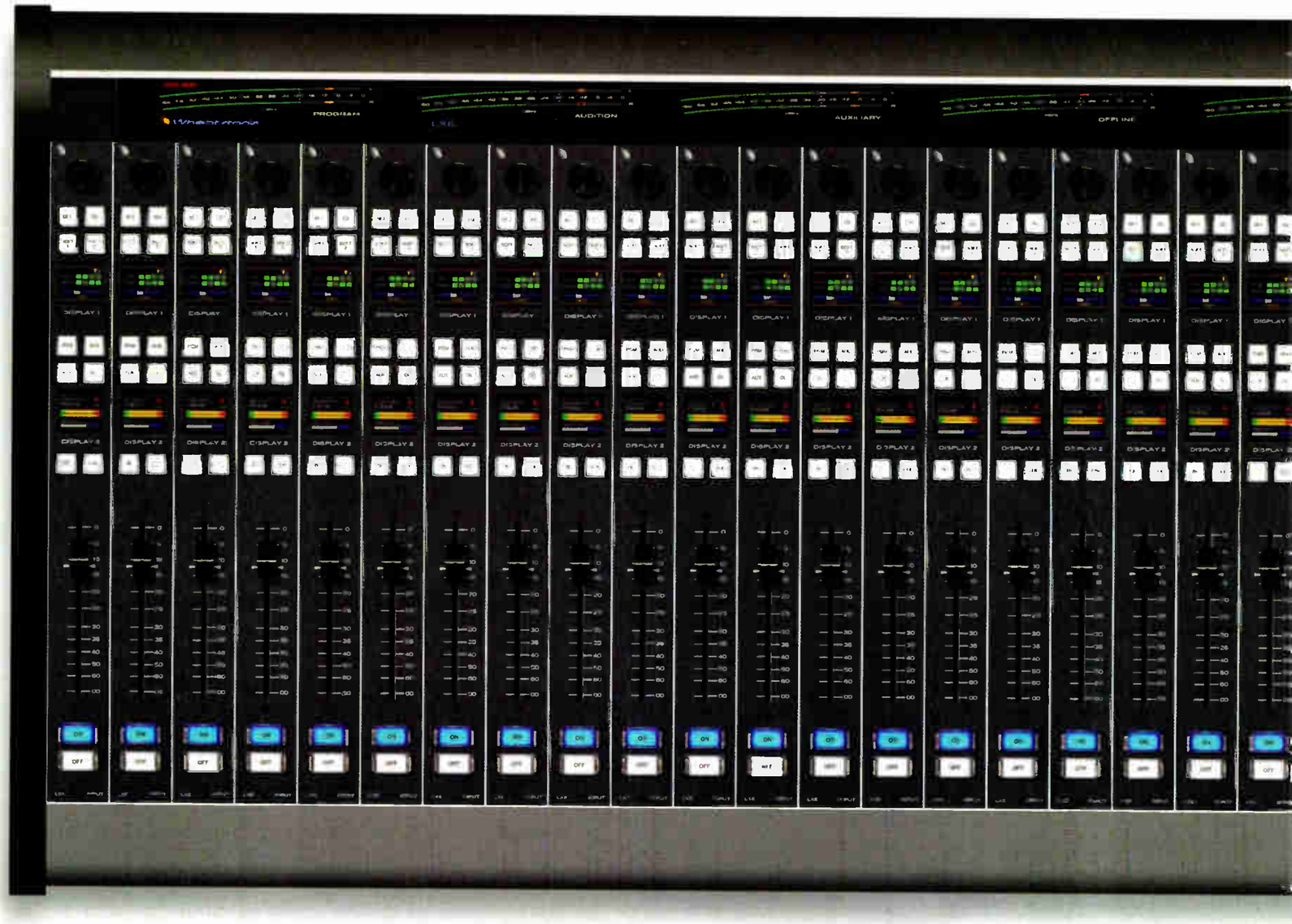
LXEvolved



The Evolution of LX Radio Control Console

Wheatstone's new LXE console brings control surface configuration to a new level. Going far beyond the usual "any source to any fader" network concept, the LXE is a fully flexible control interface, where every switch and rotary control is programmable to perform any desired function. This means console architecture is completely customizable to client requirements, and limitations to functionality are no longer a factor. Physically compact, the LXE is available in several different form factors including countertop, countertop sunken, and split frames (split sections are not confined to one room, they can actually be in different studios).

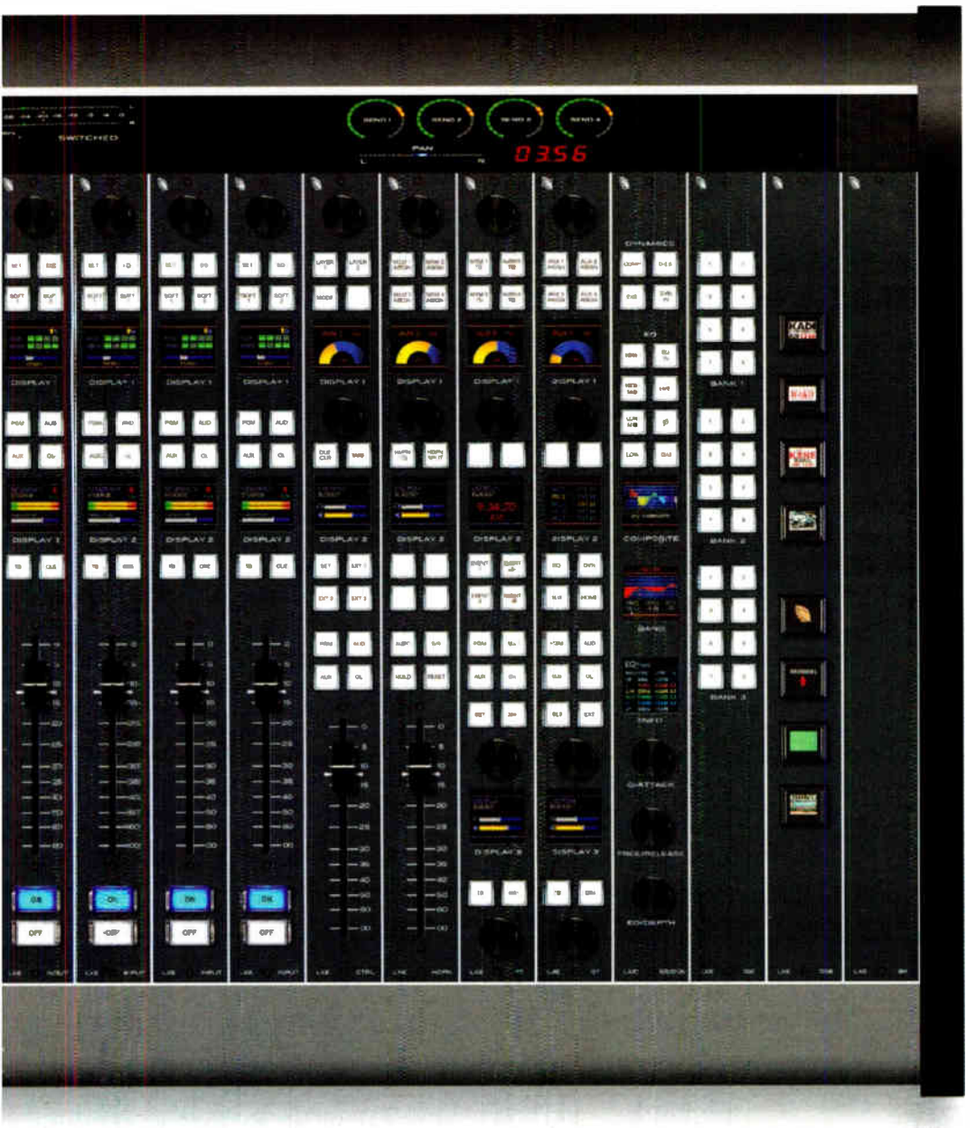
Any Way You Want It

ConsoleBuilder software allows every switch on the surface to be programmed for function, mode, and even color (switches are RGB led illuminated). In fact, built-in software allows every button to be scriptable, letting you create powerful macros for as many controls as you want. Multiple full color OLED displays on each panel keep pace with ongoing operations, and event recall allows painless one touch console reconfiguration at the press of a button. With its inherent control flexibility and ability to access thousands of signals (sources and destinations are limited only by the size of the network) the LXE takes facility work flows and audio control to a new level.

LXE is the recipient of NewBay Best of Show Awards from Radio World and TV Technology

World Radio History

THE INTELLIGENT NETWORK



The World At Your (Motorized) Fingertips

The LXE can have up to 32 physical motorized faders, with full DSP processing available on all 32 channels. Surface(s) interface seamlessly into the WheatNet-IP Intelligent Network, and utilize BLADE-3s for audio, control and associated logic data flowing on single CAT6 interconnecting cables. The system can ingest and convert virtually all audio formats: analog, microphone, AES/EBU, SPDIF, AoIP, MADI, SDI and even AES67. Loudness metering, phase control, and full EQ/Dynamics are included.

All New Graphical User Interface

LXE's new GUI has pre-built screens for everything you normally use – metering, clocks, timers, dynamics, EQ, assigns, and more. All are touch-screen accessible with gestures you're used to using on your smart devices. And, the GUI is just as customizable as the LXE surface. Using our ScreenBuilder-LXE software, you simply drag and drop objects and define their functions via a simple wizard interface. You can store multiple custom screens, if you like, to go with your custom LXE setups.

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World Radio History

WFMT

(continued from page 14)

by dragging and dropping selected elements of a program. Those who have access to a computer will be able to create remixed Studs Terkel programs reflecting their chosen vantage point. You can preview it at *http://studsterkel.hyperaud.io/*. We're excited how this tool will engage millennials and extend Studs' voice and influence, making him a part of conversations we're having now on race, feminism, civil rights, and other relevant topics.

b. Trint — An online transcription editor for both audio and video that creates interactive transcripts, which can easily be shared and also ported over to Hyperaud.io for easy remixing. The highlighting function is important, for those who teach or need quick references points. Sign up now at *https://beta.trint.com/register*.

c. DigitalReLab / Starchive — An innovative back-end asset management system designed to organize our audio and seamlessly create derivatives, allowing for accessing and ingesting incoming material from various sources. See their video at *http://digitalrelab.com/*.

d. Vamonde — A location-based audio platform that pins specific audio to a location — in order to create an audio adventure that is downloaded via the Vamonde app (available in iOS only but Android coming soon). We are able to use this tool to bring Studs' conversations to the neighborhoods in which he loved interviewing regular people. Students will also use this tool to interact with other Studs programs with their voices mixed in. To explore Chicago's adventures go to *www.vamonde.com*.

Courtesy John F. Holmes

Allison Schein, archive manager, and author Tony Macaluso, director of network syndication for the WFMT Radio Network.

e. Dominican University's Library and Information Science Graduate School has worked closely to provide stellar interns and support on many levels.

f. Third Coast International Audio Festival has been a helpful friend — they made the Studs archive the subject of their annual ShortDocs competition this year, which meant hundreds of radio producers made short radio programs inspired by Studs.

2. Educational use: Helping schools create curriculum based on Studs' audio, especially around themes and topics — for example, the Civil Rights and Labor Movements, Work or Community, especially those interviews where he talks to the everyday man, woman or youth.

3. Reuse material: Encouraging journalists, teachers, scholars, artists, radio producers and other media makers to get creative about repurposing it.

4. Take it Easy, But Take it: a weekly podcast/radio series, in which guest curators are invited to pick programs from the archive and create their own audio response/storytelling that connects Studs' conversations or programs from the past with the contemporary world.

One of the first steps was to start encouraging other organizations to use material from the archive in order to test and demonstrate how Studs' work could be relevant today.

Quite quickly organizations such as "This American Life," "Radio Diaries," "All Things Considered," The Third Coast International Audio Festival, "Blank on Blank," Radio France, the Poetry Foundation and many others have used material for radio shows, podcasts, films and audio competitions. And coming up in 2017: the BBC commissioned two hour-long documentaries based on Studs' work from British audio company Falling Tree Productions, which will be heard globally on the BBC.

This year we also formed an extensive partnership with Chicago Public Library's YOUMedia teen program and CPS — especially Curie Metropolitan High School, ChiArts and Gwendolyn Brooks College Preparatory Academy — in order to get teens to explore Studs' audio and to create their own original work inspired by him. Work developed by the program, called New Voices on the Studs Terkel Radio Archive, can be seen at *www.nvonstuds.com*.

The curriculum created out of the pilot New Voices on Studs Terkel Radio Archive program is in its development with Chicago Public Library's YOUmedia department, Chicago Public Schools and the Great Books Foundation. Our free unit plans will be made available nationally to teachers.

THE FUTURE

While the Studs Terkel Radio Archive is still in the early stages of what we hope will be a long and fruitful existence full of unanticipated uses, the past three years have opened our eyes to the varied possibilities. We know from talking to many of Studs's colleagues that he dearly hoped that his work would not only be listened in the future, but perhaps more poignantly, that it would also be used as raw materials for new work by others. During his 45 year career at WFMT, Studs himself frequently dug into his own archive to grab a bit of audio to play at the beginning of a newer interview. He delighted at the idea that the voice of Big Bill Broonzy or Simone be Beauvoir or Kurt Vonnegut might inspire fresh thoughts in some later guest or situate a conversation in a deeper historical context or sometimes just dazzle listeners with an unexpected connection. If the Studs Terkel Radio Archive can be a tool for young radio producers, teachers, theater directors, community organizers, musicians, investigative journalists or others, then Studs's work, and radio in general, become less trapped in the present moment and the cultural amnesia that comes from a lack of meaningful connection with the past.

So — in Studs' immortal words — we encourage those in the radio world or other disciplines to "Take it easy, but take it!" and help us to explore the possibilities for this unique audio archive. Anyone wanting to exchange radio archive ideas or explore using audio in the archive for new projects is invited to get in touch with us at *tmacaluso@wfmt.com* or *studsterkel.org*.

More Radio, More Voices

Here's a sampling of more posts and stories that appeared at radioworld.com *in recent weeks.*

iStockphoto/pay404

"FCC's Doyle Speaks Out About Silent Station Practices" — The commission doesn't like it when a station sits silent because precious radio spectrum should not "sit fallow." That's the context for some scolding language in a ruling from Peter Doyle, chief of the commission's Audio Division of the Media Bureau. See *radioworld.com/silent*.

"Q&A: EBU Starts Work on '.Radio' Domain" — The European Broadcasting Union was chosen by ICANN to administer the ".radio" domain globally, including the United States. Its program will be administered by a World .Radio Advisory Board. What are the implications? We asked Alain Artero, .radio TLD project manager for the EBU. See *radioworld.com/domain*.

"A Primer on the September National EAS Test" — Are you ready for Sept. 28? Ed Czarnecki of manufacturer Monroe Electronics offered a FAQ not only for users of Monroe gear but for anyone interested. See *radioworld.com/primer*.

"Europe's Digital Radio Rollout, Part III" — Our colleagues at the international edition of Radio World are running a multipart series based on the EBU's Media Intelligence Service Digital Radio Report. See where digital radio stands in Belgium, France, Italy, Poland and Czech Republic. Visit *radioworld.com/rollout*.

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Radio Needs Great Leaders

Good management is about more than keeping a station in the black

iStockphoto/Choreograph

For about 20 years, a friend of mine worked part-time on the air at a major-market radio station. Although his "day job" was with the police department, he loved radio, so he consistently performed weekend after weekend, rarely asking for time off. He would also do vacation fill-ins at night during the week, after his police work.

One weekend, he walked into the control room to find another staffer getting ready for the same shift. *Awk-ward!* He double-checked the schedule and his name was not listed. He called the relatively new program director three times before finally reaching him. "Oh, yeah," said the P.D. "I decided to give this new kid a shot — sorry I didn't call to let you know."

Taking this in stride, my friend checked the schedule the following week and discovered he still was missing in action. He called the P.D. again. "Oh, uh … yeah. Sorry, man. We've decided to keep trying the new guy. I'll call you when we decide to put you on the schedule again."

My friend waited three weeks and never got a call. He resigned — not that he needed to, but because he felt a sense of responsibility. That's obviously more than he got out of the station management.

He later died young from cancer, but I've never forgotten his story. A solid performer, one who sounded great on-air, took direction well and showed up on time only to be dropped.

What's going on here?

TAKE THE LEAD

This story is about management neither acknowledging nor recognizing the value of its employees. The issue continues to manifest itself against on-air talent, engineers, sales reps and, at some stations, entire staff rosters.

The solution to this ongoing problem is leadership. When a general manager or market manager doesn't know his or her employees on a first-name basis and is not involved with their performance evaluations, department heads will wield power that many of them don't have enough experience to handle.

And don't tell me that a market manager can't take on responsibility for that volume of employees. I once worked for a CEO/chief operating officer who knew the name of and something about every employee in his chain of stations. This enabled him to greet an employee by name and inquire about his well-being at any encounter.

Leadership is about commitment to excellence, valuing everyone's contribution and nurturing loyalty. Why are these attributes important? Because such leaders are capable of creating a happy environment in which employees do their very best to drive success at all levels.

When employees are recognized, heard and encouraged, the entire environment shifts to one where people actually look forward to coming to work and tackling challenges. An open, caring environment stimulates creativity, which is the key to success in content creation, the sales process and even engineering solutions.

The opposite situation — anonymous employees with no voice in operations, unrecognized contributions, and no feedback loop other than negativity — creates an environment where people hate their boss, can't stand to come to work and complain to their peers.

The not-so-obvious part of this for executives who strive to be leaders is that action is even more important than words.

If you say "I have an open door! Whenever you want, come see me and we'll talk." But if your door is rarely open or you don't treat employees warmly when they enter, you are not living up to your commitment. To have a two-way conversation with your employees, you must learn how to listen and internalize meaningful emotions transmitted to you.

Here's an easy test: The next time you have a conversation with an employee, try to recall the next day what it was he said to you. If you can't recall, you weren't truly paying attention. Effective leaders walk the walk and never exercise the "do as I say, not as I do" game plan.

Caring about employees, knowing what's going on in the day-to-day environment and being self-aware in terms of personal improvement — all can help any manager go from ordinary to extraordinary.

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

PROMO POWER

Mark Lapidus

PEOPLE NEWS

Jon Sallet
Justice Department
Former FCC general counsel becomes deputy general counsel for litigation in antitrust division of DOJ

Steven Hickson
AccuWeather
named chief financial officer

Dr. Nnake Nweke
The Broadcasting Board of Governors
named as first director of the new Office of Internet Freedom

Tim Roberts
CBS Radio Detroit
promoted to vice president of music programming for WYCD(FM), WOMC(FM) and WDZH(FM)

John Abbot
Cumulus
appointed as chief financial officer

Christian Leicher
Rohde & Schwarz
has been chosen to serve as president

Mike O'Neill
Broadcast Music Inc.
will extend his contract as president and CEO

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The Pros Give VoxPro a Spin

Wheatstone acquires Audion Labs and VoxPro, rolls out version 6 – the best one yet

HANDS ON

BY ALAN R. PETERSON

Some years ago, something epic began happening with radio contest callers: They stopped asking if they were the "ninth caller;" they already had their radios turned down, and they were as tight in their responses as the jock was in his/her performance.

Did their level of intellect or their performing chops suddenly improve overnight? Nope. Give credit where credit is due: Stations bought a VoxPro — the recorder/editor for live on-air operation, designed in 1991 by Seattle personality Charlie Brown and distributed by Audion Labs.

The premise was simple and brilliant: Extraneous audio not essential to the excitement or relevance of the moment is easily and rapidly edited out using digital technology instead of laboriously slicing up reel-to-reel tape. What was once a one-minute "Caller 9" recording quickly fit into the 10-second intro ramp of the next song.

Starting out on the Apple iOS platform, VoxPro was available with an optional hardware controller console. The big beefy scrub wheel was a huge hit for anyone used to "rocking the reels" to find the best bits in a phoner. The product was ported over to PC hardware in 2001.

VoxPro and Audion Labs were acquired in October by equipment manufacturer Wheatstone. Today's model is the VoxPro6, and it offers tons of features. The ivory-toned curved-front controller was upgraded along the way to a slick new black console. And it now multitracks!

We asked several industry pros about some of their favorite tricks using VoxPro. This is intended to be the first in a series of occasional articles about how to get the most out of various popular models of radio broadcast equipment.

Wheatstone acquired Audion Labs and its VoxPro product line last fall.

COMING TO TOWN

Touring artists do advance promotional calls for upcoming cities, but can devote only a few minutes to each station. If they are there live, it is usually for a similarly short time.

"Shotgun" Jeff Jaxon, PM drive host on WDAF(FM)/The Wolf, Kansas City, Mo., uses an older version of VoxPro (v4) for guest artist interviews, and to make it sound as if the guest was so comfortable they decided to hang out all day.

"I record straight to VoxPro, then edit it into segments which I drop in throughout my show," Jaxon tells RW. "Spacing the segments keeps the interest of my listeners high and makes it seem as if the artist is sticking around with us for the whole show."

But it is in its most basic intended function — cleaning up listener phone calls — that Jaxon screams through his tasks … or would that be *howls*?

"Because our station is 'The Wolf,' I ask my contest winners to howl like a wolf," Jaxon told us. "Sometimes it takes a little coaching and a few tries."

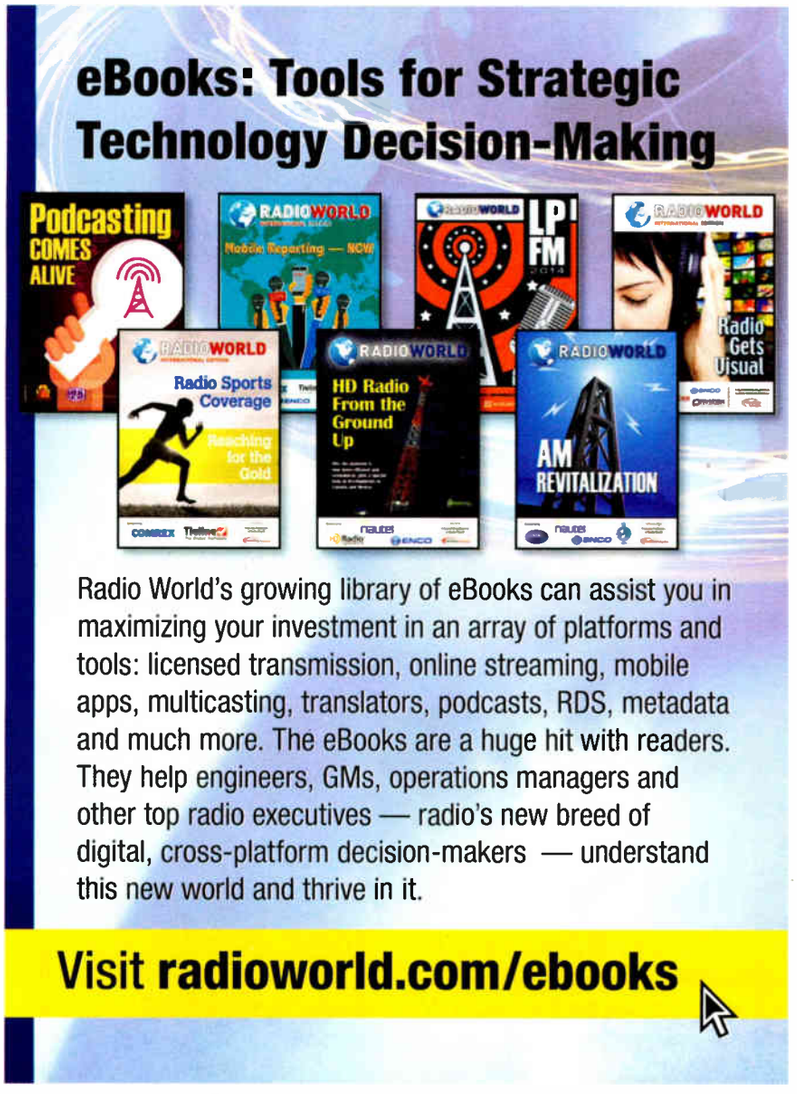
After a few super-quick edits, the feeble tries are gone. The caller's howl is strong, the call is tight and ready for air. "It makes the whole contest more fluid and fun," he said.

Since VoxPro6 has tight integration with the Wheatstone's WheatNet-IP audio network architecture, files can be shared from studio to studio; a morning show associate producer (aka "intern") doesn't have to hog the studio unit. They can run down the hall and cut a "greatest hits of the morning" bit montage using audio files parked on the system.

GOTTA KEEP THEM SEPARATED

The VoxPro records L+R binaural files, but allows the user to independently edit and modify each channel, and even time-slip the channels against each other. This is a feature found indispensable by Mark Morris, PM drive host at CITI(FM)/92.1 in Winnipeg, Manitoba.

"I record phone sessions with the caller on the left channel and my voice on the right," he said. "In a fast-paced show, it's easy to talk over the caller's voice."



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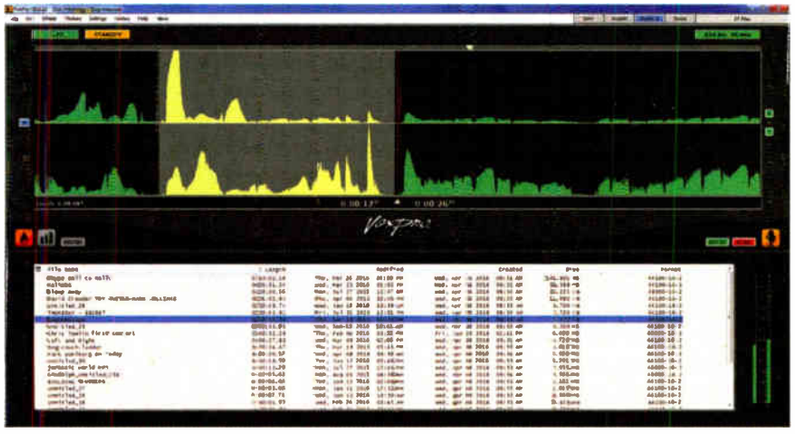

A VoxPro6 background recording being edited.

Instead of allowing the interview to sound sloppy and interruptive, Morris uses Voice Slip to give everyone's voice equal time.

"I section the recording where we are both talking and instantly separate them," he said.

One of Morris' handiest VoxPro tools is the Beep Function. "We're a rock station, and sometimes callers might say a swear word," he said. "I can block it off, hit CTRL-B and it's replaced by a beep."

Morris also uses the Beep Function for rapid-fire topical call-ins. "I might ask, 'Which team are you on, Superman or Batman?' then take five or six calls."

He then edits out the set-up on each call, flies in the beep, and airs a montage consisting of each caller blurting out their choice, separated by the tone burst. "It really gets listeners interested," he said.

Meanwhile, back at The Wolf in Kansas City, "Shotgun" Jaxon sometimes drops in a beep even if there is no NSFW word spoken in the call, just to keep the audience guessing.

On the topic of beeps and other effects: of note is VoxPro's Advanced Effects menu. Here, you'll find some generous bread-and-butter effects to spice up — and clean up — phoners. A parametric EQ can notch out an annoying background whine on crummy phone connections. A bit of compression can tame that scream from the winner that somehow clipped the hybrid/interface.

But there are a lot of creative possibilities too. A big political gag right now is Donald Trump's pronunciation of the word *huge* ("Yoooge!"). Get a caller to say that magic word, dial up the onboard high-quality Waves reverb function and drop it in at the right moment, and said caller sounds like the voice on the mountaintop.

MAJOR LEAGUE TRACKING

Perhaps the best new feature in VoxPro6 is that it is now a multitrack editing environment.

Lots of software being used in radio production today comes from the pro recording industry — DAW environments such as Avid Pro Tools and Adobe Audition are typical. But in the heat of battle, there can be too many features and menu options getting in the way of a finished production.

The form and function of VoxPro6 is dedicated entirely to radio broadcast and rapid assembly. Drag and drop music tracks, sound bites and sound effects into the multitrack window, add fades and effects all at top speed. Pull a track into a side window for additional editing before returning to the multitrack window (a key feature found in other programs such as Cool Edit and Audition).

When done, the mixdown can immediately be assigned to a Hot Key, all inside the same environment.

As we've found out from our users, a lot of functionality can be derived from older versions of VoxPro. But don't hold back. There are many exciting new features to be found in VoxPro6; you can check them out — along with a few compelling videos — at *http://voxpro.wheatstone.com*.

Alan Peterson is production director for Radio America, a Washington-based producer and syndicator of national network talk radio programming. Reach him at apeterson@radioamerica.com.

This image shows VoxPro6 with floating Hotkeys window on top.

World Radio History

INOVONICS RELEASES 223 PROCESSOR

Inovonics says that its new 223 Multimode Audio Processor is a quick, menu-driven, application-specific processor for NRSC, European or shortwave AM broadcast; monaural U.S. or European FM; Traveler's Information Service; and analog SCA applications.

Features include gated and windowed "gain-riding" AGC, three-band compression with adjustable EQ, and a "lookahead" final limiter coupled with overshoot-controlled multiple cutoff output filtering to suit a variety of uses.

The 223 is an alternative to the Inovonics 222 AM NRSC compliance processor that has been in production since 1987.

The 223 is suitable for broadcast services including asymmetrical NRSC-compliant AM processing with 10 kHz, 9 kHz, 7 kHz and 5 kHz brickwall cutoffs; processing for TIS roadside information transmissions, stressing optimum-but-natural speech intelligibility; comprehensive monaural-FM processing for low-power and temporary installations; or an analog-SCA processing mode with smooth, peak-free response for spoken-word and background music services.

The company highlights its intuitive menu-driven user interface. All modes employ protection-limited pre-emphasis and bandwidth constraint specific to the service selected. The triband compressor section has selectable turnover frequencies, and its "smooth vs. loud" adjustment gives clear-cut control over program density.

The compact 1/3-rack-size unit integrates with other Inovonics INOmini products, which include RDS encoders and decoders, AM/FM/HD Radio confidence monitors with IP control and streaming audio, and other economic problem-solvers for broadcasters.

Info: www.inovonicsbroadcast.com

OMT INTRODUCES PIXPLUS VERSION OF IMEDIATOUCH

Broadcast-assist software developer OMT is out with a new version of iMediaTouch aimed at smaller broadcasters of all types: LPFMs, small stations, educators, Internet, etc.

Called iMediaTouch PixPlus, the program offers many of the basic features of the company's iMediaTouch Enterprise but without as many bells and whistles. It can be deployed on a single PC.

OMT says it includes core playback automation, device control and current day schedule management, as well as a "cart wall" for on-demand playback of beds, sound effect, IDs and any audio item from the library.

It adds that PixPlus has an SQL-based content management system along with advanced search capabilities and drag-and-drop functionality, audio ingest and editing, voice recording and other features.

According to OMT, PixPlus has extensive IP and web functionality including remote access, playlist and sales functionality and operation.

Info: www.imediatouch.com

DAVICOM COUNTS THE STRIKES

Last year Davicom brought out its DVLD-1 Lightning Detector. Expanding its offering in that market, the manufacturer now has released the DVLC-1 Lightning Counter.

The DVLC-1 is designed to be mounted on a tower leg and count direct lightning strikes upon the tower.

A 30-meter fiber-optic cable will feed alert information back to any installed Davicom remote control unit. It is strike-resistant and will not provide an electrical path for the lightning.

Info: www.davicom.com

BELAR EMPHASIZES AFFORDABLE MONITORING

Belar is thinking affordable these days with the introduction of low-cost versions of its FMHD-1 and FMCS-1 monitors.

The FMHD-1 Lite and FMCS-1 Lite (shown) are said to be 40 percent lower in price and half-the size (height-wise).

Though the feature set is simpler, the company says, these models include popular features such as "all pertinent meters, alarms and enhanced monitoring features ... including Belar's Automatic Delay Correction software for managing HD Diversity Delay."

Belar says that both units are aimed at IP remote operation.

CEO Mark Grant said, "Almost every significant RF component today is accessible from the studio, an office or even from home. ... Engineering visits to RF plants happen less frequently, and there is little point in driving out to sites daily or weekly to adjust your processor, mod monitor and transmitter." He said the new monitors give engineers a less expensive option without sacrificing performance.

Info: www.belar.com

HENRY BRINGS POWER TO ITS PODS

Henry Engineering's new Power Pod is a multisystem power supply and audio input unit for use with any of Henry's various "pod" products. It will provide power to the popular Talent Pod and Sports Pod commentator units, as well as the Guest Pod and MiniPod headphone listening stations.

Because these products use identical Cat-5 linking protocol, they can be "mixed and matched" to create a remote broadcasting or in-studio commentator system. A single Power Pod can provide power and audio input facilities to the entire system via the Cat-5 link, eliminating the need for multiple power sources, DAs and complicated wiring.

Each Power Pod can provide power for up to 12 MiniPods, six Talent Pods, five Sports Pods or 10 Guest Pods. In addition, the Power Pod's audio input jacks can be used to feed audio to the system. With Power Pod, it is now possible to use Guest Pods for headphone monitoring without a MultiPhones Master unit. The Power Pod also facilitates use of the talkback feature on Sports Pods commentator units.

Info: www.henryeng.com

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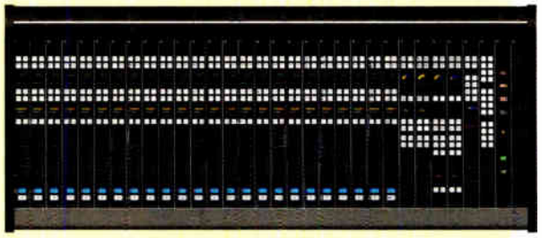
WHEATSTONE DEPLOYS LXE CONSOLE



Wheatstone's new LXE is aimed at radio stations deep into IP networking.

The control surface is completely configurable, with programmable switches, rotary controls, buttons, fader groups that can be operated across a network from different consoles.

It is native to the WheatNet-IP network along with other AES67-compatible networks.

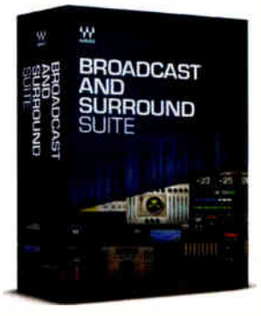
Wheatstone Systems Engineer Kelly Parker said the product is a response to broadcasters who wanted a more adaptable console surface. "By eliminating the usual hard-coded buttons and encoders and instead scripting out those capabilities much like we've done with our audio network, we can give them that."

Individual channels include DSP, EQ and metering. The control surface features multiple OLED touchscreens and up to 32 motorized faders. Wheatstone says its GUI has prebuilt screens for metering, clocks, timers, dynamics, EQ, assigns, and more. All are touchscreen-accessible with gestures similar to those used on smartphones and other devices. Like the surface, the GUI is customizable. Using Wheatstone's ScreenBuilder-LXE software, users drag and drop objects and define their functions via a wizard interface.

I/O includes analog, S/PDIF, AES/EBU, MADI, AoIP, SDI and AES67. The LXE is available as a countertop, sunk or split frame.

Info: www.wheatstone.com

WAVES ROLLS OUT BROADCAST BUNDLE



Processing software developer Waves is bundling a number of its plug-ins that it feels will be of service to radio and TV broadcasters, packaged as the Waves Broadcast and Surround Suite. These are for radio operations that employ a major and/or multiplatform production effort.

The 18 selected plug-ins include noise reducers, loudness metering, surround processing and mixing.

Specifically included are Waves 360 Surround Tools, DTS Neural Surround plug-ins, WNS Noise Suppressor, NS1 Noise Suppressor, WLM Plus Loudness Meter, Dorrough Stereo and Dorrough Surround plug-ins.

The plug-ins are Mac and Windows-compatible and should work with AAX, AU, RTAS, VST3 systems — Pro Tools, Nuendo, Cubase, Pyramix, Audition, Premiere, Logic, Digital Performer and Reaper. Price: $2,499

Info: www.waves.com

P-CUBE OFFERS NEW BANDPASS FILTERS

Maine's P-Cube is offering a new FM bandpass filter aimed at the low-power FM market.

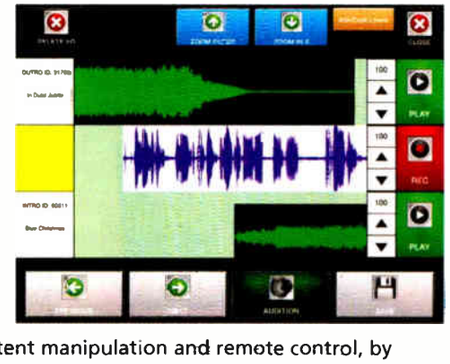
The company describes its new unit as a compact, cost-effective, bandpass filter that available in three- and four-section models.

The four-section model has "the added benefit of non-adjacent coupling for better rejections on either side of the pass band."

The company has higher-power models as well as mask filters, directional couplers, coaxial adaptors, combiners and other assorted RF transmission support gear.

Info: www.pcube207.com

ENCO DEMOS MOBILE JOURNALISM TOOL



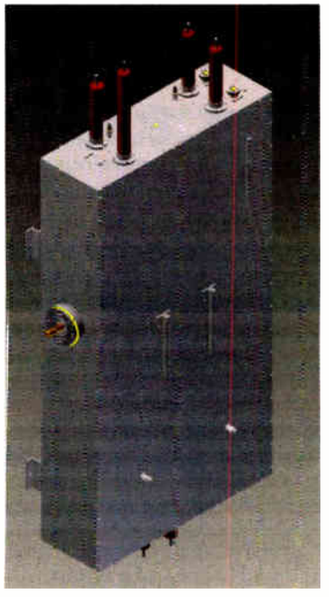
At spring's NAB Show, ENCO demonstrated its iDAD app as a mobile journalism tool, allowing journalists to record and then stream audio from their iOS or Android device to the ENCO DAD automation systems for playout.

"The unifying element is making sure that these tools are accessible for our customers in the cloud, from any connected location outside of the studio," said General Manager Ken Frommert in an announcement.

ENCO says it is laying the groundwork to expand further in mobile and browser-based radio production applications.

To start off, it will be rebranding its current tools, which include remote voice tracking (shown) for off-site audio production, remote content manipulation and remote control, by bringing them all together under the enCloud suite family name.

Info: www.enco.com



ERI INTRODUCES TWO FM COMBINERS

RF transmission support equipment manufacturer Electronics Research Inc. has produced a pair of combiners.

The Model FI136 is a low-power Tee combiner capable of combining two FM channels up to 1 kilowatt each, 2 kW combined. It is aimed at FM translators sharing an antenna. Frequency separation must be at least 1.6 MHz. The filter set is constructed of lightweight aluminum with copper resonators. Nonadjacent coupling increases rejection of transmitter out of band emissions. The combiner is temperature-compensated and includes a single port directional coupler at the combined output and directional couplers for the combiner inputs are optionally available.

The Model FI836 (shown) is also a two-channel model but its power rating is significantly higher at 15 kW per input or double that with a forced-air-cooling option. Spacing for the FI836 is a minimum of 1.8 MHz between channels though closer frequencies can be handled as a special order. The company says that the bandpass filters are integrated into a single compact floor-mounted cabinet that requires little or no on-site combiner assembly.

Info: www.eriinc.com

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20 KW	2002	Harris Z20CD, solid-state
20 KW	2006	BE FM20S, solid state
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World Radio History

Relief for Tower Owners and Migratory Birds

It's possible to be both cost-effective and bird-safe, FCC biologist says

COMMENTARY

BY JOELLE GEHRING

As the biologist for the Federal Communications Commission, I work on issues involving migratory birds and endangered species. I am eager to spread the word about the new Federal Aviation Administration tower lighting recommendations that can reduce your tower maintenance and construction costs, as well as reduce migratory bird collisions.

Every year, millions of birds migrate thousands of miles across North America to Central America and elsewhere as seasons change, following the weather from cooler to more temperate climates and back again. Ducks, geese, sparrows, warblers and other North American migratory birds follow these flight patterns annually. The Arctic Tern, for example, migrates the farthest distance annually, at approximately 44,000 miles round trip.

Photos by J. Gehring

Indigo Bunting is a species that collides with communications towers lit with non-flashing L-810 lights.

The FCC has an important protective role to play.

Communications towers serve as deadly roadblocks on the paths of birds as they travel. Some in broadcasting have expressed doubts that birds collide with communications towers or that bird collisions with towers are a significant threat to bird populations. However, small bird carcasses can be difficult to detect in vegetation and are often quickly removed by scavengers like raccoons and cats. In addition, bird collisions do not occur at every tower on every night, but are instead most common on foggy or rainy nights during spring and fall bird migration.

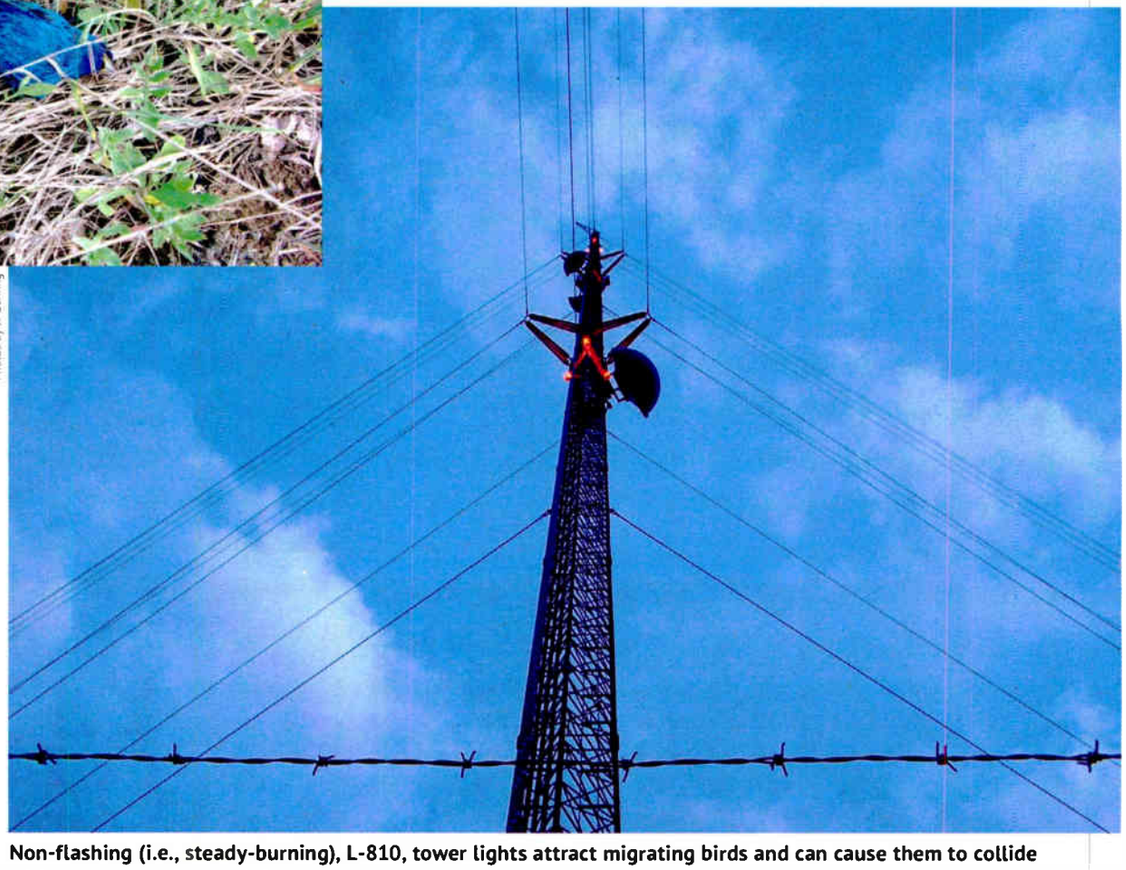
For more than 50 years, migratory birds have been documented to collide with communications towers, as well as other tall structures. Biologists have conducted focused studies (*http://tinyurl.com/zq6noku*) and estimate that approximately 7 million birds collide with towers in Canada and the United States every year during their spring and fall migrations. A documented 239 species of birds have collided with towers resulting in fatalities.

Wildlife biologists have concluded that tall, guyed towers are involved in more bird collisions than shorter, self-supported towers.

Most important for towers that have already been constructed, migratory birds are attracted to tower obstruction lights and appear to be more attracted to steady-burning L-810 side-marker lights than to flashing lights. Their attraction to the tower lights results in collisions with tower guy wires and the tower structure itself.

STANDARDS

Over the past six years, the FCC has partnered with the Federal Aviation Administration to protect migratory birds by revising the standards used for lighting communications towers, extinguishing non-flashing lights on towers taller than 350 feet above ground level and transitioning from steady-burning tower lights to flashing tower lights on towers 150–350 ft. AGL.



Non-flashing (i.e., steady-burning), L-810, tower lights attract migrating birds and can cause them to collide with tower guy wires and the tower structure.

The publication of revised lighting rules last year (*http://tinyurl.com/hns668d*) marked the culmination of a multi-year effort to significantly reduce mortality rates of migratory birds resulting from collisions with communications towers. On towers taller than 350 feet AGL, these new FAA tower lighting rules reduce tower construction costs, maintenance costs and energy costs, in addition to minimizing bird collisions by as much as 70 percent. As an added incentive, extinguishing the non-flashing lights on existing towers with red light systems can be completed without climbing the tower.

Going forward, new and altered towers standing more than 350 feet tall may only use flashing lights at night.

Within the next few months, the FAA is expected to promulgate new technical specifications that will similarly enable the use of flashing lights only on towers 150 to 350 feet tall.

In addition, the FCC is encouraging owners to extinguish non-flashing lights (*http://tinyurl.com/zem2huc*) on towers built before the new FAA standards took effect. In March 2016 the FAA stated, "New tower lighting schemes should now follow the revised guidance, and operators of towers with the old lighting system should submit plans explaining how and when they will transition to the new standards."

Similar to tower obstruction lights, the elimination of continuously burning security lights on the buildings under towers will minimize bird attraction to the site. The FCC encourages the use of motion sensor-triggered security lighting under communications towers, if security lighting is required.

These cumulative efforts will prevent millions of avian fatalities each year in the U.S. and Canada. And extinguishing or eliminating the use of non-flashing lights on towers can save industry construction costs, maintenance costs, energy costs and carbon output with no additional cost to the tower owner.

HOW TO CHANGE TOWER LIGHTS

A "lighting deviation" is required to extinguish or eliminate L-810 steady-burning side lights from an existing registered tower. There is no fee or other

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BIRDS

(continued from page 29)

charge for requesting a lighting deviation from the FAA, and the FAA typically approves these requests quickly, especially when there is an existing approval for a tower lighting system.

In addition, FAA representatives from each state are available to assist with tower lighting requests. For specific contact information, visit *http://tinyurl.com/jeu79hj*.

Below is the step-by-step process for obtaining an FAA lighting deviation determination and updating the FCC's antenna structure registration database to extinguish red steady-burning lights (download the PDF at *http://tinyurl.com/fcc-birds*):

1. File a Marking and Lighting study electronically with the FAA (online at *https://oeaaa.faa.gov/oeaaa/external/portal.jsp*), requesting the elimination of steady-burning lights (L-810) with Form 7460-1, Notice of Proposed Construction or Alteration. Designate structure type: "Deviation from Red Obstruction Light Standards."

2. Once the FAA has approved the request and assigned a FAA Study Number, file Form 854 with the FCC via the antenna registration system. Please select "MD — Modification" and choose the appropriate FAA Lighting Style. If the FAA grants a lighting deviation referencing an advisory circular other than 70/7460-1L, select "3. Other" and describe the lighting in the field provided. If the FAA issues a new study referencing 70/7460-1L, select the lighting style that corresponds to the lighting in the FAA study. The FCC will typically approve the application and modify the registration within 24 hours.

3. Once the lighting change for a tower has been granted by the FCC via ASR, the steady-burning, side-marker, L-810 tower lights can be extinguished. This is typically accomplished in the tower transmission building and does not ordinarily require climbing the tower. Per the FAA requirements, flashing red lights should flash at 30 FPM (+/- 3 FPM).

We hope that you consider taking advantage of this new cost-effective and bird-friendly lighting option.

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

CORRECTION

The article "NFCB: 'We're Better Together'" in the Aug. 3 issue incorrectly quoted AIR Executive Director Sue Schardt on several key points of its "Localore: Finding America" production. Schardt did not use the terms "hopeless" or "forgotten" and in fact, she subsequently told us, those terms are opposite of many of Localore's goals. We asked her to expand on that: "We directed our local production units to the 'far corners' of local communities where public media is seeking to engage citizens more effectively. Our efforts are intended to provide new approaches for journalists and others who seek alternatives to the often redundant beat of violence-poverty-disparity headlines. The story we are surfacing, and that visitors to our documentary site [findingamerica.airmedia.org] will experience, is one of endurance and faith, ties that bind and commitment, family and livelihood. There is no sugarcoating, but there is a deeper and, at times, inspiring, reality of ordinary, day-to-day life across America."

READER'SFORUM

SPEAK UP ABOUT INTERFERENCE

Paul, please remind Radio World readers about the FCC's Public Notice dated Aug. 27, 2015, titled "Enforcement Bureau Enhances Procedures for Public Safety and Industry Interference Complaints" as well as the FCC's informal complaint form, which broadcasters should use to file interference complaints for distribution to AM, FM and TV broadcasters.

Beyond the separate, unprecedented notice of inquiry about RF noise from the FCC Technological Advisory Council (Docket 16-191), every broadcaster should be proactive in filing complaints as appropriate to emphasize the level of concern regarding interference to the reception of their broadcast services.

You can read the notice at *http://tinyurl.com/rw-fcc-complaint* and download the complaint form at *http://tinyurl.com/rw-fcc-form*.

Tom King
President/CEO
Kintronic Labs Inc.
Bristol, Tenn.

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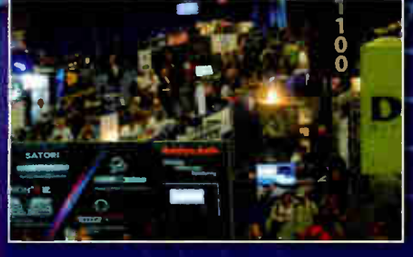

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