STREAMING SQUEEZE — Page 3

NewBay Media

RADIOWORLD

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NAB Explores Future With "Pilot" Program

Former NAB Labs aims to drive broadcast through strategic research and investments

TECHNOLOGY

BY SUSAN ASHWORTH

Recent investments and a name change have put new attention on a four-year-old technology initiative of the National Association of Broadcasters.

NAB Labs was launched in 2012 with a stated mission to "foster innovation and continue to propel broadcast television and radio into the future." It sought to provide "a platform for innovation, a venue for forging partnerships and testing new technology, and educational events to create awareness about over-the-air radio and television technology initiatives."

It has made several notable business announcements recently and in January the department changed its name to Pilot.

Part of its mission remains to invest time and resources in burgeoning organizations whose technology will provide directly applicable benefits for radio and TV broadcasting. But Pilot hopes also to pull in new media broadcasters, advertising partners, technology enablers, and measurement and "attribution" companies.

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Darryl Parks: Tough Love for Radio

He exhorts programmers to remember that radio companies still have to sell commercials

Darryl Parks

PROGRAMMING

BY KEN DEUTSCH

Darryl Parks — former Clear Channel employee, former WLW(AM) Cincinnati programmer/talk host and current culture blogger — can look at radio from both sides now, to paraphrase Judy Collins. Radio World spoke to him about the state of our industry.

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Sometimes It's Good to Find Fault
Workbench, page 14

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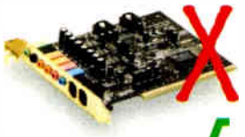

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NewBay Media

Small Webcasters Are Squeezed by Music Rates

New digital performance royalty rates and terms took effect with the start of 2016

BY RANDY J. STINE

WASHINGTON — Updated music streaming fees, set by the federal Copyright Royalty Board, are having a dramatic impact on the smallest commercial webcasters.

The three-judge panel set digital performance royalty rates and terms, effective Jan. 1, 2016. It cut the rate for commercial nonsubscription services paid by many radio stations for their online streams, as RW has reported. But the CRB also eliminated a rate model for small webcasters and microcasters, one that helped to make their ventures affordable, according to people familiar with the sector.

The rate structure derived from the Webcasting IV proceeding already has been cited as contributing to the demise of Internet hosting platform Live365, which ceased operations at the end of January. That left more than 5,000 independent webcasters looking for hosting options for their online radio stations, according to a person familiar with the situation. It's not clear how many of those webcasters ceased operations.

Live365 called the new rates "prohibitively expensive for small to mid-sized Internet broadcasters." The company also cited the loss of several key investors as a reason for shutting down.

This graphic accompanies a petition at change.org. "Nearly 100,000 small webcasters will go off the air without YOUR help," it pleads.

There is no way to know for sure how many Internet radio stations have ceased operations this year, but experts contacted for this story said the number could be in the hundreds or even thousands. Some small webcasters have started blocking their streams in the United States, while others may have gone pirate, some said.

SoundExchange is the entity responsible for collecting music recording royalties and distributing them to copyright owners. It said that of the more than 2,500 services that leverage the statutory license and pay SoundExchange — including non-interactive Internet radio, satellite radio and cable radio services — fewer than 80 services paid under the small webcaster rate.

Of those 80, some represent multiple small webcasters. For example, StreamLicensing, which provides blanket royalty and performance fee coverage and reporting for small webcasters, had approximately 1,300 clients at the beginning of the year but counted as a single service.

A spokesperson for SoundExchange said small webcasters did not participate in the Webcasting IV rate proceeding, "and therefore the CRB was not asked to consider a small webcaster rate."

SoundExchange said it is too early to know whether fewer small webcasters are paying the new CRB commercial rate of $0.0017 per-performance (which is often cited as 17 cents per 100 songs).

MICROCASTERS AND HOBBYISTS

Meanwhile, the "microcaster" category also was cut from the 2016–2020 CRB rates and terms. The category was intended for small webcasters at "hobbyist" level services, with low annual gross revenues, low annual expenses and online listenership fewer than 18,067 aggregate tuning hours annually.

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O'Rielly Bashes "Anti-Capitalism Talk" — In an FCC blog post, the commissioner writes that capitalism is under "continuous assault domestically by self-defined progressives and ultra-liberals, who have found sport in using misguided rhetoric and false pretenses to denigrate one of the core tenets of American society." Read it at *radioworld.com/capitalism.*

Building an Industry: AIS Pioneer Reflects on Successful Career — Bill Pasco never intended to work for an audio information service. In fact, when he graduated from Ohio University with a degree in radio and television, he had no idea such a thing existed. See *radioworld.com/pasco.*

EBU Provides Update on Europe's Digital Radio Rollout — Which European countries are leading the way in the transition to digital radio, and which are "waiting to see"? Find it at *radioworld.com/ebu.*

World Radio History

Why It Doesn't Look Good for OTA

Consulting engineer Bob Culver finds digital radio's data capacity lacking

FROM THE EDITOR

Paul McLane

Five years ago while preparing to moderate a convention session, I had an email back-and-forth with consulting engineer Robert (Bob) Culver, among others, about the state of U.S. digital radio. I like to gather ideas from as many people as possible for such events, and Culver's questions and predictions were pungent, not intended to soothe anyone's worries about the medium.

I recently came across my saved notes and wondered if his views had evolved; so I checked in with him.

First, here's a flavor of what Culver told me in 2010: "Digital radio is not going anywhere very fast," he wrote then. "It has not achieved critical mass to become an entertainment-data-communications necessity. It is not demanded by the public because it does not offer anything new.

"Even if every radio in every new car could receive digital (as a switchable option, I hope) it is not offering any substantial thing that is new. The excess data capacity is used to provide the Same Old Stuff, more programming or alternative programming from another source to overcome some technical limitation in that other source."

Culver said that he first saw a demo of digital radio at the NAB Show in Atlanta in the days of the EIA-NAB project, during which he served on several industry working groups. He recalls offering the standing wager of a beer that 10 years after wide acceptance of DAR, its excess data capacity — over and above that required to carry the former audio program — would become

Robert (Bob) Culver

more valuable than the advertising revenue from the audio program channel. He had high hopes.

Two decades later, in 2010, he told me, "My bet is safe for two reasons. 1) *Wide* acceptance has not been achieved, even now, a considerable time after rollout, and it might never be achieved. 2) The excess data capacity in the current digital radio systems is fast approaching *zero*. It is either being used for non-data needs with more audio or pared down because of interference."

He also mused about how much non-audio programming data could be delivered to any given receiver; how digital data capacity might change under an all-digital radio mode; and how various digital platforms could deal better with dropouts.

DEMAND ECONOMY

I reached Culver again this winter to ask for an update on that and some other predictions he'd made about data capacity, connected cars and digital radio.

He emailed while sitting comfortably in retirement with his wife in Wyoming, watching hockey on TV, with the sun shining brightly on the Tetons, 10 below zero outside and a fire burning merrily in the wood stove.

Digital radio is not yet widely accepted, and the vanishingly small excess digital data capacity is totally swamped by other mobile data paths to the consumer.

– Bob Culver

"I'll give you the short answer now: It does not look good for over-the-air broadcasting," Culver wrote. "I re-read what I wrote over five years ago and do not find much if anything that I would change today.

"First, I think my wager for a few beers is safe (not that I wouldn't sit down with any of my radio engineering friends over a few beers, the conversation would improve). The reason is that digital radio is not yet widely accepted, and the vanishingly small excess digital data capacity is totally swamped by other mobile data paths to the consumer.

"Something that was overlooked in addition to this wager was my prediction that the present/planned digital radio system in the U.S. is an *interim* system; something would come along to replace it. It has not been replaced yet and may never be; it probably will just be buried under the mobile personal communications systems not related to broadcasting."

Culver noted that demand for data from smartphones is creating such load on cell systems that more and more infrastructure and RF spectrum are needed.

"Here in the isolated and relatively small town of Jackson (population 10,000) I have been questioned by and talked to the town council on how they should deal with the requests for new towers. We do have a challenging topography to serve, but it is the consumer 'demand' that is pushing the need for more towers. They eventually settled on a plan where 'camouflaged' towers

NEWSROUNDUP

MDCL: AM stations that wish to use modulation-dependent carrier control systems can do so without FCC authority as of March 3 as long as they notify the commission afterwards. That's one upshot of the recent AM revitalization order. Law firm Fletcher Heald & Hildreth, keeping an eye on the administrative details, reported that the federal Office of Management and Budget gave approval to a section of the rules and to Form 338, the AM Station Modulation-Dependent Carrier Level Notification Form. It also reported that the FCC has given 33 permanent waivers and 20 experimental authorizations since 2011.

CONTEST RULES: The new contest rules, previously reported, went into effect last month. The FCC earlier announced an overhaul of rules governing licensee-conducted broadcast contests. The Office of Management and Budget subsequently approved the rule changes, again according to Fletcher, Heald and Hildreth. Stations can post their contest rules on their websites rather than having to make extended on-air announcements of the rules. Some on-air requirements still apply, however.

BBG: The president's budget request for fiscal 2017 includes $777.8 million for the Broadcasting Board of Governors. That would be a 3.5 percent increase in spending over FY2016. CEO John Lansing said the request reflects unprecedented collaboration among the BBG networks to increase efficiency and support BBG's mission. The request prioritizes expanding digital and video production to engage young audiences affected by Russian aggression and disinformation, and by media campaigns of violent extremist groups such as ISIL.

PANDORA: Pandora brought in more than $1 billion last year, but it also lost a lot more money than the year before at a time when its listener growth flattened and competition in the streaming space has increased. The company said total revenue grew 26 percent to $1.16 billion, helped in large part by growth in advertising as well as a recent acquisition. And total listener hours increased by 5 percent. But the company reported another net loss, this time of $169.7 million, compared to a loss the year before of $30.4 million. And the number of active listeners fell slightly after growing the year prior. Separately, the New York Times reported that Pandora has explored the possibility of selling itself.

PODCASTS: Major producers of public radio podcasts issued guidelines for podcast measurement. "These guidelines are not intended to operate as a full technical standard per se, but rather overall principles and public radio's technical guidelines for measuring podcast usage," they wrote. Contributors were from organizations such as NPR, WNYC, SCPR, WBUR, PRI and other public media entities. See related information at *http://podcast-measurement.wikia.com*.

BEASLEY: Steve Griesbach was named market director of engineering for the Las Vegas cluster of Beasley Media Group Inc.

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Photos courtesy John F. Schneider

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would get fast-track permit processing and ugly towers would go the long path to approval. So now they build 'fake pine tree' towers sitting up on rock ridges and sticking out like a sore thumb. Dumb! But I digress."

Culver feels personal mobile devices have "stolen" any opportunity for broadcast data. "The potential broadcast data was too limited under the system the U.S. decided to adopt (what eventually became HD Radio) as a result of the focus on the 'business of broadcasting' over the benefit to the consumer."

In general, he thinks broadcast radio, as well as TV, has reached a tipping point and is heading to near-oblivion. "The service provided by over-the-air broadcast is burdened by cost and deficiencies of that medium; it will no longer grow but will steadily decline," he said. And poor programming choices are not helped by a digital conversion in over-the-air transmission.

"The only saving grace I can think of is the talk radio service available over long distances on rural AM radio. No, there is another saving grace: educational radio. It is not on the air as part of the business of broadcasting, but instead to educate those listening *and* those doing the broadcasting." His cited local low-power FM stations KJHB and KJHR. "Universal global digital coverage is still a long way off and some areas, mine for example, we will not see it for a long time."

Speaking of digital platforms more generally, one of the points Culver questioned five years ago was how to solve the problem of irritating digital failure modes.

"It looks like the technical fix of over-building a digital system in a service area, higher digital ERP for example — to provide a signal level far above that threshold of failure over a large area — has been acknowledged and applied as one fix." Building more towers for cellular and personal devices is another.

"However, I think the public has become accustomed to digital dropouts. By comparison to an analog system in which you could accommodate the noise, the 'defective' digital service may now be tolerated."

He closed with personal observations about our increasingly digital world.

"I get to lecture at some of the local high school technical classes on radio and related engineering. The one point I am careful to make regarding digital data is that *anything* you put online and into the digital domain *stays there forever*. If you don't want your mother to see it, don't post it. If you don't want a future employer to see it, don't post it. If you don't want some prosecutor (or other government type) to see it, don't post it.

"Since you mentioned connected cars, I guess I should chime in about that. The answer is easy: Do you want another information path opened up to others?

"Our private lives are not so private anymore; and it takes more vigilance to try to keep it so in the digital world. There are some digital systems that can crash or be invaded by unauthorized snoops. The connected car is only the latest: the power and water and other civic infrastructures are attractive terrorist targets. Digital is useful, but do not ignore the unintended consequences a digital system can cause."

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

Culver communes with Ben Franklin on Center Street in Jackson, Wyo.

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FM Translators for AM: Just the Start

Opening of the first phase of the window brought a rush of applicants

BY SUSAN ASHWORTH

WASHINGTON — The Federal Communications Commission received more than 450 applications in the first days of a window for AM stations looking to modify FM translators for rebroadcasting their AM signals.

Applicants come from a range of backgrounds and organizational types. They include Hi-Line Radio Fellowship, a religious ministry broadcaster; educators like the State University of New York; and individual entities like the Thomas Huth Revocable Living Trust.

Each application — required to be submitted in all-caps on a multipage, drab-gray application known as Form 349 — offers details like coutour reach, field strength and antenna height, yet they also read like small diary entries, providing a glimpse of what these ventures foretell.

This first window will be open for months but several industry execs said they were not surprised that most of the applications arrived in the first few days, due in part to the wink-and-it-may-be-gone nature of the process. The FCC will grant applicants on a first-come-first-served basis; applicants who file for the same channel on the same day must resolve their mutual exclusivity through settlement or technical amendment processes.

One company in the trenches is Phoenix Media Group, a radio broadcast consulting firm that worked with a number of AM stations to submit recent license applications.

"This is a truly golden opportunity for many AM stations to add another platform for their content and, in many cases, a 24/7 platform at that," said Steve Moravec, principal of Phoenix Media Group, which helped initiate translator applications for licensees in Iowa and Minnesota. His advice: "Go for it, now."

While many jumped early, some good opportunities may yet appear months from now, said John Broomall, licensee of WPCG(LP) in Canton, Ga., and founder of Christian Community Broadcasters. "Translators will leave certain markets and holes [will be] left by defective or dismissed applications," he said.

For Class C and Class D AM stations that have not yet engaged in efforts to obtain an FM translator, there is a sliding scale of opportunities this year and in the opportunity to apply in the planned 2017 FM auction filing window, said John Garziglia, a partner with Womble Carlyle Sandridge & Rice.

For stations in a spectrum-rich area with many available FM frequencies, waiting until the 2017 filing window may make sense, Garziglia said. But do your homework. "If there are only several prime FM frequencies remaining in an AM station's area, waiting until the 2017 auction filing window could result in being left out or obtaining a less than optimal FM frequency," he said.

"Therefore, if prices on translators [stay] substantially moderate in the next several months, and a translator becomes available in the low five figures, an AM station needs to balance the risk of waiting, with the fairly certain benefit and nominal cost of an immediate FM translator acquisition," he said.

"At some FM translator price points, it will be imprudent for an AM station to wait for the 'free' translator that might or might not result from the 2017 auction filing window, as nothing with a future FCC auction filing window is absolutely certain."

> **This is a truly golden opportunity** for many AM stations to add another platform for their content and, in many cases, a 24/7 platform at that.
>
> – Steve Moravec

Price points for FM translators sold ahead of the opening window varied substantially. Q Media Group is purchasing K263AL in Madison, Minn., for $75,000; Custer County Broadcasting is buying K250AP in Pierre, S.D., from Radio 74 Internationale for $20,000.

"The prices were a bit of a surprise," said Larry Langford, owner of WGTO (AM) and W266BS in Cassopolis, Mich., and a contributor to Radio World. He said at least one translator in Michigan sold for $3,000. "Some of us expected prices to soar, but it looks like demand did not exceed supply. Some of the deals allowed time payments, which was a great surprise and a help to cash-strapped AM operators who need all the help they can get."

Langford has chosen to use this first window to move his frequency to a clearer channel that will help his rural station be heard in the nearest big city. "At first I thought [the 250-mile move rule] would drive prices up, but what it has done in reality is increased competition among owners to sell unused CPs or low-power translators, and that means some buyers have been able to negotiate some rather nice deals."

Part of the success for translator sellers like Ronald Unkefer was the "realistic pricing" his group assigned to listed FM translators. Unkefer is founder and CEO of First Ventures Capital Partners, which conducted three private translator auctions before the opening of the FM translator window. Translator prices in the First Ventures auction ranged from $25,000 to $50,000.

"The only negative was that the last one was too close to the filing window for most broadcasters to make new plans in time for the start of the auction," Unkefer said. "It has been a tremendous driver of sales, and in spite of the radio world being programmed to negotiate, we believe that the buyers actually enjoyed the transparency of posted prices with nonnegotiable terms."

Others expressed surprised that more applications were not filed.

"We thought the number would be higher and found the quantity light by perhaps half of our own expectations," Moravec said. "The lack of technical knowledge, coupled with the 2017 'free for all' window, kept more than a few owners on the bench waiting for next year."

A review of the data suggests that 15 or so engineering firms were responsible for about 50 percent of the applications.

Interested parties must also weigh the fact that they get one shot at this: Only one translator modification application will be accepted in any of the 250-mile relocation windows. The FCC has said that subsequent applications — for this window or any of the upcoming FM translator windows — will not be accepted.

There has also been frustration that some broadcasters have been left out of this process altogether. "Spectrum is limited and what helps one class of broadcasters — i.e., AMs getting an FM signal — will hurt and lessen the chance of LPFMs ever getting more power or there being a future LPFM Window," Broomall said.

Low-power FM advocate REC Networks recently petitioned the FCC to include LPFM stations in one of the two FM translator filing windows for AM stations set for 2017.

It appears the FCC staff has a fair amount of work in front of them. As of mid-February the commission had begun to grant a few of the 250-mile window applications, such as one by

(continued on page 8)

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World Radio History

MICROCASTERS

(continued from page 3)

according to SoundExchange — or approximately 49 listeners, each listening for one hour per day.

There were 150 services in the microcaster category last year that paid rates to SoundExchange, according to the company.

Sound Exchange said a microcaster fitting the criteria, including annual gross revenues below $5,000 and annual expenses below $10,000, will continue to pay the $500 minimum per year and nothing more.

However, supporters of small webcasters said the new rate structure puts an emphasis on limiting listenership of small Internet radio stations and severely curtails interest from hobbyists looking to develop webcasts.

rate agreement would have meant a $2,000 annual fee for a small webcaster with expected gross revenues under $50,000, he said.

"Even a webcaster with only 10 simultaneous listeners will now pay upwards of $2,000 for the year. Then each new simultaneous listener costs another $223.38 per year. That will quickly add up for a small webcaster who doesn't have any revenue to offset those increases," he said.

A small webcaster — as defined by the Webcaster Settlement Act of 2009 — was one with less than $1.25 million in gross revenue.

"Under the new arrangement there is no difference between large or small webcasters. Everyone pays the same $0.0017 per-performance rate," Goldberg said.

There is always a chance of royalty rate relief for small webcasters, he said, but it would be a two-step process.

"First, a deal would have to be struck with SoundExchange. Second, Congress must pass a bill which authorizes the agreement or settlement become effective."

Congressional action would be necessary because the Copyright Act says that only the CRB can set rates and terms applicable to webcasters and sound recordings, Goldberg said.

Dennis Fallon is a partner in SHOUTcast Streaming, a stream hosting company that provides streaming services to webcasters. He the music streaming rate hike has cost his company up to 45 percent of its customers.

"Thousands of small to medium-sized Internet radio stations are going 'dark' because they cannot afford the new royalty structure," Fallon said.

For example, one of his company's clients, FM5280.com, had hundreds of listeners and saw its royalty payments go from $125 per month to over $1,500 per month, Fallon said.

"The rates did not just double, they increased by over 10 times the prior rate. Most stations could have absorbed a doubling of rates, but not many stations could afford the rates increasing over ten-fold," Fallon said.

FM5280.com is no long streaming due to increased royalty rates for 2016–20, according to its website.

Meanwhile, StreamLicensing LLC is promoting a grass roots effort to sway Congress to reconsider reestablishing the small webcaster agreements.

"No one can afford to succeed with a lot of listeners right now. The higher-ATH webcasters are gone. Though some have geo-locked the U.S. out and continued broadcasting I suspect," said Marvin Glass, owner of StreamLicensing.

Glass is asking clients and other webcasters to sign up at *www.radiodiversity.org* to join what will likely be a legislative process to regain affordable music performance fees for small music webcasters.

The CRB rate setting ruling also could be appealed to Washington, D.C., Circuit Court of Appeals, which adjusted some of the rates in the Webcasting III proceeding, observers said.

StreamLicensing had some 1,300 clients at the beginning of the year, according to Glass. He declined to say how many of his group's webcasters have shut down due to the more onerous royalty fees.

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

No matter how you calculate the rate increase for small music streamers, it is massive.

The previous Small Webcasters Agreement allowed small webcasters to choose from several rate options based on revenue or expenses.

Attorney David Oxenford wrote on his Broadcast Law Blog that "under prior webcaster settlement agreements, small commercial webcasters were able to pay based on a percentage of their revenue, and there were special provisions for small broadcasters to avoid some of the regulatory burden."

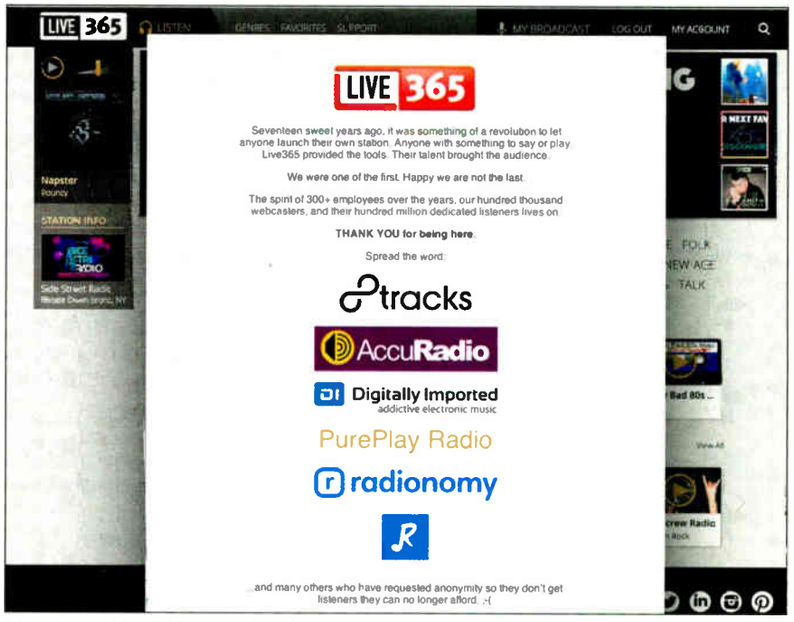
The CRB's decision left most commercial radio broadcasters satisfied with the new rates, experts said. The rate for commercial nonsubscription services of 17 cents per hundred songs applies to many radio stations and is down from 25 cents prior.

The rates for noncommercial webcasters are $500 annually for each station or channel for all webcast transmissions totaling not more than 159,140 Aggregate Tuning Hours in a month.

Small commercial webcasters had to file an annual fee statement form and pay $500 per channel on Feb. 1, earlier this year, and pay $0.0017 per-performance, according to attorney Kevin Goldberg with Fletcher, Heald & Hildreth, and then submit this year's first monthly statement of account and pay January's bill.

Goldberg, who specializes in First Amendment and intellectual property issues, said no matter how you calculate the rate increase for small music streamers, it is massive.

The fee requirement under the old



The site of Live365 notes its closure and points visitors to 8tracks, AccuRadio, Digitally Imported, PurePlay Radio, Radionomy and RadioTunes.

TRANSLATORS

(continued from page 3)

Salem Media of Illinois, which plans to rebroadcast Class D station KCRO(AM) in Omaha, Neb., via the FM translator K229CG.

The commission has also begun the task of dismissing applications. The FCC dismissed one from Sacred Heart Radio in Kirkland, Wash., which proposed to rebroadcast Class B AM station KBLE in Seattle. The commission has said it would dismiss any application filed during the first modification window that proposed to rebroadcast either a Class A or Class B AM station.

Several sources told Radio World that in general, this translator window is being seen as a potential boon for AM stations.

"This is a truly golden opportunity for many AM stations to add another platform for their content and, in many cases, a 24/7 platform at that," Moravec said.

"It's hard to say what it means as far as industry health goes," Langford said. "Almost any AM operator would love to have an FM signal or improve the translator being currently used. And with this being a one-time shot, I expected the rush regardless of what the AM industry as a whole looks like."

But success of the FM translator window won't necessarily solve the bigger problems facing AM radio, Moravec added.

"The urban noise floor [on AM] is now deplorable," Moravec said. "Every new device which creates more noise takes another chomp from AM's dwindling pie."

Others said that no matter what the FCC does on revitalization, it's not going to mean as much to the public if other issues aren't resolved, like introducing improved receivers. "The signal transmitted by an AM station is much better than what you hear on a typical radio … but [the FCC] has never mandated any response or distortion minimums for AM radio," Langford said.

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World Radio History

PILOT

(continued from page 1)

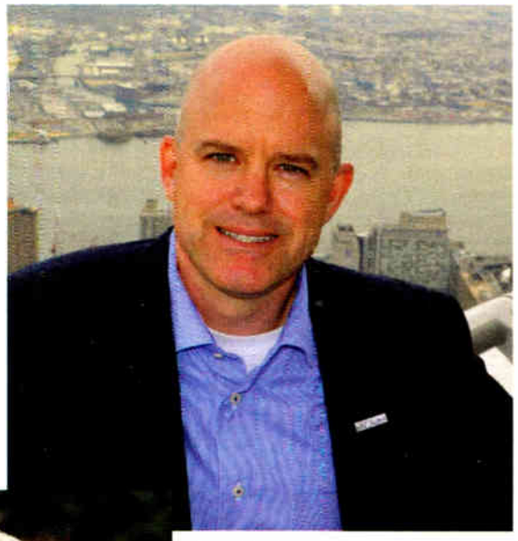
do with TV and radio?" But the NAB has acknowledged that the definition of broadcasting has expanded beyond over-the-air signals, and it sought to take a deeper dive into multiplatform business for its members, including streaming, FM broadcasts via smartphones, virtual reality and the like.

"We want to look at the way that these multiplatform digital platforms are becoming such an important part of our traditional business," said Sam Matheny, executive vice president and chief technology officer of NAB, by better understanding consumption.

The name, Matheny says, will help reinforce the organization's efforts and attract more businesses beyond broadcast to the proverbial table. (NAB styles PILOT in all capitals, though it is not an acronym.)

"If you think about it, there are pilot signals in TV that are the first and most tunable part of the signals, and there are pilot tones in radio that indicate that these are the frequencies I need to tune to," said Matheny. "There are pilot programs in both. There is experimentation in both, and pilot experimentations are done to prove things out."

When it came to changing the moniker, the organization thought the name should be about navigating a future that includes but is not exclusive to broadcasting or related to lobbying. "A lot of people will think [this organization] is about advocacy. We want to be able to leverage that, but be very intentional about this being a navigation of broadcast's future. We want to be on that leading edge and helping to define what comes next."



Sam Matheny

John Clark

Former media exec John Clark has been named to lead Pilot as executive director.

"We have unparalleled opportunities to advance how we serve our audiences," Clark said. "We've launched Pilot to explore the answers to these questions with the people directly and indirectly involved."

INVESTMENTS AND PARTNERSHIPS

Part of the mission of NAB Labs has been to invest in "development and commercialization of new technologies that have the potential to advance broadcasting in the digital age." Investments over a decade have included Yet Analytics (2016), Antenna (2015) and Syncbak (2007), an NAB investment made before the name NAB Labs existed.

NAB has not made public how much money is involved in each investment.

In 2015 it also announced partnerships with 1776, a hub company that provides resources and networking connections for startups, and the Dingman Center Angels, an investment group that provides resources and networking connections for early-stage companies.

In February of this year, Pilot announced an investment in Haystack TV, a California-based startup that aggregates content for a stream of "tailored" news that can be viewed on mobile devices as well as on connected TVs. Matheny joins Haystack TV as an advisor.

These efforts complement initiatives at NAB such as FASTROAD, a technology advocacy program, and Sprockit, a program at the spring NAB Show that gives start-up companies the opportunity to present to media and entertainment executives.

Also, while NAB Labs didn't directly invest in NextRadio, it underwrote and funded development of the API that engages a smartphone application to talk to and use the FM chip hardware. "That's been beneficial for all broadcasters, to see FM chips activated on smartphones," Matheny said.

That was also the thinking behind the program's January investment in Yet Analytics, a Baltimore startup that provides technology platforms for the collection and analysis of data within large organizations. The essence of the technology is that it can simplify and leverage so-called big data analytics.

We have unparalleled opportunities to advance how we serve our audiences.

– John Clark

According to Yet Analytics CEO Shelly Blake-Plock, broadcasters will continue to see an increase in the number of data sources and the variety of data types being produced across industries. "It is in this environment that the real-time collection and analysis of performance metrics will provide game-changing insight into the way that businesses function in a fully-immersive digital world," he said.

Likewise, the organization's investment in OTT company Syncbak and its live streaming solution was a success, Matheny said. Syncbak is powering real-time streaming for the CBS All Access service as well as providing OTT services for Fox O&O affiliates and Raycom Media. NAB made its initial equity investment in Syncbak in 2007 and participated in some follow-on rounds since.

To support NextRadio, NAB Labs underwrote and funded development of the API that engages a smartphone application to talk to and use the FM chip hardware.

Matheny said there is no one single methodology behind Pilot's investment strategy, but the organization is "intentional" in putting itself behind companies with technologies that would be beneficial for broadcast, such as the API technology being used to deliver live and local FM radio via NextRadio.

Pilot is not a venture capital fund or placing big bets on individual companies. But it seeks to work with innovators, Matheny said, and its priorities include content creation and gathering, content distribution and monetization.

While he was mum on any new investments on the horizon, and silent on whether funding for the Pilot program comes from NAB member fees or other sources, he said the organization is considering small-scale investments that will help the broadcast industry see further into the future. "We want to be involved in the process of being engaged in the startup community. ... We are actively going out and meeting with and seeing pitches from a whole variety of startup companies that are boundary-spanning."

ONLINE ENGAGEMENT

For instance, Pilot made an early-stage investment in startup firm Antenna, which built an online engagement platform that enables users to react to and interact with mobile and Web content. Matheny told Radio World last August that Antenna's overall seed round was $650,000 and that NAB Labs was a minority investor; but he didn't specify a dollar value of its share.

The platform measures audience sentiment from these reactions, including responses to news and entertainment content, and provides a means for media companies to determine what online content is resonating with audiences.

(continued on page 12)

World Radio History

HIGH CAPACITY
EVENT STUDIO TRANSMITTER LINKS

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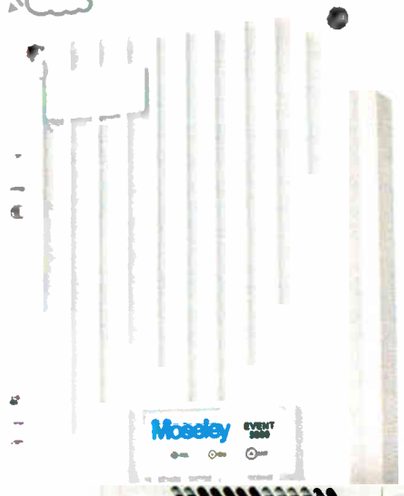

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Five Questions: Tim Clarke

Cox Media Group's radio stations recently moved to a corporate-wide streaming platform in conjunction with streaming service provider StreamGuys. The radio division's Senior Director of Digital Audience Tim Clarke discusses how this move came about and what it entailed.

Radio World: *What were major considerations approaching this decision?*
Tim Clarke: First and foremost, our listeners expect our brands to be easily available on all platforms and form factors. We need to make sure they are able to engage with us whenever and wherever they want. The mobile disruption, as well as OTT, have given radio the opportunity for more occasions throughout the user's day, and we're taking full advantage of that. Our advertisers also need more highly targeted ways to reach our collective consumer. To enable this, we needed a streaming infrastructure that allowed for agility, flexibility and rapid growth.

RW: *What is the point of streaming? Does it produce revenue? Help marketing?*
Clarke: Boundary-less listening is a must. We have to be accessible and ubiquitous to our listeners. More than ever, radio transcends the "FM band" — and streaming allows us to achieve that.

RW: *Why wasn't this done in-house?*
Clarke: Our "true north" is great content and great solutions for advertisers. We found an expert in streaming technology and distribution in StreamGuys. By relying on their partnership in this area, we can focus on continuing to run the absolute best content and sales organizations.

RW: *Were individual stations doing their own streaming before? How has this now changed from the point of view of Cox and its individual stations?*
Clarke: Our Cox Media Group radio stations have been streaming for quite some time, but it's not a "hobby" anymore. It's a major key. ... From an engineering/technical perspective, we make the solution as turnkey for the markets as possible so that, again, they can focus on the product and what's coming out of the speakers.

RW: *What had to be done in a station's physical plant to get it ready for streaming and what are the regular (daily/weekly/monthly) maintenance/operation considerations?*
Clarke: Our brand managers and local technical staff are fully engaged in quality assurance when it comes to our streaming products. Most importantly, it's part of our culture to monitor and use these platforms daily to ensure our listeners are having a great experience.

NEWSROUNDUP

Conrad Trautmann

CUMULUS: Changes continue in the corporate management suites at Cumulus. Conrad Trautmann was promoted to become senior VP of technology and operations. Longtime SVP of Broadcast Engineering Gary Kline is leaving the company. The move was announced in an internal memo by new CEO Mary Berner. Trautmann will be responsible for companywide broadcast engineering and IT. He had been chief technology officer and EVP technology for network operations at Cumulus-owned Westwood One. Pete Stefanske was promoted to VP of information systems; Marsha Reid Rhodes is upped to manager, telecom; Eric Wiler becomes SVP, technology and broadcast operations, at Westwood One. Kline had been with Cumulus in several capacities since 1999. He serves on the board of directors of the Society of Broadcast Engineers and is a past recipient of the Radio World Excellence in Engineering Award recipient. Berner said he would stay on to assist with several projects and ensure a smooth transition.

CBS: President/CEO Leslie Moonves was elected chair of the CBS board after Executive Chairman Sumner M. Redstone stepped down to become chairman emeritus. Redstone's resignation came amid rumors of his ill health and a lawsuit calling his mental capacity into question.

Julio Cardiel

CPB: The Corporation for Public Broadcasting announced it would be losing two execs to retirement this year. Jennifer Lawson, senior VP for TV and digital content, and Bruce Theriault, senior VP, journalism and radio, will be leaving in May. Before CPB, Theriault spent 13 years as senior VP at Public Radio International.

PRSS: NPR Distribution tapped Julio Cardiel to lead the Public Radio Satellite System as director of engineering, effective Jan. 27. He replaces Mark Murphy, who retired in 2015.

PILOT

(continued from page 10)

"It's a unique and creative platform that allows people visiting mobile sites of content producers to pick which piece of content they want — they don't have to wade through the whole document or the entire story, but can comment on a particular quote within article, or in a headline or in a paragraph," Matheny said.

Taking cues from the uptick in audience response time due to social media, the technology from Antenna offers feedback more than just a "like" or a "heart" (on Facebook or Twitter, respectively).

"Media companies want to know what their audiences care about and why," said Antenna co-founder and CEO Porter Bayne. While they may "love the engagement, they often need help managing the interface and monitoring and interpreting reactions."

"When looking at measurement for traditional over-the-air or linear listening, more has to happen," Matheny said, whether the audience is listening via a traditional radio station or via an online app for a TV network. Both radio and TV industries need to get a better sense of how people are listening, how they are sharing their opinions and what that means for overall content consumption.

So how do you use this data to help a station? "We want to help develop solutions that will measure across all platforms to determine how to make content more discoverable, how to better measure engagement and how to ensure that our members' content is positioned the best way that it can be," Matheny said.

DIGITAL "FUTURES"

Exactly what role the charter members like Akamai and Yahoo will play has yet to be seen; but according to the organizers, these members will help Pilot define key areas in which to devote research and development. They become associate members of NAB and thus will participate in NAB technology program development, conventions and networking events.

On Sunday of the NAB Show this spring, Pilot will introduce Digital Futures Exchange, a conference track that will provide educational programming to those with digital leadership responsibility at a station.

"We're trying to see further into the future," Matheny said. "As the definition of what it means to be a broadcaster broadens, it is critical to work with traditional and new media partners on innovations to better meet the needs of future generations of consumers."

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WORKBENCH
by John Bisset

Read more Workbench articles online at radioworld.com

Those specially priced $29 OEM computer power supplies you see in online ads can be tempting when you need a stockpile of PSUs for a fast repair. But it's worth it to spring for a few of the pricier ones for a number of reasons.

Alan Peterson, engineer at the Radio America Network in Arlington, Va., and a frequent Workbench contributor, had a production studio computer that developed an odd mechanical whine around 8 kHz. Turning off each fan, one at a time, and disconnecting the disk drive did nothing to isolate the problem.

The problem turned out to be a "singing" component on the circuit board inside the power supply. Swapping out the PSU for a better-built one did the trick, and the whine disappeared.

Alan concludes that surprises like this keep the job from getting old.

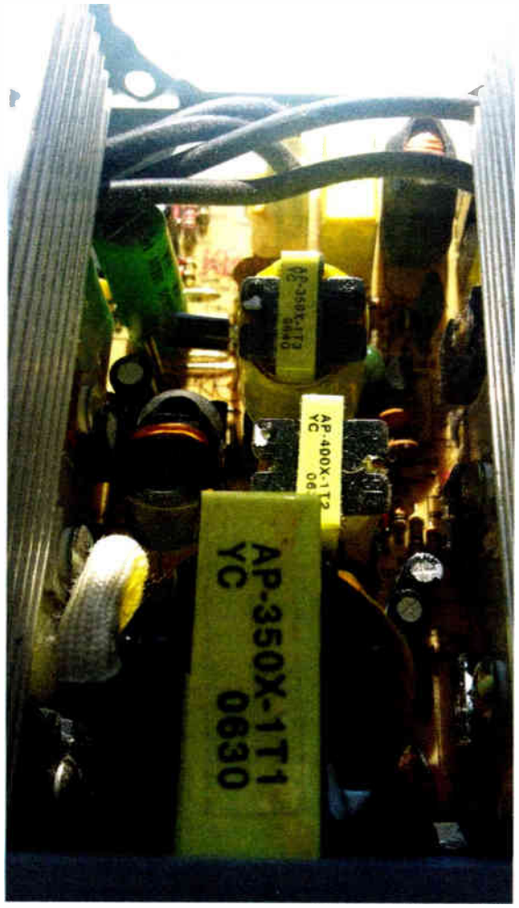

Fig. 1: It's not over 'til the fat PSU "sings." Cheaply-built PC power supplies can be a source of mystery mechanical noise.

Greg Muir, principal of Wolfram Engineering, offers a tip for those of us needing to shine a little more light on the subject.

Purported to be the brightest headlamp available, the Boruit 3x CREE XM-L T6 8000 Lumens LED Headlamp Head Light features three LED lights mounted on a headband. Used as a bicycle headlamp, the lights can be individually controlled and include a charger for the rear-mounted battery pack.

Surprises like this keep the job from getting old.

No longer will you have to strain your eyes troubleshooting under the console cabinetry or in some recessed corner of the transmitter — holding a trouble lamp in one hand and tools or a meter in the other. The headlamp mounting frame is adjustable, and it costs less than $20.

Find it at *www.ebay.com/itm/321419743565*.

The Federal Emergency Management Agency has released an interesting link that permits visualization of natural disaster history for both states and counties. All types of natural disasters are tabulated.

Interested in the flooding history of your transmitter — or studio — site? Here's the link: *www.fema.gov/data-visualization*.

Platinum Tools of Newbury Park, Calif., launched the Fault Trapper Smart Tester, which ends guessing about circuit breaker tripping issues.

Not only will this device detect the type of fault, it will timestamp when the fault happens and locate the position of an electrical "event" that caused intermittent/persistent circuit breaker trips and No Fault Found conditions in either feet or meters.

The Fault Trapper (part number TFT100) monitors live circuits to detect faults when traditional methods fail to find them. The device runs on the power from the circuit until the circuit breaker trips. Then it captures the time and distance to opens, shorts or arc faults, saving the event information in memory for later investigation. The last faults can be viewed off-line using battery power.

The Fault Trapper is unique, as it can detect faults that trip *and* don't trip circuit breakers. If the circuit breaker trips the backup battery powers the Fault Trapper to allow for an orderly shutdown. The last faults can be viewed using the battery power. The Fault Trapper tester allows for unattended monitoring of dedicated circuits for NFF conditions. Just set it up, press the Start button to begin monitoring and walk away. Come back later or the next day to find out the why-when-and-where of circuit breaker trips and NFF conditions.

This Smart Tester should be suitable for monitoring transmitter breaker trips at remote sites, as it identifies opens, shorts and arc faults. Visit *www.platinumtools.com* for more information.

You have good ideas, we're looking for good ideas. Send Workbench tips to johnpbisset@gmail.com. *Fax to (603) 472-4944. Bonus: Tips qualify for SBE recertification credit.*

Author John Bisset has spent 46 years in the broadcasting industry. 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.

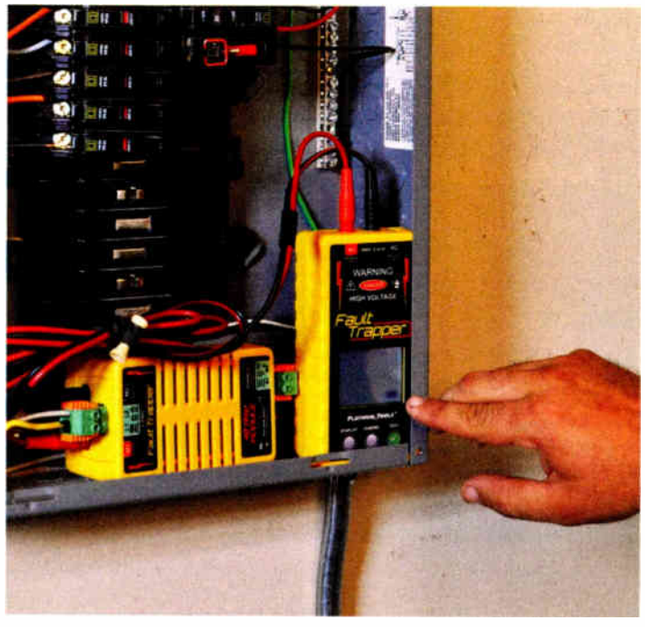

Fig. 2: The Fault Trapper detects and identifies a variety of electrical faults.

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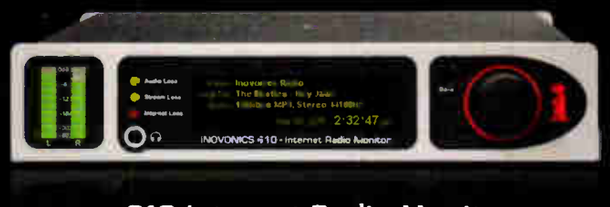

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World Radio History

IP's a Ten Gallon Hat

It's been said that radio is made up of the same eight people wearing different hats. That could explain a lot about Marc Hill, who has worn the music director hat, the talent hat, and the technology hat in his 30-plus years in broadcasting. More than 20 of those years have been spent acting as the IT Manager for what is now iHeartMedia in West Michigan.

We got to know Marc while working with him on a new Wheatstone WheatNet-IP networked facility for the seven-station cluster. He said he "wandered" into IT in the late '90s when he unwittingly volunteered to install the Prophet/Wizard automation system. He worked the overnight shift at the time, and eventually traded in his talent hat for IT – a ten-gallon hat that now includes streaming, mobile and, more recently, IP audio networking. He still laments that he gave up his talent gig before he could try out the new automation. "That was kind of unfair because I never even got to use it. I came off the air overnights to install it so someone else could use it," he says.

Read the rest of the story: INN32.wheatstone.com

Your IP Question Answered

Q: I've been told that WheatNet-IP is the audio network that has integrated control. What does that mean?

A: IP audio isn't just about routing. It's also about being able to control and automate audio. For example, WheatNet-IP has an integrated control layer that carries all the logic functions for audio. Control is built into each WheatNet-IP connection point that is shared with other IP connection points across the network, giving you access to not only all sources at once, but also the presets and any associated logic that goes along with each feed for controlling such things as mic ON/OFF, or changing remote mic settings for IFB, processing and other parameters. Being able to route audio in tandem with full system control makes a world of difference when it comes to handling the unexpected or repurposing a news set for multiple productions.

For more IP Audio News: INN32.wheatstone.com

Taking The Aura8-IP Beyond Broadcasting

By Scott Johnson

When you think of Wheatstone processing, you naturally think of broadcasting. But if an audio engineer tucked an Aura8-IP under his arm and left the station, would he find other uses for it? The answer, I found out recently, is a resounding yes!

Wheatstone processing gear has myriad applications in the broadcast world. There's almost no corner of a radio facility where a Wheatstone processor can't be of assistance. But we rarely think of what we might be able to do with, say, an Aura8-IP outside the station's doors. I did wonder. There's a big, wide world of audio out there, waiting to be tamed.

Read the rest of the story: INN32.wheatstone.com

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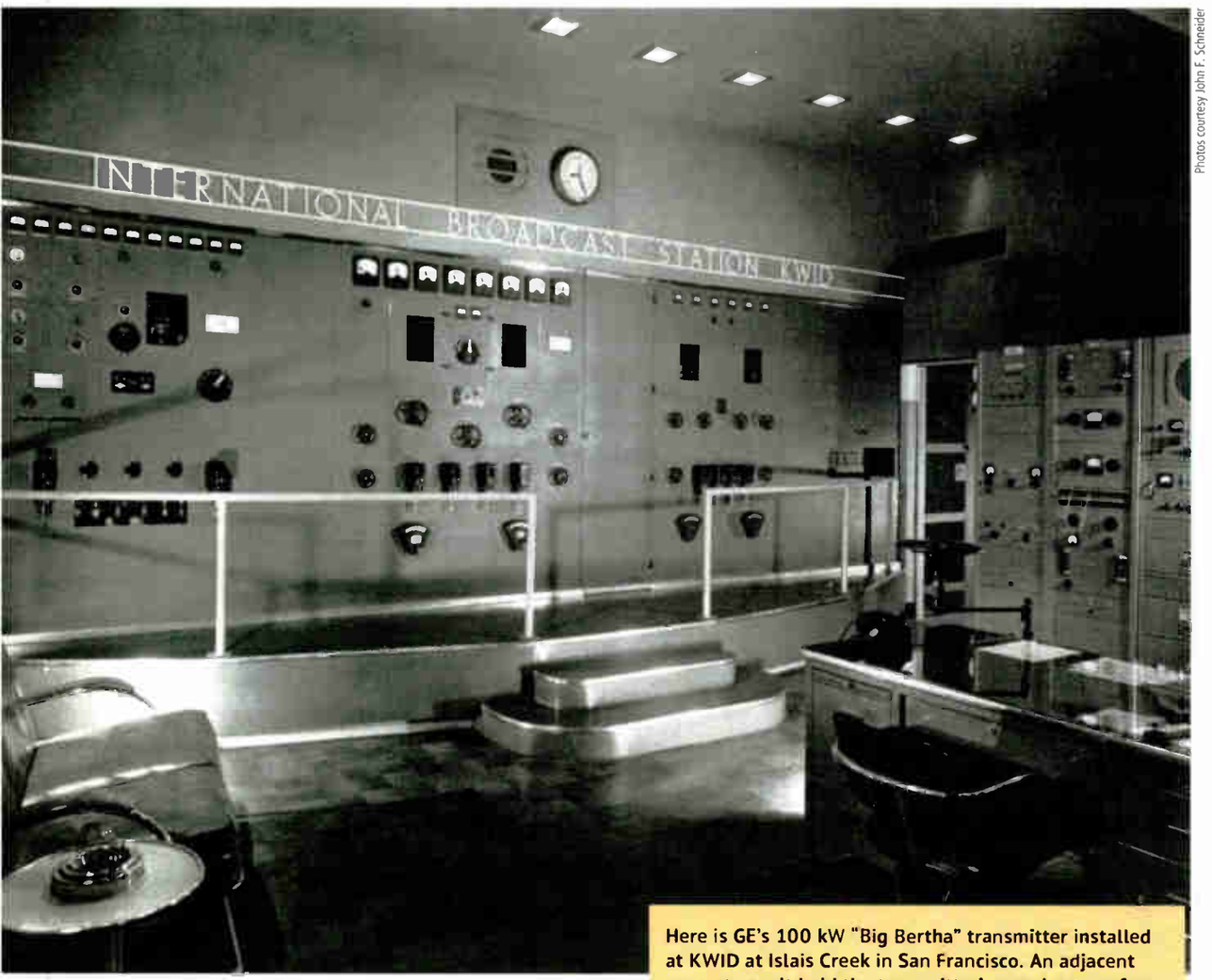
World Radio History

Schenectady Shortwave Transmitters, 1941

General Electric built a trio of high-power AM stations in the early 1920s



Photos courtesy John F. Schneider

Here is GE's 100 kW "Big Bertha" transmitter installed at KWID at Islais Creek in San Francisco. An adjacent concrete vault held the transmitter's massive transformers and water cooling system. KWID was operated by the Associated Broadcasters, which also owned KSFO. The KSFO transmitter was to the right, out of view.

ROOTS OF RADIO

BY JOHN F. SCHNEIDER

The General Electric Co. was truly among America's premier broadcasting companies.

In addition to developing much of early broadcast technology and building a trio of high-power AM stations in the early 1920s — WGY Schenectady, N.Y.; KOA Denver; and KGO Oakland, Calif. — GE was also the country's pioneer shortwave broadcaster.

GE's initial shortwave station, 2XI, first broadcast in 1923, and in 1924 it was used to relay WGY's programs for to KOA and KGO for rebroadcast in the western U.S.

By 1925, there were two experimentally licensed shortwave stations in Schenectady: W2XAD and W2XAF. A third GE station in San Francisco, W6XBE, was added in 1939.

That was the year that the Federal Communications Commission allowed the country's experimental shortwave stations to relicense as commercial operations, and these three GE stations received the call signs WGEA, WGEO and KGEI, respectively.

BIG BERTHA AND WWII

In July of 1939, WGEA and WGEO debuted the world's most powerful shortwave transmitter, a 100 kW monster nicknamed Big Bertha. It utilized a new 100 kW GE power tube that featured a demountable filament. Big Bertha alternated service between WGEA and WGEO, primarily broadcasting programs in Spanish and Portuguese to South America.

A few weeks after the attacks on Pearl Harbor, the government bought the transmitter under an emergency authorization. It was dismantled and shipped by rail to San Francisco, where it went on the air as KWID, serving as America's second shortwave radio voice in the Pacific war theater (along with KGEI).

In order to keep WGEA on the air, GE refurbished an old 50 kW transmitter that dated back to the early '30s, and this unit operated until a second "Big Bertha" could be constructed. The new WGEA 100 kW transmitter was inaugurated in Sept. 1942.

At the start of World War II, the government found itself with a critical problem of its own creation: The value of shortwave radio as an information and propaganda vehicle was recognized instantly; however, a 1930s congressional ruling prohibited the government from owning or operating any broadcast stations, and all 14 of the country's shortwave stations were in private hands.

As an immediate solution, the government decided to lease

World Radio History

GE's Schenectady shortwave operation in 1941. The WGEA transmitter at left is the early '30s refurbished unit. The new 50 kW WGEO transmitter at right was placed into service in July of that year.

all private shortwave stations in the country, effective Nov. 1, 1942, and the Office of War Information was given the responsibility to program them all. The station owners (CBS, NBC, GE, Crosley, Westinghouse, KSFO and WRUL) continued to operate and maintain the transmitters, and all costs were paid by the government.

After the end of the war, the Office of War Information was reborn as the Voice of America, but the VOA existed only as a producer of programs.

Also, the government continued the station leases until Nov. 1, 1963, when it finally took direct ownership of the leased stations. That was also the year that the VOA opened its new shortwave facility in Greenville, N.C. At that time, the Schenectady shortwave operations were determined to be unnecessary and outmoded, and they were shut down in 1963.

John Schneider is a lifelong radio history researcher and a longtime Radio World contributor. Write the author at jschneid93@gmail.com.

FIND WHAT YOU'RE LOOKING FOR

Did you know you can search past issues of Radio World using keywords? Go to *www.radioworld.com/digital-editions*, open any issue and click on the Toolbox icon to access search functions.

This is the 100 kW power tube developed by General Electric in 1937. It was a unique design with a demountable filament. It's shown seated in its water cooling jacket. "Big Bertha" was the first transmitter to utilize the new tube.

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MARKETPLACE

Time Has Come: Broadcast audio equipment maker Wheatstone has announced that its control protocol, Automation Control Interface, is now compatible with DaySequerra's M4.2 TimeLock HD Radio receiver/processor.

ACI is resident in Wheatstone processors and allows for the control of third-party equipment. DaySequerra's M4.2 TimeLock is a receiver/processor designed to eliminate FM-HD Radio time alignment errors by measuring such errors and sending compensation information back to an on-air processor.

A firmware upgrade with the DaySequerra hardware will provide the needed compatibility. Information on the upgrade can be found here.

DaySequerra Vice President of Market Development Mike Pappas said, "The number one complaint we get from engineers is this problem of imperfect blending between the standard analog FM and HD Radio signals. By getting our firmware completed and tested with Wheatstone processors, we now have a way to solve this problem easily and cost-effectively for a large number of stations using their existing Wheatstone processors."

Wheatstone says that this approach eliminates an additional step in the signal chain. Senior Product Design Engineer Jeff Keith said, "By using their existing Wheatstone processor and not adding to the air chain, broadcasters can keep the signal path pure and simple."

Info: www.wheatstone.com, www.daysequerra.com

Heroic Sounds: Everybody knows The General; now meet the AudioHero.

AudioHero is a sound library/FX company operating a website with 200,000 royalty-free tracks. The company explains, "AudioHero offers simple subscription plans that bring your cost for a single sound effect or music track to just 20 cents each or less, depending on the package you choose. There are no long-term commitments and no contracts to sign."

Packages start at $9.99 for 50 downloads in a month to $299.99 for 3,000 per year. It also offers individual track purchasing options, starting at $1.99 for FX and $9.99 for music.

Info: www.audiohero.com

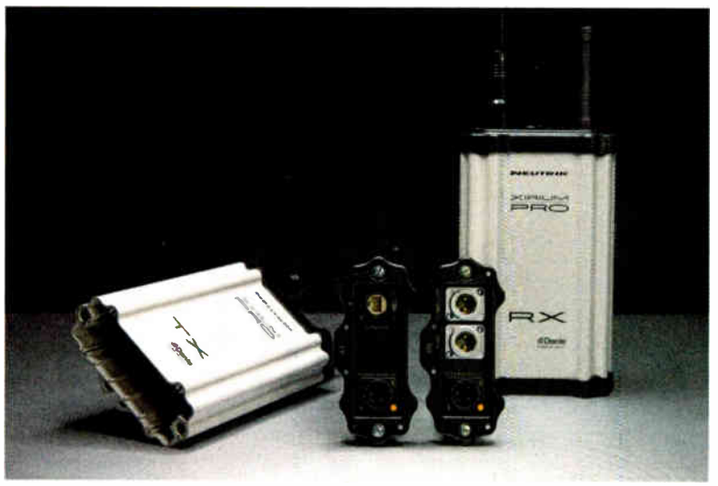
Rack 'em: Broadcast equipment maker Inovonics has announced it is packaging some of its sub-rack-sized equipment in rackmounted bundles.

The INOmini RackPack Bundle allows the user to pick from selected INOmini products to populate a single rack unit package. Inovonics notes that the offered products would allow for monitoring of AM, FM, HD, AES, RDS and Internet radio.

The resulting packages would consist of three INOminis or two 610 Internet Radio Monitors. Power supply and power jumper cables are included, along with print manuals and three-year warranty.

President/CEO Ben Barber highlighted the concept for its flexibility for broadcasters who need to customize monitoring equipment within budget; he also noted that the INOminis can be used for AM, FM, HD, NOAA and other applications needing small pro receivers.

Info: www.inovonicsbroadcast.com



Going Wireless: Here's something on the cutting edge — an internal wireless audio link that offers Dante. Neutrik's Xirium Pro "cable replacement system" uses 5 GHz spectrum that is license-free for quality digital audio performance over long distances.

Neutrik calls the technology it uses DiWA, Digital Wireless Audio. According to the company, it uses no compression, offers 20 Hz–20 kHz performance, has low latency (app. 3 ms) and will maintain sample accuracy.

The system is modular concerning I/O with analog, AES and Dante modules for transmitters and receivers. Estimated operational distance should be greater than a half-mile.

Neutrik says, "On the receiving side, Xirium Pro supports an unlimited number of receivers. As long as a receiver can 'see' the transmitter's signal, audio engineers can use as many receivers as necessary for their project. Further, a repeater module is available that converts any receiver module into a repeater unit."

Though initially aimed at install and live sound markets, it might be interesting to see if broadcasters can make use of this technology.

Info: www.neutrik.com

Heading Up: Fostex has a new affordable headphone family available, the TR series.

All three members share a 40 mm driver. Fostex describes the differences: "The TR-70 has a fully open design; the TR-80 has a fully closed-back; and the TR-90 has a semi-open design." Each model has an 80 ohm version and 250 ohm.

Cables are detachable and each headphone comes with two — coiled and straight. Each unit also ships with two pads, normal and thick. Plugs are 1/8-inch with a 1/8-inch to 1/4-inch adapter included. Price: $199.

Info: www.fostexinternational.com

World Radio History

Website Development 101

Your online presence is a given in the 21st century — but your success there isn't

When it comes to Web design and functionality, people get emotional. They love the website! Or they hate it! They want a new website because the old one is, well, old.

For those of us who are responsible for building and maintaining websites, it's easy to take passionate feedback the wrong way. If you work in website design — or in digital content development — it's important to remind yourself continually that people are passionate because they care. Passion is so much better than the indifference of no feedback at all.

If what you've been hearing lately concerns website redesign, let's tackle this fun (albeit time-consuming) challenge in a way that will make your various constituents into happy campers.

It may seem intuitive to consider many other challenges before setting a goal, but you have to know your destination in order to find the best route.

ANALYZE THIS

For websites with at least a moderately successful level of organic traffic, your analytics are a good place to start.

For this exercise, be sure to filter out any traffic coming in via digital ads, as those metrics do not reflect normal organic behavior. Compare your year-over-year traffic for bounce rate; average session duration; users; return users; and top pages.

When the highest-performing page on your website is your homepage, you've got a lot of work to do in creating more enticing content, basic search engine optimization and building regular in-bound links from other websites.

Reminder: When you need a refresher course in what these key performance indicators mean, the definitions are just a search away. After your metrics review, agree on reasonable growth goals.

It's safe to assume that most stations will want to drive website revenue, so put in the time to discuss revenue goals and how much of that money will be coming from integrated advertorial, page takeovers, rich media ads, banner ads and data capture. After you have a basic agreement on goals and an understanding of your budget, it's time to find a construction partner.

CHOOSE YOUR WEB DEVELOPER

How do you find your next great Web development agency? While this question is a non-starter for the large radio groups who do their own development, the rest are left to explore a wide array of choices.

Start with a list of requirements. For example, you must have a responsive website, so anything made for desktop has to be replicated and sized for mobile screens. You also want to surface your social feeds, such as pictures from your Instagram account showing up on your website. I'm sure you have many more specifics. Think big when creating your requirements doc because you can always scale back or develop in phases.

Let trustworthy colleagues know that you're shopping for a new digital agency and ask for recommendations. Once you have a list of at least 10 companies, be sure that each prospective agency receives the same requirements document. Set a deadline for proposal sub-

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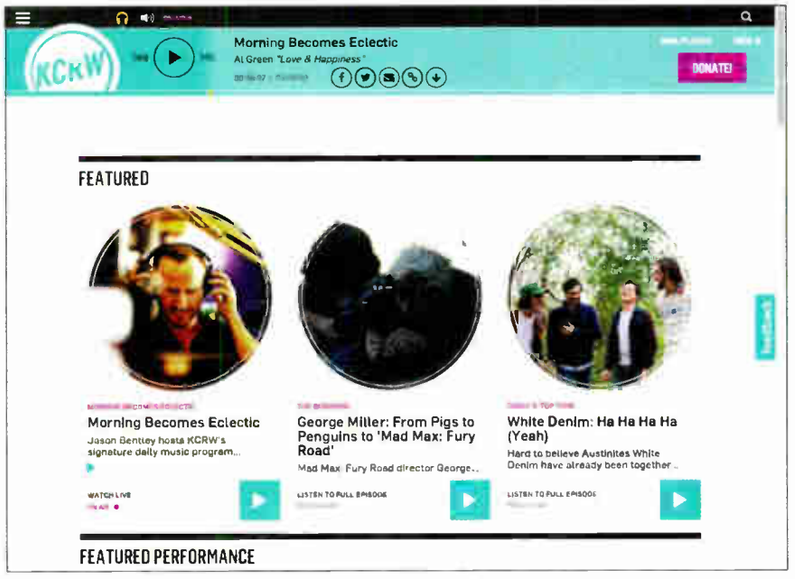

Los Angeles public media station KCRW was a 2015 winner of The Webbys, an awards program presented by the International Academy of Digital Arts and Sciences. It was recognized in the Radio & Podcasts category — the existence of which should tell you that your website matters.

PROMO POWER

Mark Lapidus

Think big when creating your requirements doc because you can always scale back or develop in phases.

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World Radio History

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Positioning Radio's Golden Opportunity

Move your station into the foreground of listeners' consciousness by taking some risks

BY GARY BEGIN

Strong positioners move a radio station past utility grade. Nearly all of the listening going on in the United States is utility — not foreground, not a reason for listening.

It's about getting your radio station near the useful part of the curve. That means moving away from being a utility.

Utilities by nature get taken for granted. Radio by its nature also gets taken for granted.

You turn on the country station to hear country. Classic hits to hear classic hits. That's not all bad, but that's not all there can be!

If you're just a utility, you have no top-of-mind awareness for your listeners and are consequently easily replaced. Consider how to be more.

You need to break through utility status and become something that transfers to an emotional level. Beyond just awareness. That's your opportunity, where the great radio stations have been and will be in the future.

If you don't believe you're a utility, think about what you do on the air and what you do when your phone calls come in. You receive the calls when you don't do what you're expected to do. Miss a school closing or pass over a traffic report and see what happens!

The golden opportunity in positioning is to build desirable attributes that are high profile and difficult to duplicate, attributes that break through the utility status.

Easy to accomplish? No.

MASS APPEAL

What's difficult to duplicate? Great air personalities! That's true for every station.

Put something on the air that's entertaining and is something listeners can't get anywhere else. Then watch your AQH change dramatically.

Powerful positioners include nonmusical positive differentiation and a robust sense of character. You need to ask yourself: What are the character words that describe my radio station?

If you're going to be high-profile, you need to take a risk.

PRINCIPALS OF DEFNESE

Think like eminent Chinese military strategist Sun Tzu. Remember, an effective way to play defense is to attack your own weakness.

A great radio station that's on top, ratings and revenue-wise, wants to stay there and is scared of losing this position constantly. The radio station management thinks, "What can they do to me?" "Where am I vulnerable?"

How would you attack your own radio station? What would you do to unseat its market advantage? Do it now.

Defense is about never letting a product attribute be introduced that you think has any potential without covering your base. This means: Don't wait and see! If you like it, cover it .... Seem obvious?

Confusion *always* benefits the leader. You never attack strength; you attack weakness. Continuously play offense. Figure out the competition's weaknesses and then pursue a strategy that's too uncomfortable for them to follow.

FLANKING

On the other hand, flanking is a wonderful attack method.

Move into an uncontested area. Become the first country or classic hits station in your market.

But if you choose to flank, surprise is everything. Pursuit is the whole shebang. You cannot just be listener-focused; you have to be competitively aware.

The new country format accomplished this by flanking the young demo through positive differentiation, unique selling proposition, relative advantage, "not your parents' country station."

A single relative advantage may come from a single point of differentiation — "your hometown station," "country's hottest hits," "pure rock'n'roll."

Don't allow a complex cluster of values such as service, strong personalities, sports, entertainment take you down. If you're amused, chances are someone else will be also. Keep the creativity flowing!

But it doesn't matter how you get there, as long as the journey is worth it in the long run.

Gary Begin is founder and president of Sound Advantage Media; he has over 30 years of radio programming experience. He recently wrote the book "Radio Programming and Branding — The Ultimate Podcasting and Radio Branding Guide."

WEB DESIGN

(continued from page 21)

missions. Pick three to five finalists to present in person or via WebEx. After you've picked the two best, check references via phone so you can get a better sense of each company.

GET IT IN WRITING

Your contract terms should include all the details from the requirements document, phased delivery dates, and hosting/serving fees, if applicable.

Having specific phased dates like "Discovery," "Wireframes," "Design/Art," "Content Transfer/Upload" and a "Warranty Period" will keep you organized and on track. Carefully consider whether or not to include a "maintenance" phase that goes beyond the website build and launch.

I highly recommend that you keep up the relationship with your development company for at least a year after launch, and if you like what they're doing, extend the terms. Over time you will want platform upgrades, new technology implementation, and even new designs.

So what did I leave out? Content. That's a story for another day — and oh man, what a story! Without compelling and relevant content, a website is just an empty piece of art with a very high bounce rate.

'Til next time!

World Radio History

PARKS

(continued from page 1)

Radio World: *What are the big broadcast groups doing wrong, and what are they doing right these days?*

Darryl Parks: iHeartMedia, back when it was Clear Channel, had the foresight to move onto digital platforms, so they get a lot of credit for that. But on the terrestrial side, most groups have developed little original content.

In news/talk, for example, there is a lack of investment, so it's fundamentally the same format as it was 25 years ago. Most AM stations run syndicated conservative talk all day long. If there's a local show, it parrots what the national hosts are saying. "Obama bad!"

There has to be some variety, or else you run the risk of poorly positioning yourself and backing yourself into a corner. In marketing few things are worse than that. AM radio today is basically conservative talk, sports or religion. There's very little variety.

RW: *Air America tried a liberal slant to talk radio, but it failed.*

Parks: It failed because it wasn't entertaining. Talk radio needs engaging hosts like Howard Stern, Ellen [DeGeneres] or people that hook you emotionally like Dr. Phil.

Sports talk stations can expand content choice, too. The successful ones go beyond just the Xs and Os, and they talk about all the stuff guys are interested in. It should be about the fan experience, the stories, the emotion of sports fans.

RW: *What else should news and talk stations be doing?*

Parks: For a talk station to be healthy, it has to have news that's relevant to the local audience. News is the gateway into the format. Many stations have laid off their entire news departments. If something important happens people are supposed to be able to tune in for that, and then stay for the talk hosts.

When the San Bernardino terrorist event happened, I read that KGO(AM) was simulcasting a TV partner. Radio has given up images it used to own, like the news image. Severe weather updates come from someone else like a local TV station, as often does breaking news. Sports stations have given up their branding to entities like ESPN.

If all you are is a conduit for content instead of an originator of content, you're teaching people that, if they really want information, they have to go elsewhere.

RW: *How did we get to this state?*

Parks: News outsourcing goes back to about 1997, when radio started putting in automation systems connected to the Internet. We experimented with hubbing and spoking in our news departments back then.

When I was in Columbus at WTVN(AM), we fed news to Toledo, Lima and other places and I think the concept is workable. But in each spoke market there has to be some basic human infrastructure. We never really figured it out at Clear Channel because many of the spoke stations had only skeleton staffs. There were no news producers, just a program director whose job it was to keep the automation system working. The concept is OK, and the technology is there, but the problem is really lack of investment in human capital to make hubbing news content work. There have to be point people, plural, in each local market.

I'll tell you where the real problem lies, and it's not with the top-of-the-hour newscasts. It's when there's a tornado coming through town at 2 a.m. on a Sunday, or some other important breaking local event. If you're hubbing news from another city, the news person in the hub market may not know it's happening. The Achilles heel of the whole system is breaking news and breaking weather. That kind of information must be immediate, and that's the weakness of the hub and spoke news system.

If all you are is a conduit for content instead of an originator of content, you're teaching people that, if they really want information, they have to go elsewhere.

– Darryl Parks

RW: *What does your crystal ball show for AM radio?*

Parks: That's an economic question. Which is cheaper? Having 40 acres of land, a tower site and equipment; or

(continued on page 24)

World Radio History

PARKS

(continued from page 23)

broadcasting on the Internet? Eventually it will come down to that.

Revenues for many news/talk stations are in decline because of aging demographics and increased competition. As audio goes more to an "on demand" model on devices like iPads, those products are expensive. The people who gravitate to those devices are more affluent, and those that can't afford the devices will be left to listen to terrestrial radio, watch over-the-air TV or read a printed newspaper. It's a qualitative issue, and look at the demographics.

Many conservative talk radio shows discuss the Reagan years, but their target audience, a 45-year-old guy, never even had the chance to vote for Reagan because he turned 18 in 1988. You might as well be talking about the Korean War. Talk radio is stuck 25 years in the past. Its audience is aging out and becoming less desirable to advertisers.

RW: *Can you talk more about how demographics will be changing AM?*

Parks: There is a fundamental generational and ethnic shift happening that most AM news/talk stations ignore.

When Obama was elected for the second time, a lot of people seemed surprised because those people were operating in the echo chamber of conservative talk radio.

How do you think the Hispanic population of Texas got to be 40 percent? That didn't happen overnight; it happened over decades. Many programmers and group owners chose to be blind to it, and that is why their young demographics are going down. This is no longer the baby boomers' world. It is now the world of the millennials and the Generation Xers, and they have much different sensibilities.

When I hear talk radio ranting against same sex marriage and legalizing marijuana, I think, "Are you out of your mind?" Younger listeners, Gen-Xers and millennials, don't care about that. Chances are the people in those generations may be fiscally conservative, yet they're socially more moderate. Radio, TV and newspapers have to start reflecting this new reality. Programmers and talk hosts who continue to focus on conservative social issues will witness the end of the format.

Music of Your Life stations went away, beautiful music went away and pre-1964 oldies went away. They were no longer demographically appealing to advertisers, and remember, radio companies still have to sell commercials.

RW: *That doesn't sound too promising for AM.*

Parks: Last year Borrell Associates (*www.borrellassociates.com*) looked 10 years into the future, and they predicted that half the radio stations would be off the air by 2024. I don't know if I believe that, but my point is that they looked at radio's future and trends with open eyes.

RW: *Is podcasting the answer?*

Parks: It may be part of the answer. So often podcast content is just repurposed from the terrestrial side. "If you miss my show, you can listen to the podcast." Stations don't even bother to strip out the "best of" or just grab a cool interview out of a show. My point is, there's little new original content in podcasts, and for podcasts to be the answer for radio stations the content must be new and original, not old material from the terrestrial side. That's where the creativity should happen.

RW: *Would younger air personalities bring in listeners?*

Parks: The real, successful personalities of the past, today and in the future will relate to and connect with people. They will always bring in listeners. While the ways to reach an audience may change, having a great personality connect one-on-one with a listener will never change. Great personalities are the voices and advocates for listeners. Listeners identify with these personalities. If you turn your station into a jukebox, you lose.

Parks blogs at www.darrylparks.com. *Ken Deutsch is a former on-air "personality" who says his exit from radio was met with relief from listeners and management alike.*

NOW THIS IS SNOW

Here's a great pic from the Radio World photo archives of engineer Dave Adams at the Bennett Mountain site serving KTPZ(FM) in Hazelton, Idaho, in 2005. Send us your photo of yourself in your radio work environment!

World Radio History

Stereo Tool Provides Big FM Processing at Little Cost

Software processor packs in a lot of tools (but can it replace a hardware processor?)

SHORT TAKE

BY CURT YENGST, CSRE

In 2001, Hans van Zutphen started a Web radio station and needed something software-based to improve the sound. He started with a few simple filters, and years later, having improved his coding chops, created a processor that saw 90,000 downloads within weeks of its release.

It didn't take long to get the attention of FM broadcasters, who began to request specific features like RDS, stereo generator, etc. Fast forward to 2014, and Hans found himself with a booth at the NAB Show, and a commercial version of Stereo Tool, a full-featured FM and webcast audio processor.

The website says that Stereo Tool is "used by over 1,000 FM stations, thousands of Web radio stations and AM, HD and DAB+ stations all over the world."

AT WORK

The most basic version for streaming sells for around $40, the most extended version for FM for around $400, and there's a free version. The processing features include AGC, multiband and single-band compressors, several stereo wideners, equalizer, bass boost, limiter, noise reduction, and declipper, as well as SCA inputs, RDS, pre-emphasis, and stereo encoding. The free version contains most of the audio processing features, but gives up the FM features. The program can operate on 32- or 64-bit operating systems.

Stereo Tool Multiband Compressor Screen

It can operate as a standalone application or as a VST plug-in, meaning it can be used as a DAW processor as well. I tried the VST version on a mix I had recently finished. Setting it up was easy. I found the interface somewhat similar to that of the brand-name processor we have here at WAWZ(FM). It's intuitive and neat.

The various stages of processing are presented as buttons on the left side of the window. Clicking each button brings up the appropriate screen, and if needed, a drop-down menu of additional buttons is presented. On my mix, I found it transparent. The EQ gave a nice top-end sheen without sounding brittle, and did a good job of filling out the bass. The multiband compressor sounded good, even at what I would consider extreme settings. I had to really work at it to

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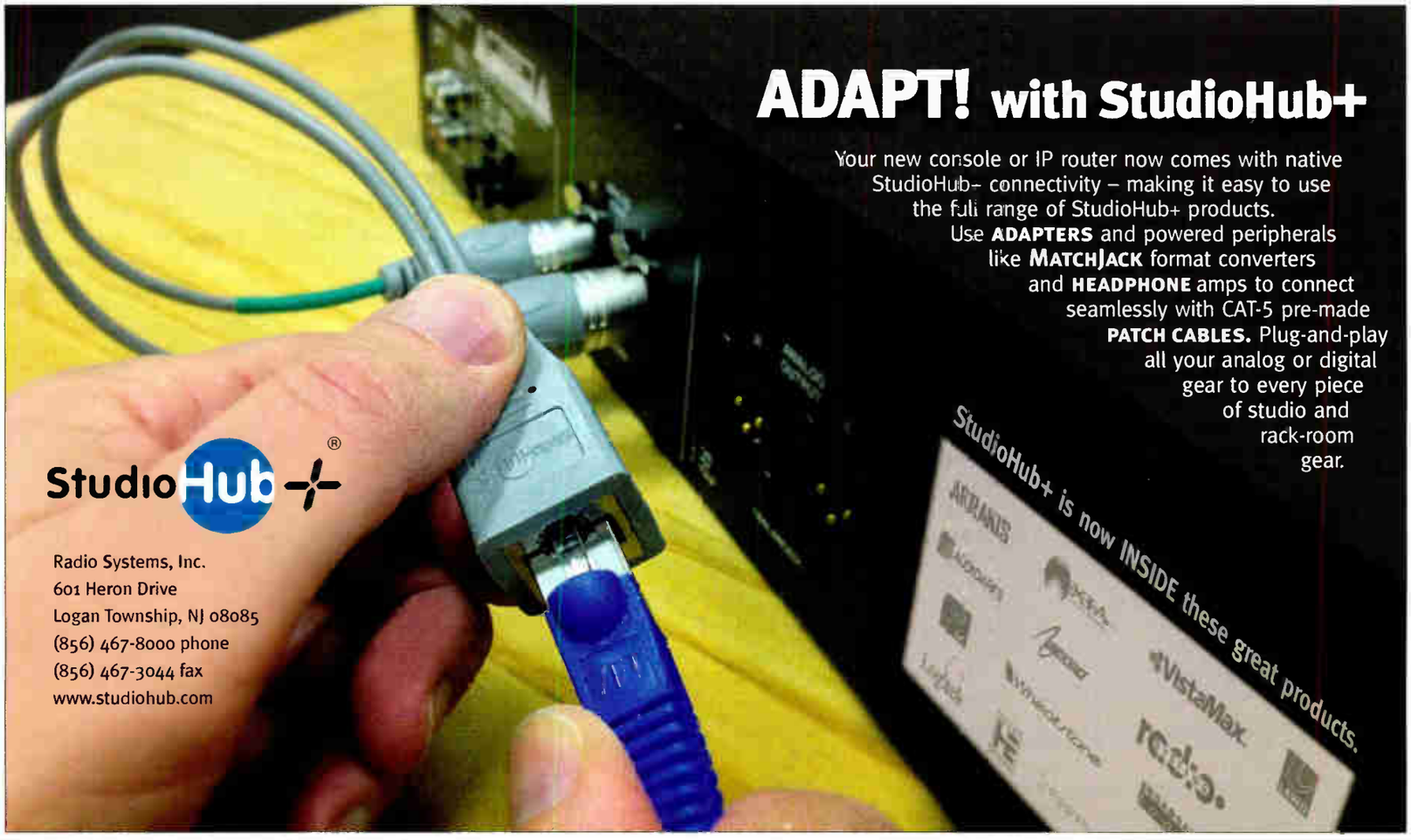


World Radio History

Auphonic Multitrack Streamlines Mixing

Expand program horizons with an automatic software mixer

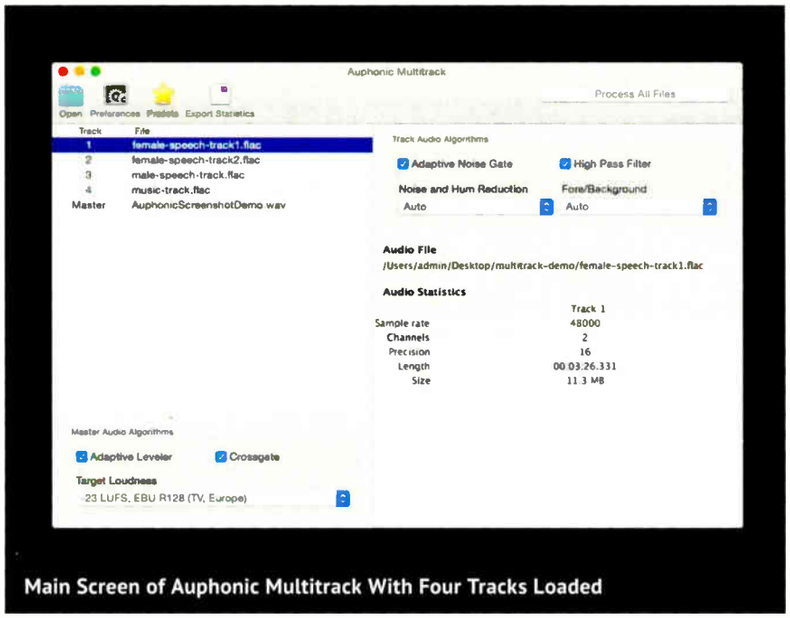
SHORT TAKE

BY CURT YENGST, CSRE

I often review free audio software and plug-ins here. This offering, though not free, was intriguing enough to look at. Auphonic Multitrack is a new program from Austria-based Auphonic Productions that provides an automated solution for creating mixes of podcasts, interviews and other programs. The Auphonic process was introduced in 2012 as an online subscription-based service. Their first downloadable offering came in the form of Auphonic Leveler, a batch file leveler, noise reduction and loudness processor. Auphonic Multitrack takes that process a step further by providing automated mixing.

Auphonic's Georg Holtzmann said, "The basic approach is that we analyze the signal first, e.g. music, different speakers, background noise, signal-to-noise ratio, etc. Then we try to automate the things which an audio engineer is doing manually."

Think of it as audio engineering in a can.



Main Screen of Auphonic Multitrack With Four Tracks Loaded

LUFS

The application installs on Windows or Mac OSX. Once installed, it presents the user with a simple file-based interface. Let's say you've recorded a roundtable interview with a host and three or four guests, and each voice is recorded on a separate track. You simply drag each track file into the input window. If you already have a pre-recorded intro and outro, add those files as well. Select your target loudness profile from among several industry standards, and it's one click to start the process. After number-crunching for a moment the program creates a mixed and processed file of your program.

I decided to put the application through its paces by using it to mix a weekly radio program I produce. There are several algorithms to choose from, all based on a LUFS scale. The default is –16 LUFS, optimized for podcasts and mobile devices. The top of the scale is –13 LUFS, and the bottom is –31 LUFS. The –24 LUFS setting represents the current U.S. television standard. Maximum peak level in dB can also be specified on a scale from 0 to –9, or set to automatic.

CLEAN UP

While my initial attempt, using the default settings, sounded overcompressed for my taste, the mix of the various elements was pretty close to what I would have done. Setting the maximum peak level to –6 as opposed to automatic went a long way toward fixing that. I tried another pass at the loudest setting, –13 LUFS, and started to hear noticeable compression again. Disengaging the Adaptive Leveler option took care of this. Another handy feature is the noise reduction that is user-selectable on individual track files. It did a decent job of cleaning up background grunge.

Two tiers of licensing are available: a discounted license for noncommercial use for $89, and a commercial license for $349. Is it worth the cost of the license? If you're producing a podcast or your own radio spots, and don't have a lot of engineering chops, it's a great timesaver. The seasoned professional likely has workflows in place that already streamline the mixing process. Still it's worth a look. The free five-day trial version can be downloaded at *https://auphonic.com/multitrack*.

For information, contact Georg Holtzmann at Auphonic in Austria at grh@auphonic.com or visit auphonic.com.

STEREO TOOL

(continued from page 25)

get the audio to sound terrible.

Next, I used the standalone version as a temporary air-chain processor on WAWZ's HD3 channel, "The Energy." There are numerous presets available, many of them specific to FM. I chose one called "Beat This." The difference was immediate and gratifying — tight compression with a bass boost that didn't sound overly boomy. I tried a few others, and found similar results, although there were a couple that actually sounded worse to my ears.

Stereo Tool certainly doesn't skimp on features. It seemed I was always finding another page of settings to play with; and a few times I got lost. Fortunately, there's a "reset" option that allows for either resetting certain parameters or the whole thing. Still, I was able to accomplish a lot without documentation. While a lot is given up going with the free version, it still makes a capable mastering processor. The low cost for even the professional version, compared to the cost of a hardware processor, makes Stereo Tool worth a look.

For information, contact Hans van Zutphen at +31-64-718-5781 or stereotool@hansvanzutphen.com or visit www.stereotool.com.

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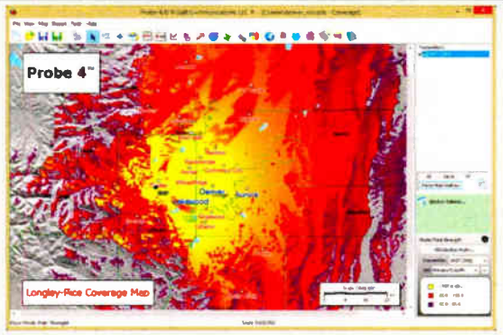

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WYBG 1050, Messina, NY, now off the air is selling the following: 8-chnl & (2) 4-chnl cntrl boards w/microphones & accessories; (2) CD players; (5) turntables w/cabinets & stylist; gauge tuner for 1000W xmtr, studio patch panel; transmitter reader meter; EBS receiver and a 250' tower, make offer. 315-287-1753 or 315-528-6040.

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Looking for a broadcast excerpt of a SanFrancisco 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 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.

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World Radio History

AoIP: Where We Are, Where We're Headed

Take full advantage of the beauty of Audio over Internet Protocol with AES-70

COMMENTARY

BY MARTY SACKS

The author is vice president of sales, support and marketing for the Telos Alliance.

New York Yankee Yogi Berra once said, "The future ain't what it used to be." Take that quote and apply it to Audio over Internet Protocol in broadcast facilities and other professional venues, and I'd have to say that Yogi would be wrong. The future is actually very bright indeed.

At Axia Audio — and the Telos Alliance at large — we were so convinced of the importance of interoperability between AoIP products that we put significant financial and technical resources into the work that lead to the standard — AES-67.

Until AES-67 was ratified in 2013, the only AoIP interoperability was between hardware and software partners within a specific protocol, like our Livewire+. Then, as now, with 100 or so Livewire+ partners, our clients could share audio, data and GPIO between various pieces of AoIP gear in the thousands of studios where Axia consoles were installed.

Our competitors had some partners too, but the situation was not ideal because folks with AoIP equipment made by competing manufacturers were simply not able to take full advantage of the beauty of AoIP.

AES-67 changed all that by defining how AoIP systems from various manufacturers share audio streams. It opened up the potential of a larger AoIP ecosystem, giving new and old users alike the benefits of large interoperable networks. Suddenly, any gear that complied with the AES-67 standard could share audio streams, paving the way for AoIP to become more mainstream.

This has been great for the industry, because with more manufacturers coming to the table, broadcasters have a wider choice of equipment.

However, broadcasters have always had the need to send "Start," "Stop" and other control signals, along with the audio and program associated data. And while Livewire had the ability to share control information, some AoIP protocols did not.

A page from the AES Standards News Blog sets out the three parts of "AES70-2015: AES standard for audio applications of networks — Open Control Architecture." View it at *www.aes.org/standards/*.

AES-70

The latest standard, AES-70, aims to fix that by co-existing with AES-67 on the AoIP network and sharing control information (GPIO) across different AoIP gear. With AES-70 in the mix, the broadcaster's AoIP network can continually evolve and is essentially future-proof.

For the first time, thanks to the number of broadcast gear manufacturers that have adopted AoIP, broadcast facilities can be built from microphone to transmission processor (over the air or over the Internet) using nothing but Ethernet. Even speakers now have AoIP connectivity!

As I mentioned, the future is brilliant for AoIP, and we see 2016 as a banner year for the technology. Here are our predictions for what will be coming down the pipeline in the coming months:

More AoIP gear will become available — More manufacturers are embracing AoIP. We're seeing this adoption across a number of other audio markets, such as live sound. In fact, Audinate has announced that its Dante AoIP standard will support AES-67. The more choices for broadcasters, the better.

Increased promotion of AoIP — Through organizations like Media Networking Alliance (*medianetworkingalliance.com*) and the Alliance for IP Media Solutions (*aimsalliance.com*), forward-looking broadcast suppliers are investing real money to speed the adoption of AoIP through education and promotion. Telos Alliance is proud to be involved in both groups, because they are

(continued on page 30)

READER'SFORUM

REGULATION

I can't say how much I disagree with the states fining and/or shutting down pirates. The U.S. Constitution Article 1 Section 8 Clause 3 states that no state can interfere with interstate commerce. The station my be illegal but it is still interstate commerce even if it's signal doesn't normally cross a state or international border. States can't regulate my amateur radio license or regulate a commercial AM or FM station nor should they. I can see something like this getting out of hand. A conservative state coming down hard on a commercial AM or FM station because it aired too many Planned Parenthood commercials, a liberal state doing the same to a station that aired too many anti-union commercials. States need to keep out of any regulated by the federal government.

Sam Hevener W8KBF
Richfield, Ohio

NOT AN "X" MAN

Regarding:" A Tale of Three X-Band Stations," Radio Feb. 3:

OK, I'm an Engineer, but when I see X-Band, I don't think of the Extended AM Broadcast Band (1610 to 1700 KHz), I think 7 to 11 GHz. (Or 8-12 GHz according to the IEEE).

I remain,

The Old Soldering Gunslinger
Senior Broadcast Engineer
Arizona

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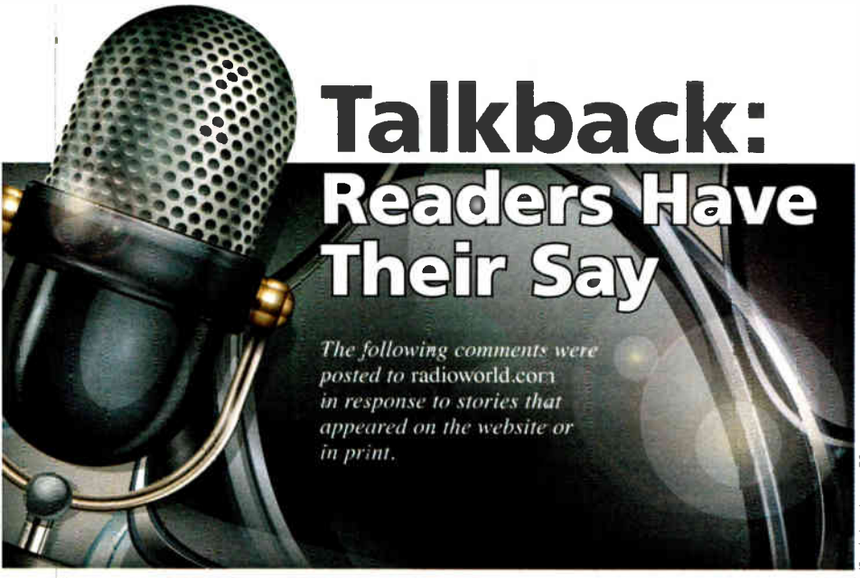

Talkback: Readers Have Their Say

The following comments were posted to radioworld.com *in response to stories that appeared on the website or in print.*

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COMMISSIONER OPINIONS

"O'Rielly Bashes 'Anti-Capitalism Talk,'" Feb. 12, 2016:

That's some *strong* Kool-Aid on tap. It's almost as if O'Rielly is auditioning for his next job ... any bets on what industry he ends up lobbying for?

So O'Rielly is in favor of bringing back the AM/FM ownership restrictions? And thus allowing the consumer marketplace to decide which signals are economically viable and which aren't ... rather than allowing cluster ownership to prop up unviable signals and deny competition?

CONGRATULATIONS

"Tim Bealor: A Lifetime of Broadcast Electronics," Feb. 16, 2016:

I remember you with fondness. Have a wonderful retirement. You are epic in interaction with other people. I wish Tom Beck, well, too. I know he will carry on the legacy.

AOIP

(continued from page 29)

the best way to move AoIP forward.

Late adopters making the switch to AoIP for good — Those who said "no" in the early days are changing their tune. Customers are no longer buying older TDM designs, but are firmly in the AoIP camp. The vast majority of those we talk with will not buy or use anything but AoIP for their upcoming projects.

Differentiation of full AoIP vs. partial AoIP offerings — We see the industry becoming very savvy about networks that are fully open versus those that are partially open. Some providers only offer AoIP at the edges of their networks, while maintaining proprietary topologies at the core. In our experience, most want a fully open network that has Ethernet at its core. Additionally, this allows the core to be updated as time goes on — something that can't be done with proprietary cores. One of our larger clients just did this with their core switch and were ecstatic with the results.

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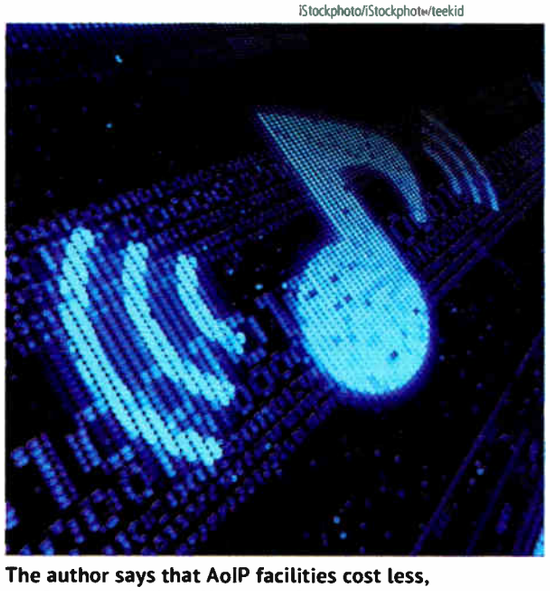

The author says that AoIP facilities cost less, are faster to build, offer more flexible workflows and are more scalable.

Whether you're talking AES-67 or AES-70, one thing is certain: In the 10-plus years since the first AoIP studios were created with Axia consoles and gear, AoIP has lived up to every promise it has made. AoIP facilities cost less, are faster to build, offer more flexible workflows and are more scalable. AoIP is here to stay, and we're excited to be a part of both its heritage and its future.

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

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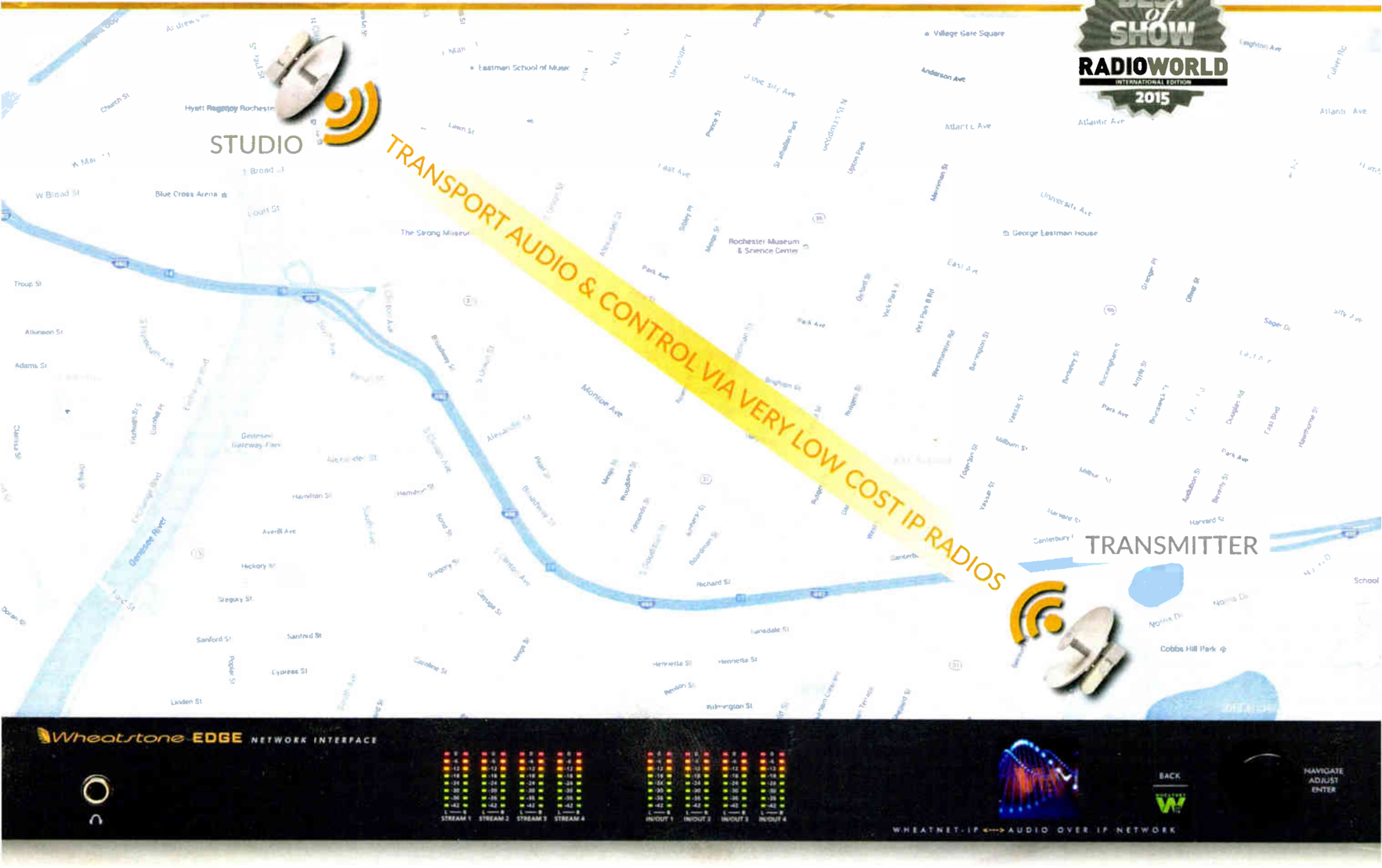

Enables Advanced Inter-Studio Communications Over Inexpensive IP Radio Connections

Network EDGE is designed specifically as a translator to enable intelligent bi-directional multi-channel communication between high-quality, low-latency studio networks such as WheatNet-IP and low-bandwidth STL connectivity options such as very low cost third-party IP wireless radios.

When used within the WheatNet-IP system, with a Network EDGE at one end and a BLADE at the other, the result is a world of possibilities based on BLADE I/O functionality such as silence detection, clip player, logic for automation, mixing, processor control, and so much more.

NETWORK
EDGE

COST EFFECTIVE TRANSMISSION + INTELLIGENT NETWORKING = SMARTER STLS, REMOTES, LINKS & MORE

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World Radio History