BUYER'S GUIDE: SIGNAL MONITORING & MORE — Page 20

NewBay Media

RADIOWORLD

OCTOBER 21, 2015 | The News Source for Radio Managers and Engineers | $5.00 | RADIOWORLD.COM

INSIDE

Old Music Brings New Headaches

Groups face legal hassles over pre-'72 content

BY RANDY J. STINE

Old songs are bringing new headaches for broadcasters, given the complex issue of federal copyright protection for music recorded prior to 1972 and potential royalties owed by broadcasters at the center of lawsuits in California and New York.

Separate suits filed by ABS Entertainment in August in federal courts in California and New York target iHeartMedia, CBS Corp. and Cumulus Media — and the pre-1972 music those broadcasters play. The suits seek injunctive relief and monetary damages. They claim the defendants "delivered music content, recorded prior to 1972, through broadcast radio channels, HD Radio channels, the Internet and mobile devices without consent."

ABS, which seeks a jury trial along with an injunction to prevent use of pre-

(continued on page 10)

WFMU Keeps Audience Discussions In-House

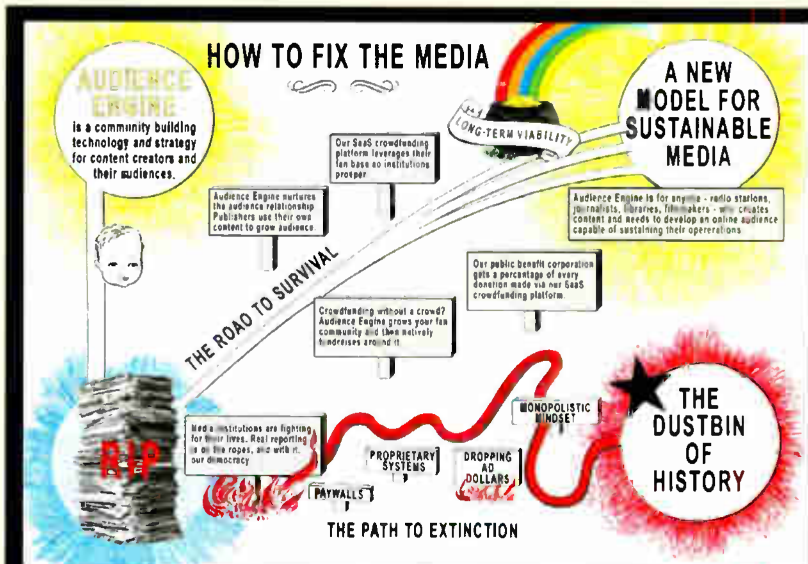
BY TOM VERNON

PUBLICRADIO

Community radio, by its nature, is a grassroots movement. It is all about localism. It's not surprising that some industry observers find it a bit perverse that listeners to local stations turn to global platforms like Facebook, Twitter, Reddit or LinkedIn for intense discussions about local topics.

A for-profit offshoot of WFMU(FM) in Jersey City, N.J., is hard at work developing an alternative not only for public radio but eventually for other "media makers" like journalists, filmmakers and libraries that need online audiences. Part of the idea is to become a "revenue generation shop" for content producers who don't have full-time IT staff.

The platform, called Audience Engine, is described as an "open-source suite of community-building, fundraising and publishing tools." It aims to help organizations increase traffic.



A whimsical look at how to "fix the media" promotes the Audience Engine project.

AIN'T NOTHIN' LIKE THE REAL THING....
THE AUDIOARTS D-76 DIGITAL CONSOLE

The Audioarts D-76 console has all the practical style and rugged functionality of the beloved D-75 standalone console, a staple in radio studios for the past 15 years, but with modern necessities such as an RJ connector system for all your I/O.

The D-76 is a tabletop, modular console available in a 12-channel or 20-channel frame, and includes StudioHub+ RJ45 connectivity.

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

It has four stereo busses, dual-domain outputs, sample rate conversion on all digital inputs, and interchangeable input module daughter cards for easy analog-to-digital conversion in the field. Its modern design features backlit controls and meter bridge with full-scale, bargraph digital peak plus VU metering and automatic timer and clock.

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

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

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

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

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

MAKING THE ABSOLUTE BEST IN RADIO FOR OVER 35 YEARS

AUDIOARTS ENGINEERING

Designed and built in the USA by Wheatstone Corporation

Phone 1.252.638-7000 | audioartsengineering.com | sales@wheatstone.com

RADIOWORLD
Vol. 39, No. 27 October 21, 2015

Next Issue of RADIO WORLD November 4, 2015
Next Issue of ENGINEERING EXTRA December 9, 2015

Website: www.radioworld.com
Email: radioworld@nbmedia.com | Telephone: (703) 852-4600
Business Fax: (703) 852-4582 | Editorial Fax: (703) 852-4585

For address changes and subscription renewal, please visit radioworld.com and click on the "Subscription" button. To submit letters or story proposals, to request writer's guidelines, or for other editorial matters, email the editor at radioworld@nbmedia.com.

EDITORIAL STAFF
EDITOR IN CHIEF, U.S. Paul J. McLane
GEAR & TECHNOLOGY EDITOR Brett Moss
TECHNICAL ADVISER Thomas R. McGinley
TECHNICAL EDITOR, RWEE Rich Rarey
PRODUCTION EDITOR, RWEE Karen Lee
CONTRIBUTING EDITOR Emily Reigart
CONTRIBUTING EDITOR John Bisset
ASSISTANT WEB EDITOR Michael Balderston
INTERNATIONAL EDITOR IN CHIEF Marguerite Clark
LATIN AMERICA EDITOR IN CHIEF Rogelio Ocampo

EDITORIAL CONTRIBUTORS
W.C. Alexander, Susan Ashworth, James Careless, Harry Cole, Ken Deutsch, Mark Durenberger, Charles Fitch, Christopher Friesen, Harold Hallikainen, Craig Johnston, Alan Jurison, Paul Kaminski, John Kean, Peter King, Mark Lapidus, Daniel Mansergh, John Merli, Laura Mir, Jim Peck, Mark Persons, Stephen M. Poole, Carl Lindemann, James O'Neal, Tom Osenkowsky, Rich Rarey, John Schneider, Randy Stine, Richard Strickland, James G. Withers, Tom Vernon

ADMINISTRATION & PRODUCTION
PUBLISHER John Casey
EDITORIAL DIRECTOR Paul J. McLane
PRODUCTION MANAGER Karen Lee
ADVERTISING COORDINATOR Caroline Freeland

CIRCULATION
GROUP DIRECTOR, AUDIENCE DEVELOPMENT Meg Estevez
CIRCULATION MANAGER Kwentin Keenan
ASSOCIATE CIRCULATION MANAGER Michele Fonville

SUBSCRIPTIONS
Radio World, P.O. Box 282, Lowell, MA 01853
TELEPHONE: 888-266-5828 (USA only 8:30 a.m.–5 p.m. EST)
978-667-0352 (Outside the US) FAX: 978-671-0460
WEBSITE: www.myRWNews.com
EMAIL: newbay@computerfulfillment.com

CORPORATE
NewBay Media LLC
PRESIDENT AND CEO Steve Palm
CHIEF FINANCIAL OFFICER Paul Mastronardi
CONTROLLER Rick Ng
VICE PRESIDENT OF AUDIENCE DEVELOPMENT Denise Robbins
VICE PRESIDENT OF DIGITAL MEDIA Robert Ames

VIDEO/BROADCAST GROUP
EXECUTIVE VICE PRESIDENT Carmel King
VICE PRESIDENT / SALES DIRECTOR Eric Trabb

ADVERTISING SALES REPRESENTATIVES
US REGIONAL & CANADA: John Casey, jcasey@nbmedia.com
T: 212-378-0400, ext. 512 | F: 330-247-1288
US REGIONAL: Michele Inderrieden, minderrieden@nbmedia.com
T: 212-378-0400, ext. 523 | F: 301-234-6303
EUROPE, AFRICA & MIDDLE EAST:
Raffaella Calabrese, rcalabrese@nbmedia.com
T: +39-320-891-1938 | F: +39-02-700-436-999
LATIN AMERICA: Susana Saibene, susana.saibene@gmail.com
T: +34-607-31-40-71
JAPAN: Eiji Yoshikawa, callems@world.odn.ne.jp
T: +81-3-3327-5759 | F: +81-3-3322-7933
ASIA-PACIFIC: Wengong Wang, wwg@imaschina.com
T: +86-755-83862930/40/50 | F: +86-755-83862920
CLASSIFIEDS: Michele Inderrieden, minderrieden@nbmedia.com
T: 212-378-0400, ext. 523 | F: 301-234-6303
LIST RENTAL: 914-925-2449, danny.grubert@lakegroupmedia.com

Radio World Founded by Stevan B. Dana

Radio World (ISSN: 0274-8541) is published bi-weekly with additional issues in February, April, June, August, October and December by NewBay Media, LLC, 28 East 28th Street, 12th Floor, New York, NY 10016. Phone: (703) 852-4600, Fax: (703) 852-4582. Periodicals postage rates are paid at New York, NY 10079 and additional mailing offices. POSTMASTER: Send address changes to Radio World, P.O. Box 282, Lowell, MA 01853.

For custom reprints & eprints please contact our reprints coordinator at Wright's Media: 877-652-5295 or NewBay@wrightsmedia.com

Globe graphic ©iStockphoto.com / Edward Grajeda

Wheatstone Acquires Audion Labs

Purchase brings the VoxPro audio editing package into the company's lineup

BY PAUL McLANE

Equipment manufacturer Wheatstone this month acquired Audion Labs, maker of the VoxPro digital audio editor.

"Audion Labs will remain a separate brand entity under Wheatstone," the company stated in an announcement. Terms were not announced. Rick Bidlack, Audion Labs' chief technology officer, will remain with the company and operate from Seattle, Wheatstone said.

"Audion's VoxPro is a staple in radio studios as one of the few broadcast-specific digital voice editors designed to record and quickly edit phone calls on the fly for on-air broadcast," Wheatstone stated. The product is a PC-based software program with optional control panel surface.

Charlie Brown created the editor in the early 1990s while working on the air in Seattle; he founded Audion Labs Inc., which sold its first VoxPro system on a Mac computer to KHJ(AM) in Los Angeles. In 2001 Audion ported the program to the PC platform.

Brown was the seller in the transaction and was quoted in the announcement citing the benefits of the acquisition for "the care and growth of the VoxPro brand."

North Carolina-based Wheatstone makes IP audio networking products under the WheatNet-IP brand, as well as audio processors and other gear for radio and TV broadcast uses including Vorsis and Audioarts Engineering products. Wheatstone said VoxPro would benefit from its 24/7 support and worldwide distribution footprint.

In the announcement, Wheatstone founder and CEO Gary Snow stated, "This is a terrific little company that with one product has made a big difference in the day-to-day operations of most radio stations today."

Radio World asked Snow about the business move.

RW: *How did this acquisition first come about, who approached whom?*
Gary Snow: You know, it was more of an evolution than an actual "Hey, let's buy Audion Labs today." We've had a close working relationship with Charlie for some time. In fact, if I recall, VoxPro was one of the first products that we integrated into our WheatNet-IP system under a technical partnership. I've always admired the company and the product. So it was just one of those great ideas that materialized.

RW: *Why did Charlie Brown decide to sell?*
Snow: My impression is that he had taken this great little product along to the point that it truly is the de facto standard in radio studios, and he saw how nicely it fit into the Wheatstone family of products.

Well, okay, that's why I wanted to buy it!

RW: *How will the transition affect customers; and how will they get future support and service?*
Snow: I'm not sure they'll notice, except that now they have 24/7 support and service and a huge global distribution network — not to mention our field engineers behind the product. As part of the Wheat family, the VoxPro has all those resources, not to mention our R&D. It's no secret that we invest a great deal in DSP technology specifically for broadcasting. We have this huge foundation of technology that can only benefit VoxPro.

RW: *Audio editing software is not the category one thinks of when it comes to Wheatstone. How do you see this editing product fitting in Wheatstone's product line?*
Snow: It's actually a very nice fit. After all, the VoxPro sits right next to the audio console; it interfaces to the digital world. And we're all about audio consoles and digital, as you know. These days audio networking fits just about all categories. It's made up of all these pieces — consoles, mixing, processing — and there's no piece that is more important than editing.

A VoxPro screen and controller, left, are shown with a Wheatstone surface and Blades.

RW: *Hasn't the market for digital audio editing software become commoditized? How can a broadcast-specific product line stay relevant with so many affordable choices now available?*
Snow: VoxPro is one of those smart little products that does its job really, really well. Sure there are general editing systems out that, and yes, you could call the audio editor a commodity these days. But you can't commoditize what broadcasters do. An on-air editor is a very specialized tool. It has to do what all the commodity editors do, but it has to do it faster and it has to be easy to use. Other software editors just haven't been able to do it as well. It's like bringing a machine gun to a stick fight.

RW: *What are your plans for VoxPro specifically, how might it be improved?*
Snow: Well, for starters, we're going to transition VoxPro to Windows 10. Oh, and starting immediately, we plan to provide comprehensive dealer support and training so it's on the same scale as other Wheatstone products.

RW: *How many users does VoxPro have?*
Snow: A lot! More than 4,000 units have been sold, so that's a large broadcast community that we're looking forward to supporting.

RW: *What else would a broadcast equipment user want to know about the acquisition or the transition?*
Snow: Just that we understand that the VoxPro is the industry's beloved audio editor and we have every intention of supporting it and keeping it that way.

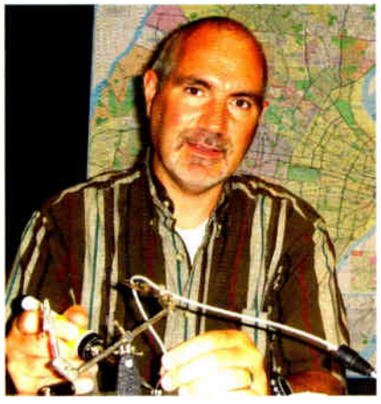
We Need Better PPM Field Tools

Engineer Rick Sewell offers an idea

BY RICK SEWELL

There's been a lot of discussion over the past year about the resiliency of PPM encoding. If you had a meter with trending topics on radio broadcasting websites, it would certainly be near the top. From the PPM encoder, through the station's processing and transmitter equipment, out to the listener's receiver where it finally reaches the PPM meter, there is obvious trepidation by engineers, programming, sales, management and owners about the ability of the system to accurately represent a station's audience.

We have a situation in our local facility that has certainly allowed a little doubt to creep in for me. We PPM encode our Internet streams. Since we don't have a computer constantly monitoring the streams, the decision was made to put the PPM monitor directly in line after the PPM encoder then into the streaming encoder. So there is nothing between the PPM encoder and the PPM monitor. You would think that this would be an ideal situation for the monitor, and you would never have a red light as long as you had audio running.



Rick Sewell

However, this is not the case. We regularly get the red light on the monitor of all four of our streams. One solution was to put audio processors inline feeding the PPM encoders. This certainly helped, but we still see times where we get the red lights. If the PPM encoding has trouble making it through in what would seem to be an ideal situation, how is it working in the not-so-ideal real world?

When there is so much at stake, such as the very competitive PPM-rated market our local cluster is part of, every station is looking for every advantage it can get. Just one PPM meter registering a station's encoding can not only make a big difference in ratings but the station's bottom line as well. When you have meters ending up in very noisy environments, no wonder there was an eager market for a device that promises to enhance the PPM encoding for a station.

This is where the Voltair came in. It's been about a year since stations have begun to implement the Voltair in their air chains. The promise of better ratings by simply inserting a device into your air chain is something that is hard to resist for most programming personnel in a competitive situation. Our programming staffs work very hard and sweat a lot of details, from how long the jocks talk, to "Will this song keep more listeners tuned in than tune out?"

It might give many of us some confidence that we don't need to purchase some encoding enhancement device; that our encoding is doing just fine.

NOT THE WHOLE STORY

As engineers, we look at the scientific part of this. Does this masked audio actually make it to the PPM meter? Arbitron (now Nielsen Audio) provided us with a tool for checking with the PPM

FROM THE EDITOR

The accompanying commentary is by Rick Sewell, Chicago engineering manager for Crawford Broadcasting. It appeared in Crawford's "Local Oscillator" newsletter and on radioworld.com.

— Paul McLane

THIS ISSUE

OCTOBER 21, 2015

encoding monitor. Most of us by now are familiar with the glow of the little green light giving us confidence that we have PPM encoding present on air. We do our best to avoid the blinking red light letting us know there is a problem somewhere along the line. After all, it's been said many times in this competitive PPM environment that "If you don't have PPM encoding you might as well be off the air." While no one would actually turn off a transmitter because they have a PPM issue, that phrase does sum up that the PPM encoding is just as important as our transmitters, STLs and other vital equipment.

I, for one, have always thought the PPM encoding monitors are a useful tool in a general way; however, they don't really give you the whole story. Most of us have our PPM monitors set up in the most ideal receiving and listening environments. They usually get their audio directly attached to expensive receivers which in turn are attached to expensive antennas. No wonder we have green lights. Good signals and no background noise to compete with the masked audio.

So, with the green light on the PPM monitor, the job for us engineering the station is done in regards to PPM. After all, you're only as good as the tools you have on hand.

REAL WORLD

I would like to see Nielsen provide engineering and programming better and more accurate tools for determining what is actually happening with our PPM encoding in the real world.

What I propose is not more hardware. The hardware is already in the hands of engineers and programmers. We use it every day. The smartphone with an app designed to decode PPM would greatly enhance our ability to determine whether we are getting our encoding out in the real world.

It would not have to be something elaborate or require a phone with an FM chip. It would actually be more accurate if it simply uses the phone's microphone to pick up the audio along with the ambient noise present at that locale.

We could simply open the app, let it listen and then give us a green or red indication that it is able to decode PPM audio. It could be that simple. A call sign indication would be useful as well. It would go a long way in demonstrating that the present system is working or if it really needs to be improved.

Nielsen has announced that they are already taking steps to improve the "density" of the PPM encoding. It would be great if we have an app, like the one I proposed, that would allow us to do before and after comparisons in the actual field. It might give many of us some confidence that we don't need to purchase some encoding enhancement device; that our encoding is doing just fine.

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

NEWSROUNDUP

Read the headlines as they happen. Visit radioworld.com/subscribe *and click on "Subscribe to Newsletters" to sign up for NewsBytes.*

Mary G. Berner

CUMULUS: Lew Dickey was replaced as CEO by an executive cited by the board for her experience and her ability to "turn around a company's performance." Cumulus Media announced that Mary G. Berner would serve effective Oct. 13. She joined the board of directors in May 2015. The news broke during the fall Radio Show in Atlanta and was seen as a reaction to the company's poor financial performance, though Dickey remains on the board as vice chairman. Berner is former president and CEO of MPA — The Association of Magazine Media. From 2007–11, she was CEO of Reader's Digest Association and, before that, CEO of Fairchild Publications. She has held leadership roles at Glamour, TV Guide, W, Women's Wear Daily, Every Day with Rachael Ray and Allrecipes.com. Chairman Jeffrey Marcus praised Dickey but said, "At a time when the media landscape continues to undergo seismic transformation, Cumulus needs a broad-based media operator who can leverage its outstanding resources — from its core strength in radio to its growing presence in digital, experiential and other emerging platforms — and capitalize on the industry's strong fundamentals."

AUDIENCE ENGINE

(continued from page 1)

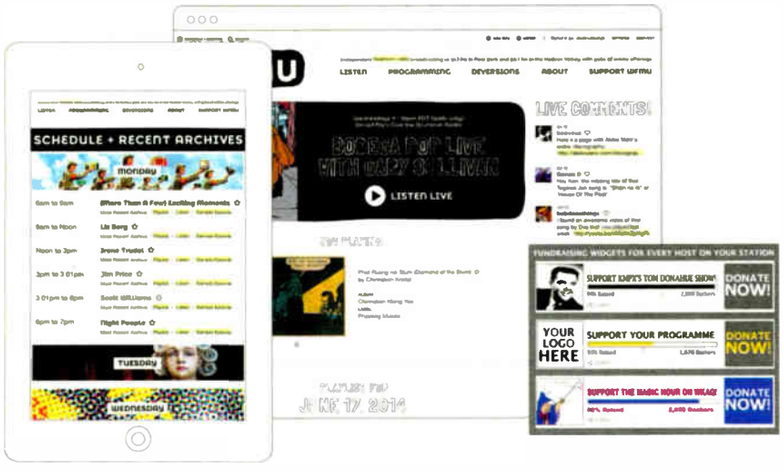
suite of community-building, fundraising and publishing tools." It aims to help organizations increase traffic, engage with people, "crowdfund" around content and thrive in the digital age.

For Ken Freedman, WFMU's general manager, the story began years ago.

"We were one of the first stations to embrace the online environment. WFMU set up its website in 1992, on pre-Web technologies. We were on the Web as soon as the first Web browser came out, Mosaic, in 1993. We started putting audio on the Web in 1993 and started streaming and archiving audio in 1997."

It also helped pioneer online fundraising strategies; and today, online contributions account for 75 percent of WFMU's $2.5 million annual budget. The station believes it has the highest rate of online donations of all U.S. public radio stations.

Audience Engine enables one-click fundraising from station members.



The dashboard is designed for live, positive audience feedback, created with self-sustaining crowdfunding in mind.

Eventually WFMU was challenged by its own success. "The website couldn't scale fast enough, and we needed to find a better solution. Audience Engine takes everything we learned about online communities and fundraising, and makes it available on an open source platform."

CROWDFUNDING

WFMU is collaborating with Bocoup, a Boston software developer. The station will distribute it as an open source platform through its for-profit subsidiary Congera Public Benefit Corp., a "social benefit" corporation, of which Freedman is president.

The effort has received $500,000 in grants from the Geraldine R. Dodge Foundation to develop Audience Engine; Congera's goal is to raise $1.6 million in total foundation backing, and it is also seeking support from both investors and philanthropists. The latter can make tax-deductible contributions in support of Congera's parent, Auricle Communications, a charitable non-profit supporting WFMU's implementation of the program.

A six-year financial plan projects the project will become profitable in 2019. The goal is for Audience Engine to host 15 publishers in 2016, and 85 publishers the year after. Its revenue starts with a percentage of the crowdfunding done by participating publishers.

"Crowdfunding generated $16.2 billion of revenue worldwide in 2014. We've taken the crowdfunding platform and added new functionality and features required by media companies and content producers," Freedman said.

Congera will collect 3 percent of each member's online fundraising revenue. That fee, collected from a projected 325 stations in 2018, would generate $1.45 million. Additional revenue will be generated from member fees, including subscription, customization, implementation and maintenance fees. Other cash streams are anticipated from event sponsorship and advertising.

The organizers feel that their competition in this space comes from the likes of Airtime, NPR Digital Services and proprietary systems used by major publishers like the New York Times. But these either are radio-only or don't interact with other publishing systems or tools.

SECOND SCREEN

How does Audience Engine build community? According to a project summary, "Publishing and broadcasting becomes a moderated event, accompanied by a buzz of listener and reader chat. Our tools let the best of that chat annotate and enrich each publisher's content. User's own pages, favorites and online behavior are gamified, resulting in a positive online social scene. Publisher- and community-organized meetups, appearances and discussions bring the online community together in public events."

"The second screen is huge in online media," Freedman told Radio World. "It's a place for the audience to interact with the programming." The issue, he argues, is on whose second screen is that forum taking place.

"The real problem for the content producer is that when they send their audiences to off-site destinations, the giant data mining operations skim off critical information that should be the lifeblood of the digital producer — information that should be sustaining the artist or producer, not the big data enterprises." That philosophy is summed up in one of Audience Engine's slogans: "Be your audience's first and second screen."

> **Audience Engine** takes everything we learned about online communities and fundraising, and makes it available on an open source platform.
>
> – Ken Freedman

One of its goals is to facilitate the construction of sustainable media.

"Traditional media publishers build proprietary systems that segregate their content from other publishers and the rest of the digital marketplace," Freedman said. "They see themselves as content distributors and ad dispensers, and not as community builders, which is what a 2015 publisher needs to be."

He said independent and public media content producers aren't managing content online effectively, they aren't capturing information about their audience and they aren't using tools to learn about the preferences of their audiences. By not engaging and building their communities, they forego revenue from crowdfunding, a viable option for media sustainability.

The dashboard for Audience Engine includes a responsively designed social content page for radio and news sites, engineered for live, positive audience feedback and created with self-sustaining crowdfunding in mind. Both Web and mobile pages have a built-in, interactive second screen, with incentives for positive contributions, and tools for stopping disruptive behavior.

On the back end, station staffers see

(continued on page 8)

WHERE COULD YOU GO...

...IF YOU HAD ACCESS?

NEED ACCESS?
CONTACT US:

1 800 237 1776
info@comrex.com

NOW, YOU CAN GO TO EVEN MORE PLACES

ACCESS codecs now feature CrossLock™ VPN Technology for superior reliability from even more remote locations. With the ability to use multiple data networks simultaneously, CrossLock gives you not just a **redundancy mode** but also a breakthrough cellular **bonding mode** with the industry's most advanced Adaptive Management Engine...plus a whole new suite of improved BRUTE (BRIC UDP Transmission Enhancement) tools.

CrossLock™ VPN

Learn more at www.comrex.com

ACCESS 2USB

WIRELESS CODEC FOR AUDIO OVER IP

COMREX
BROADCAST RELIABLE

www.comrex.com

AUDIENCE ENGINE

(continued from page 6)

a user-friendly interface where they can develop articles and playlists, as well as monitor user interaction. Fundraising campaigns give every air personality his or her own fundraising widget and "barometer," enabling producers to harness distinct online fan bases.

FLEXIBLE DESIGN

Freedman thinks that Audience Engine will appeal to a variety of users.

"We envision that content makers who will utilize the Audience Engine platform will include public media organizations, emerging digital news sites, legacy media enterprises in transition and traditional advocacy organizations. Deployment of Audience Engine will not be limited to particular networks such as NPR; the platform's flexible design can be adapted to a diverse range of users."

Freedman believes the model eventually can help support "sustainable investigative reporting," with news sites organized by writer and subject, and publication of content encouraging live reader interaction via a timed window.

Steps for a broadcaster to sign up for Audience Engine are straightforward. First, have a graphic designer create fundraising widgets, which will work on both the Web and mobile platforms. Second, if you are using the hosting service for Audience Engine, set up an account with *stripe.com*; they handle the collections. Third, use the Audience Engine API to set up the website, or use Congera's hosting service.

Audience Engine's open source software is being developed by WFMU and will be made available free via a GPL software license. For stations with limited IT staffs, Congera will provide hosting, implementation, customization and security services for this software.

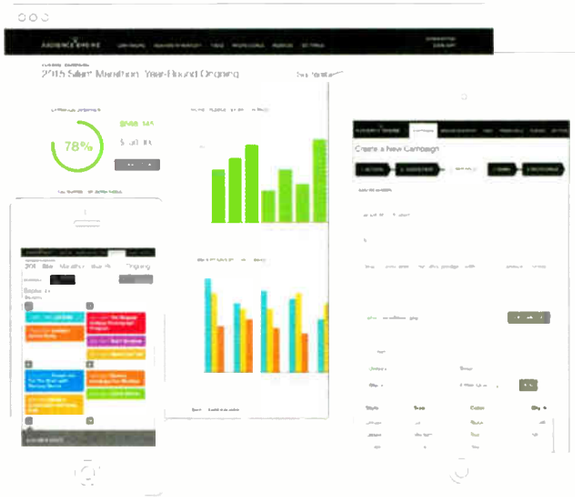
In addition to WFMU, early adopters of Audience Engine include WWOZ(FM), a New Orleans jazz and blues station; WSOU(FM), Seton Hall University, South Orange, N.J.; and WPRB(FM), Princeton University, Princeton, N.J.

A launch event for Audience Engine's fundraising tool, called Mynte, was planned for this month in New York. Content makers and coders worldwide were invited to customize and create on the Audience Engine platform.

Freedman believes the current revenue model for the Web has pretty well run its course. "It's getting easier for users to block ads, so it is important for those of us in the media to find new ways to sustain ourselves on the net."

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

News sites can be organized by writer and subject, with publication of new content encouraging live reader interaction via a timed window.



Audience Engine can give each program its own fundraising widget and "barometer," enabling producers to tap into distinct online fan bases.

NEWSROUNDUP

PPM: Nielsen set a tentative schedule to upgrade U.S. radio markets to its enhanced CBET, the heart of its PPM system. PPM has been at the center of controversy, thanks to reported widespread use of the Voltair monitor/processor that seeks to compensate for alleged PPM shortcomings. Nielsen is increasing its code density via a software update to field encoders to improve the watermark algorithm. The first two markets were to be Washington and Baltimore, where enhanced CBET had been tested; then Nielsen set a schedule starting with New York, Los Angeles, Chicago, Denver and Seattle in early November. The company also has said it plans a new encoding monitor for 2016.

AM: October saw something of a retreat — or at least a concession to reality — at the FCC for advocates of a translator window for AM stations. Commissioner Ajit Pai altered his position regarding a possible filing window, saying he would support implementation of a 250-mile waiver in the near term, though he still wants a translator window as part of AM revitalization. He shifted his stance "in the spirit of accommodation" after a similar announcement by Commissioner Mignon Clyburn. Pai said the Media Bureau should be instructed to implement a translator window in 2017, after the incentive auction and a 250-mile waiver. Chairman Tom Wheeler has expressed opposition to the idea of a translator window for AMs. At press time, an AM revitalization order reportedly was still circulating at the FCC.

CBS ENGINEERING: Paul Donovan was named vice president of engineering for CBS Radio. He will oversee engineering, information technology, real estate and capital for the division's 117 stations. The announcement was made by CBS Radio Chief Operating Officer Scott Herman. Herman called Donovan "one of the best in the business." Former Senior Vice President of Engineering Glynn Walden recently retired, as we reported earlier.

Paul Donovan

STATION SAFETY: Commissioner Michael O'Rielly is concerned for broadcaster safety and security. "Given past attacks on station employees and the physical risks these individuals can face," he wrote in a blog post, "it is all the more important that the commission clarify our rules so that if any station makes its public inspection file available online — either as required by our rules or on its own initiative — it is no longer required to make its facilities or premises open to the public." He says the recent move to require online public inspection files for most radio and TV stations "brings with it the opportunity to improve the physical security of broadcast stations. Simply put, once the public is able to view these documents online, there should be no need for public access to broadcast station premises."

M&A: SNL Kagan reported numbers for broadcast station mergers and acquisition volume in the third quarter. The value for TV and radio combined in Q3 was $3.04 billion. Some $422 million of that was in radio. This brings radio's year-to-date to $663.4 million, while the combined total is $3.41 billion. The M&A pace for the year is still significantly less than that of 2014.

APRE: The Association of Public Radio Engineers is calling for presentation proposals for its 2016 Public Radio Engineering Conference. The conference is scheduled to take place April 14–15 in Las Vegas immediately ahead of the NAB Show. Proposals can be submitted via email to *apre@apre.us*, including a short narrative of the topic and expected presentation length. Deadline is Dec. 1.

BUBBA BOOBOO: Beasley Media Group supported Nielsen Audio's PPM tampering allegations against syndicated air personality Todd "Bubba the Love Sponge" Clem. In September, it said, Clem was contacted by a Personal People Meter holder and allegedly attempted to influence the person to listen to WBRN(FM), a station in Beasley's Tampa station group. Beasley said it condemned Bubba's actions, emphasized that he was not a company employee and said it plans compliance training for him and his employees, among other steps. WBRN also was delisted from the September ratings report. Clem did not comment to Radio World.

Ruin your competition's day. Install an Omnia®.

As your station's audio architect, you've got a unique aural signature in mind, one that listeners can instantly identify. That's why Omnia's team of fanatical audio geniuses (brilliant, but humble!) has crafted half a dozen versatile audio processors with prices to fit any budget — each designed to help you get your signature sound out of your head, and onto the dial.

There's the powerful, precise Omnia.11, the detailed and versatile Omnia.9, advanced yet affordable Omnia.7, workhorse Omnia ONE, and two Omnia.S4 HD/FM cards for onboard PC processing. And don't forget the insanely cool new Omnia VOCO® 8 networked mic processor, which can smooth and punch up eight independent talent mics at once.

Each has the power and flexibility that have made Omnia the choice of 9 out of 10 top stations — and each comes with the rich array of audio-shaping tools you need to get the job done.

Craft a legendary sonic signature. Get Omnia, and get the sound you want.

Clean and Pristine.
Brickwall mastering pushes music to the edge (and sometimes beyond). Omnia-exclusive **'Undo'** technology in Omnia.9 and Omnia.7 processors reverses the effects of poor mastering, restoring life to even the squarest waveforms.

Punch 'em where it counts.
Today's active formats demand forceful, detailed low end. The Earth-shattering **'Solar Plexus'** feature found in Omnia.11 satisfies, delivering bottom end strong enough to shake the walls (but not muddy the mix).

Need Audio Solutions for TV?
Linear Acoustic® has the industry's most acclaimed, award-winning audio processors and loudness management for stereo and Surround Sound TV applications, including products for AoIP.
LinearAcoustic.com

We're here when you need us.
We're broadcasters too; we know that radio never sleeps. That's why all Telos Alliance products cover you with our industry-leading 5-Year Warranty — and with free **24/7 Support, 365 days a year.**

www.TelosAlliance.com/yoursound

Omnia® THE TELOS ALLIANCE

OLD MUSIC

(continued from page 1)

1972 music, is trying to include over-the-air public performance rights in sound recordings, in addition to streaming public performance, in its complaints against the broadcasters, according to court documents.

Broadcasters were expected to reply to the ABS complaint by mid-October in at least some of the cases after receiving a 30-day extension. The parties are working to coordinate actions between the mirroring suits in the two states, according to court filings.

"Defendants anticipate bringing a motion challenging the sufficiency of the complaint," according to the latest court documents.

Observers told Radio World that most likely the broadcasters will move to dismiss the lawsuits, with court-ordered dispute resolution likely to follow if the cases move forward.

CLASS ACTION

The class action suit filed by ABS Entertainment targets the digital rights to music the broadcasters play produced prior to Feb. 15, 1972, that isn't covered by the Digital Performance Right in Sound Recordings Act of 1995 nor the Digital Millennium Copyright Act, according to the suit (see sidebar). ABS filed the suits on its behalf and all other similarly situated owners of sound recordings, thus the class action nature of the suit.

The class action designation allows ABS to add other defendants to the suit rather than going after every potential defendant in separate suits, legal observers said. Additionally, if the defendants lose the case, all pre-1972 recordings would be covered for public performance rights.

ABS Entertainment is an Arkansas-based company that has exclusive ownership to the sound recordings of R&B artists Al Green, Ann Peebles, Otis Clay and several other artists, according to court documents.

In many states, including those where ABS filed its suits, sound recordings are protected by common law, which gives a recording's owner the right to perform that recording on the radio, or to license that right to third parties, according to ABS.

"It is clear that federal law would not permit such a lawsuit. However, since ABS is claiming a public performance right under common law for pre-1972 sound recordings for streaming and over-the air, it goes beyond federally protected post-February 1972 public performance rights in sound recordings," said Melodie Virtue, an attorney at Garvey Schubert Barer. She is not involved in the case.

The suit against Cumulus in California states, "Cumulus has chosen to copy tens of thousands of pre-1972 recordings to its servers and to transmit, copy, perform, broadcast and stream them to millions of users daily without authorization."

Huge amounts of royalties are at stake for the unauthorized performance of pre-1972 sound recordings until this point and going forward, observers said.

The lawsuits are similar to several others filed against Sirius/XM concerning pre-1972 music, including the "Flo and Eddie" suit that found the satellite company liable for playing songs by The Turtles. Sirius/XM is appealing that court decision. It also settled a lawsuit earlier this year brought by Capitol Records. Sirius/XM agreed to pay a $210 million settlement to Capitol and four other record companies to cover performance rights to pre-1972 music through Dec. 31, 2017, according to a press release from the company.

Virtue, who advises clients regarding copyright, music licensing, service marks and online digital streaming and podcasting, said the deal Sirius XM reached with record labels provides some impetus for broadcasters to reach a settlement.

However, the complexity of the performance copyright issue and the differences between state and federal law likely cloud those prospects, Virtue said.

Either way, this "gray area is begging for Congress to act to clarify what's covered and what's not," she said.

There is ambiguity to some state laws that created or clarified copyright in sound recordings since they didn't speak directly to whether that included a performance right, said Kevin Goldberg, a member at Fletcher, Heald, Hildreth PLC.

iStockphoto/pagadesign

It would seem a drastic step for the radio broadcasters to abruptly stop playing pre-1972 music, but that is in part what the lawsuits seek in lieu of royalty payments, according to court documents.

"The broadcasters could stop playing pre-1972 music but that's not going to result in the dismissal of the lawsuit, since the suit seeks payment of back royalties," Goldberg said. "That's something these broadcasters would have to consider if they lose: Is it more advantageous at that point to agree to a royalty structure or to stop playing pre-1972 music?"

Goldberg, who specializes in intellectual property matters, said the only broadcasters that could possibly benefit now by ceasing the performance of pre-1972 music are those that have not already been sued.

"In the event that ABS wins, they'll probably turn to smaller broadcasters as the next target," Goldberg said.

Goldberg said it is likely the plaintiffs and defendants are discussing ways to streamline the case prior to entering dispute resolution.

"So it's safe to assume that settlement discussions are occurring," he said.

IHeartMedia, CBS and Cumulus declined comment on the ongoing litigation.

ABS SUIT

The focus of the federal class action lawsuits filed by ABS Entertainment in August against iHeartMedia, CBS and Cumulus Media are sound recordings created prior to Feb. 12, 1972 and whether the broadcasters should be paying royalties for playing those songs on their airwaves.

Federal copyright protection has long applied to songwriting rights but it wasn't extended to sound recordings until 1972, observers said, and then only partial protection was given.

Therefore, terrestrial radio broadcasters have not paid recording royalties on the music they play produced prior to Feb. 15, 1972, nor after that, said Kevin Goldberg, a member at Fletcher, Heald, Hildreth PLC.

"When Congress decided to provide some copyright protection for sound recordings in 1972, it did so prospectively, and it was only partial protection. It gave the owner of the copyright in a sound recording the exclusive right against unauthorized reproduction, unauthorized creation of derivative works and unauthorized distribution to the public," Goldberg said. "But it specifically did not create an exclusive right to publicly perform the work."

So while Congress extended the list of media protected under United States copyright law to include sound recordings 1972, there was no performance right of any kind in sound recordings until the late 1990s, Goldberg said.

"The Digital Millennium Copyright Act created a performance right for digital transmissions — satellite and webcasting, but not over-the-air," he said.

SoundExchange is the entity responsible for collecting digital music recording royalties and distributing them to copyright owners.

More Radio, More Voices

Make Radio World part of your day every day. Visit our website for great Web-only Radio World content, including the following recent posts and stories:

Hearing Voices
Michael James Kacey talks about his work on a documentary feature film "Hearing Voices," about the history and importance of radio in our society and its relevance to the future of the Internet. See *radioworld.com/kacey.*

Staying Relevant in the Face of a Technology Scare
"When we were founded in 1973, one of our original names was 'Radio Information Service.' Our delivery method was in the name: traditional radio airwaves. Our updated tagline, 'The Virtual Newsstand,' showcases our new direction — the same crucial, timely information, now available in many different ways." Read the commentary by Amelia Christ of Mindseye at *radioworld.com/mindseye.*

Campus View: Radio Lives!
"Just a few years ago, it seemed trendy to predict the impending collapse of college radio. Even worse, many of the naysayers were from within the radio industry itself. Fortunately, the rumors of our demise have been greatly exaggerated. College radio is as strong as ever, and getting stronger." Read what Greg Weston of CBI has to say on Radio World's blog at *http://tinyurl.com/rw-cbi.*

Amazing new LOW PRICE!

GATESAIR™

The Flexiva Oasis is a high-value standalone audio console for on-air and radio production applications. Simply connect microphones, source equipment and audio monitors directly into the Flexiva Oasis console and be on the air.

Flexiva Oasis allows facilities to cost-effectively and easily migrate from analog to digital whenever they're ready. In addition to capabilities for all necessary audio and logic components, Flexiva Oasis provides both analog and digital outputs enable facilities to connect to modern STLs and studio infrastructures.

Call SCMS for more information

1-800-438-6040

www.scmsinc.com

SCMS INC.
YOU KNOW WE KNOW RADIO

Western Mountain States
303-674-6566

Central
315-623-7655

Southern Gulf
866-205-6905

North-East
315-623-7655

Pro Audio/South-East
877-640-8205

Latin America
760-650-1427

West Coast
818-398-7314

North Central
573-478-3737

Mid-West
844-436-4327

Mid-South
877-391-2650

Bradley Division
800-732-7665

Do This Before You Drive Ground Rods

Also, tiny cameras can look where you can't see

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

Marc Mann of San Diego spends a lot of time with electrical systems. He offers a caution regarding Ira Wilner's story about driving a ground rod to sufficient depth.

Marc reminds us first to ensure that there are no utilities buried underneath. Driving anything of sufficient length into the ground falls under the category of "Call 811 Before You Dig." In Marc's practice he still hears news about competent contractors who have hit active high-pressure natural gas lines, electric or other utilities.

Marc was unaware, however, that in California, it's the law (*www.digalert.org/statelaw.html*) to take this extra step of calling 811. If you don't and accidentally hit a utility line, you could face a steep fine.

This service (and its equivalent in other states) is 100 percent free, for not only contractors, but for homeowners as well. Visit *www.digalert.org/onecallsoftware.html*. All it takes is a little planning. You may have to wait a few days for the lines to be marked, but the process can be a literal lifesaver.

Google "dig alert" to find the website for your state's version of the service.

Marc figures that most Workbench readers are well aware of this procedure but it's always a good reminder.

I've called 811 to identify cable locations in an AM directional field. In almost all cases, AC lines for the tower lights run in the same trench as the RF feeder, control and sampling lines. Once their underground location was spray-painted, I took a series of pictures, so future engineers would know where the cables were buried.

During a service visit for my furnace, the HVAC technician used a unique camera to peer inside to view the condition of the heat exchanger. It is made by Milwaukee Tool (*www.cpomilwaukee.com*). The company offers several models of digital inspection cameras.

Shown in Fig. 1, the hand-held camera connects to the lens with a light via a flexible umbilical. The flex in the cable permits the camera lens to be turned to pretty much any angle, and you can view the image on a screen mounted on the hand-held body. Some models permit transferring the image via USB thumb drive.

Uses like peering around corners in a transmitter or underneath a tube socket come immediately to mind, but the umbilical cable is flexible enough to squeeze under the edge of a PC board mounted on standoffs, should you suspect a burned trace. At around $300, the price might be steep; however there are other less expensive brands in the $150 to $200 price range. Just Google "digital inspection camera."

A word of caution: Some sites sell the camera body separately from the umbilical camera/light cable — so what looks like a good deal actually isn't when you have to add the prices together.

Fig. 1: Milwaukee Tool manufactures a digital inspection camera.

Dallas special projects engineer Bill Ryan showed me an alternative to that digital inspection camera. It's a JVC Everio series HD camera. Bill picked his up from QVC, but there are a variety of models for sale on the Internet for under $200, just search JVC Everio HD camera.

What makes this camera so useful is its compact size, shown in Fig. 2, and the rotatable viewfinder screen. You can hold the camera inside equipment, and rotate or invert the viewfinder screen so you can inspect nearly any problem at any angle.

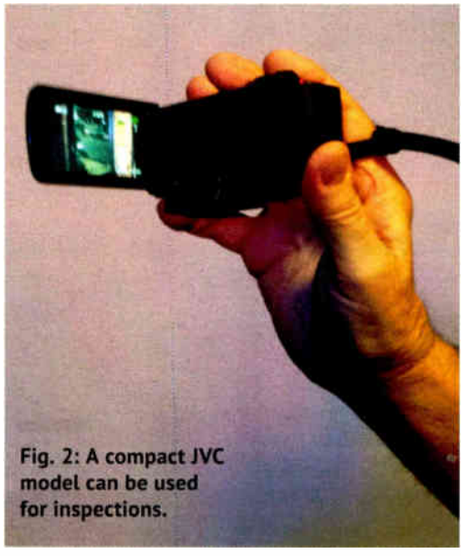


Fig. 2: A compact JVC model can be used for inspections.

Bill told me about a television transmitter problem that occurred at an unmanned site and had caused hours of fruitless troubleshooting. Bill mounted his camera on a tripod, capturing the transmitter meters, set the camera to "movie" mode and left the site. When the problem recurred, Bill watched the time-stamped video and quickly diagnosed the problem, based on the meter indications during the failure.

Bill's model has image stabilization and a 40x optical zoom; it records on an SD card. Bill paid about $150 for his camera. Granted, the camera has no umbilical for peering into really tight

(continued on page 15)

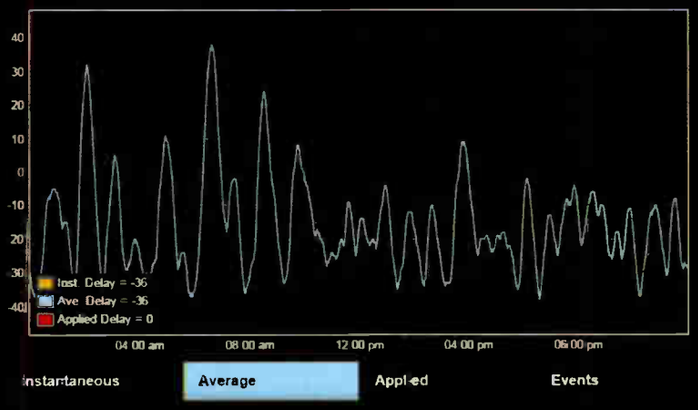
Like Clockwork

NOW AVAILABLE!

ANALOG FM & HD1 PERFECTLY IN SYNC

GETTING FROM HERE

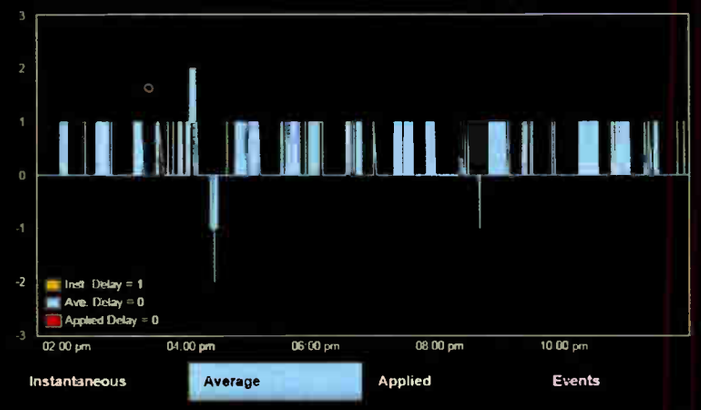
Detail View



Typical FM/HD1 drift over a 24 hour period.

TO HERE

Detail View



Corrected FM/HD1 audio within ±2 samples over 24 hour period.

What are users saying about the JUSTIN 808?

"I found it (JUSTIN 808) to be very easy to set up and install, but most importantly, it gets the job of time and amplitude alignment done perfectly, so the blend is virtually undetectable."
– Paul Shulins, Greater Media Boston.

PLACE YOUR ORDER TODAY!

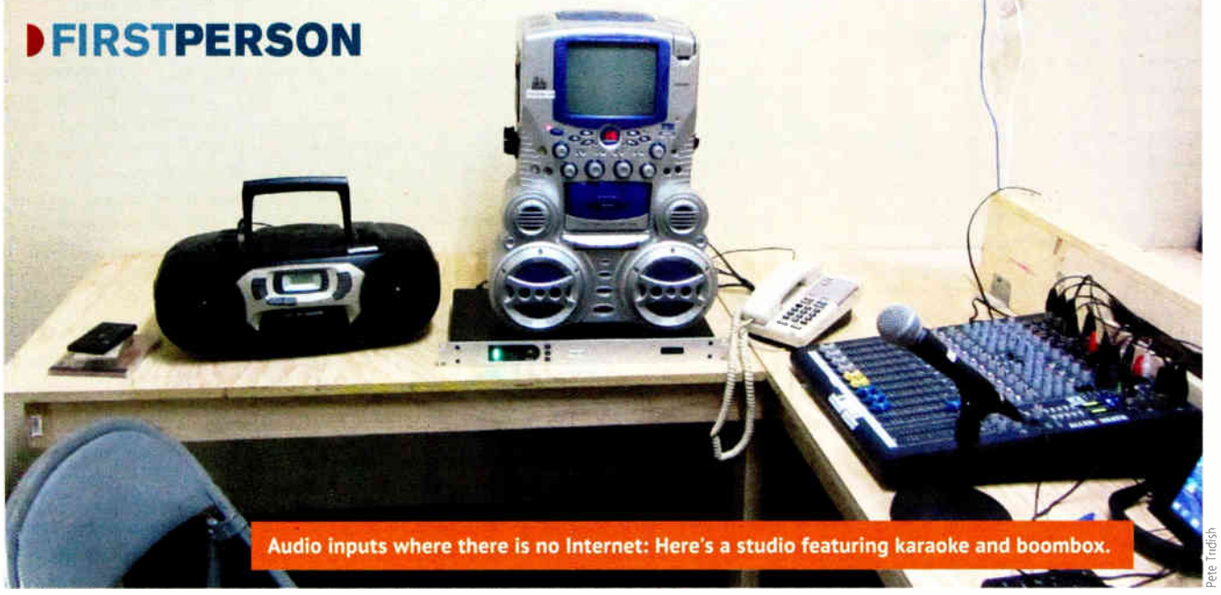
INOVONICS BROADCAST

inovonicsbroadcast.com/model/808
sales@inovonicsbroadcast.com
phone: 800-733-0552

A New Class D for the Tlingit Tribe

Yakutat, Alaska's newest radio station faces a unique set of challenges

FIRSTPERSON



Audio inputs where there is no Internet: Here's a studio featuring karaoke and boombox.

Pete Tridish

BY PETE TRIDISH

I recently got a chance to work on a station for the Tlingit Tribe in Yakutat, Alaska. The station is being launched by Gloria Benson, who works in social services and community health for the tribe.

The studio is in a building that once housed the town's school, but is now the courthouse and planning department. Yakutat has roughly 780 residents. Most of the economy is based around commercial fishing. There are no roads to Yakutat from anywhere — the only way in is by airplane or via ferry during the summer. It is located about 30 miles from a gigantic glacier. The town first received cell phone service only three years ago, and my phone did not even work there. I was happy to have a break from answering it!

Prior to our project, the town only had one radio station on the dial: KCAW(FM), a repeater of Raven Radio on K211BY. KCAW is quite good, but it has no content locally produced in Yakutat.

A major goal for the station is to help with the preservation of the Tlingit language. After generations of suppression by the government, native languages are now being recognized for their importance, and some attempts are being made to revive them. The station has been doing interviews with Tlingit elders, who recount histories of big events in the town, such as the 1964 tsunami. The station broadcasts mostly in English, but they are starting to record short announcements in Tlingit to help people retain basic vocabulary.

Yakutat is an extremely self-reliant town — which is what you would expect from a place with a lot of bears hanging out at the local garbage dump. People are accustomed to being far from outside help. The unfortunate flip side to this is that it can be hard to get on the map when you need to be.

Gray Haertig, who did the allocation work for the license, discovered that the one major tower in town had never been registered. The Coast Guard, owner of the tower in this remote spot, could not complete the proper registration paperwork for over a year.

At first glance, I thought that it would be good to apply for a 100-watt LPFM, rather than the Class D 10 watts. However, the whole population of Yakutat lives within a few miles and there is only one other station on the dial, so in truth, the 10-watt coverage is fine.

Our budget was not high enough for new studio equipment, so we made a simple but functional studio with hand-me-downs. In the photo above, you may notice a karaoke player and a boombox being used to play CDs and cassettes. The playlist also runs on a free software program known as ZaraRadio, which is good for basic automation.

OFF-LINE, ON-AIR

The station cannot yet afford an Internet connection. Internet service is very hard to come by in Yakutat. There is just one supplier, which provides the service via satellite. The dish is about $1,000 and the service is an additional $80 to $200 per month. The data limits are also quite draconian. If you download more than your quota in any seven-day period, your Internet is turned off until the beginning of the next seven-day period.

This was a challenge for the station, which was constructed in a municipal building that also housed the courthouse and planning department. They refused to share Internet with the station because kids had recently gotten into the building and watched a few videos on YouTube, which resulted in the city government's Internet being shut off for the rest of the week!

Consequently, most of the content on the station consists of locally produced shows, some downloaded podcasts and a random mix of music. The station also broadcasts city council meetings live by calling in from a speakerphone and patching it on to the air at the studio. Basketball games are phoned in live via cell phone from neighboring towns. They recently had some very successful programming from the yearly Tern Festival that featured interviews with biologists in town who study the nearby bird population.

While at times there has been some federal support for native radio, the Yakutat station has not been able to find any funding of that kind at this point. Most of the funds for the start-up were raised locally from festivals or came from agencies that promote health initiatives.

I learned a lesson or two about Alaska while I was there. One day, I had to climb

(continued on page 15)

THE POTLATCH TRADITION

During my time on site, I was invited to attend a potlatch ceremony, which is one of the most notable aspects of Tlingit culture. A potlatch is a ceremony during which the Tlingit extravagantly give away their possessions. While in the lower 48 we have an image of subsistence living in the Arctic as a very hard and austere life, the Tlingit were wealthy compared to other indigenous cultures. There was an enormous surplus of food and animal products harvested from the bountiful oceans nearby — so much so that the wealthier Tlingit routinely redistributed wealth and some even destroyed surplus possessions during potlatch feasts.

Western Christian missionaries considered the practice heretical and irrational, and in order to instill Christian and capitalist values, they succeeded in outlawing the ritual. The Tlingit continued the potlatch tradition covertly under the guise of funerals. Even though they are no longer illegal, potlatches have retained their association with funerals. The potlatch that I attended was held in honor of several elders who had recently passed, including a prominent storyteller and keeper of the tribe's language and traditions.

Some observers believe that a social function of the potlatch is to help redistribute the wealth, so that the gap between the rich and the poor does not get too big and destabilize society. In light of Oxfam's recent report (*http://tinyurl.com/nny2nth*), which concluded that 1 percent of the world population will have more than half of the world's wealth by 2016, some might say that the Tlingit potlatch practices may be more intelligent and decent than the ones of those who sought to "civilize" the tribe.

WORKBENCH

(continued from page 12)

places, like the Milwaukee does, but Bill's camera is compact and at half the cost. It's sure to do the job for most engineering challenges.

Inventor and broadcast engineer Joe Stack is always coming up with neat little products that fill a need for broadcast engineers and don't cost a fortune.

ACstate is the latest Stackley Devices product. It allows direct monitoring of an AC mains circuit simply by plugging the device in and connecting up the output barrier strip to the remote control status input.

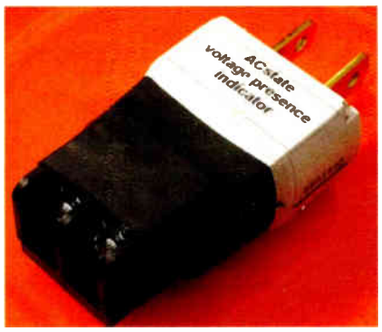


Fig. 3: ACstate monitors the status of your AC.

The output is open-collector and will interface directly with something such as a Burk status input. As you can see from Fig. 3, ACstate is small and can be wired up with a screwdriver. The device provides galvanic isolation from the AC line, so it's perfect for interfacing with a microcontroller or other low-level electronics. It will handle up to 25 volts / 50 mA max on the output terminals.

ACstate is distributed by Broadcasters General Store (*www.bgs.cc*).

Visit the Stackley Devices website for an introduction to the products Joe offers. Head to *www.stackleydevices.com*.

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

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

(continued from page 14)

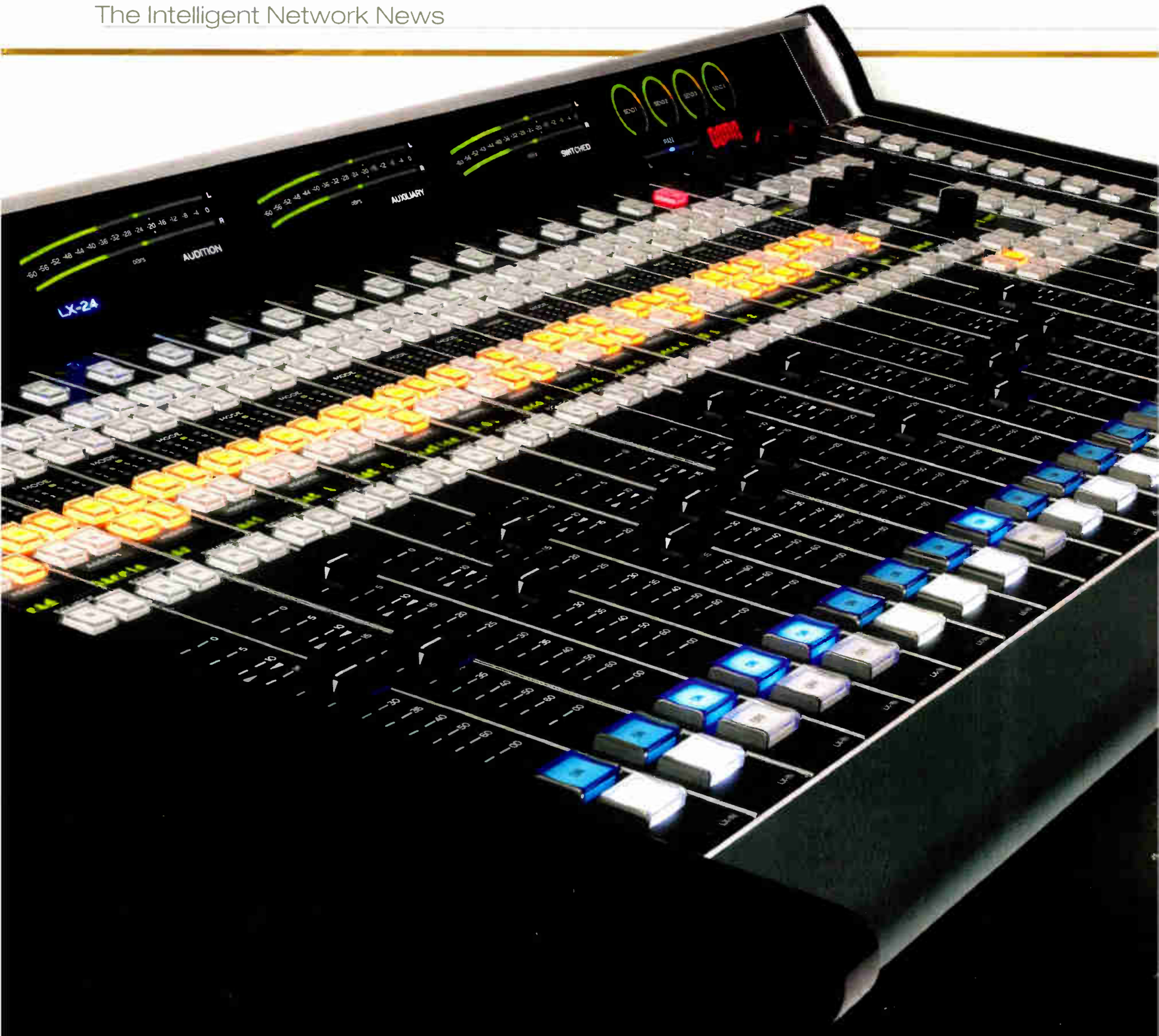
the tower to install a studio transmitter link dish. My backup climber and I scheduled the installation for 1 p.m. By the early afternoon, I got to work stringing cable and installing the dish. After a while, I looked up at the sky and saw that the sun was just inches above the horizon. I had no way of telling time, and I panicked, wondering how long had I been up there.

The sun looked like it would be going down in minutes, and I did not have a flashlight with me. I was nervous that there would be potential storms the next day and that my work would blow away, so I decided to continue working just a little more to get things as closed up as possible. Soon, I was engrossed with my work and continued on for another hour. I remembered my concern and looked back up at the sun — it was in the same place! I had completely forgotten that while a few inches above the horizon means "You've got 15 minutes, get off the tower" down in the lower 48, in Alaska things are different. The sun never gets more than a few inches above the horizon, and it would not get dark for another few hours. My intuitions about time were all wrong.

I asked station founder Gloria Benson if there was one thing that could magically appear to improve the station, she could not keep her answer confined to one thing. She replied, "Enough money for a station manager and an Internet connection."

Benson has been eating into her allowable bandwidth at home just to download the occasional podcast and bring them into the station on a thumb drive. In a town of 780, there is only so much local content to produce and many people do not have Internet access to connect with events in the outside world. She would like to be able to download more shows from native public media and other sources, but it's not possible, yet.

Pete Tridish is a radio engineer and community radio policy advocate with the non-profit station building group, International Media Action.



get some beauty

Get LX-24

Beauty is in the eye of the beholder, the ears of your listeners, the knowledge of your engineers, the voice of your jocks, the power of your network, and the strength of your ratings.

MAKING THE ABSOLUTE BEST IN RADIO FOR OVER 35 YEARS

Wheatstone

BROADCAST AUDIO PERFECTIONISTS

AES67. Hear, There and Everywhere.

AES67 INSIDE

5 things you need to know about this audio standard.

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

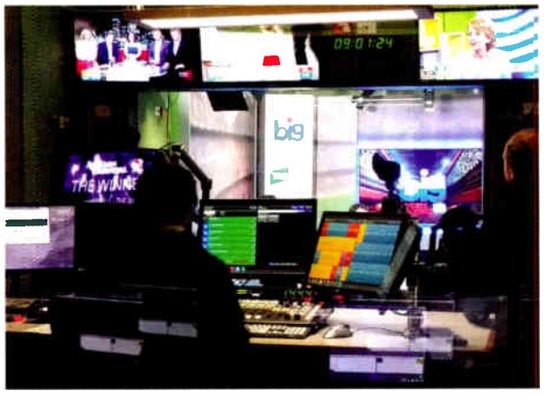
But, AES67 is by no means a complete interoperability standard. It doesn't provide for discovery and control, both of which are needed for any kind of interfunctionality to take place. These standards are in the works, but in the meantime, turning devices on and off, controlling peripheral gear from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

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

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

New Studio?

Heaven Forbid You Forget the Elevator.



It's easy to lose track of the many details of a new studio project. Let us take a moment to remember Edificio Intempo, the 47-floor skyscraper built in Spain that was said to be missing one important detail. Elevators.

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

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

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

Network Edge: Engineers Vote BEST of SHOW at IBC!

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

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

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

AM Redux

Beyond FM translators

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

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

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

Dan Slentz Sayz 'Thanks'

LPFM advocate predicts new 100W will rank in ratings.

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

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

CHRS Warms Up Its New Digs

Radio Day by the Bay event is part fundraiser, part housewarming party

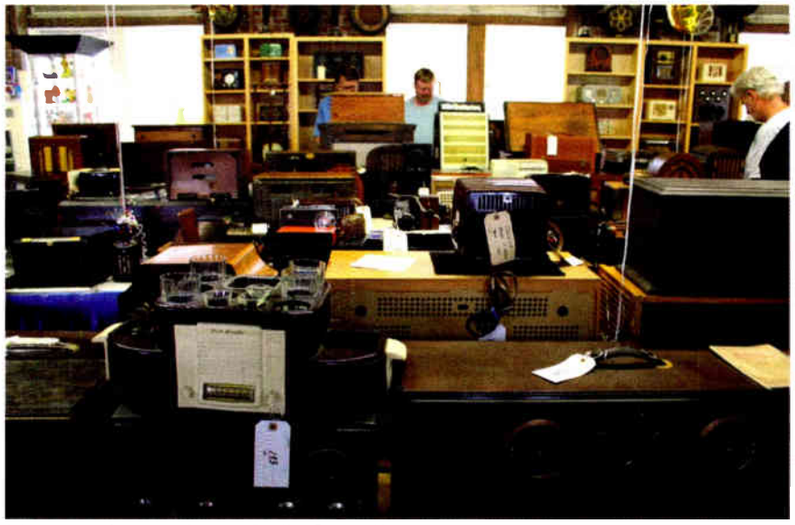
EVENTS

BY JENNIFER WAITS

A record crowd gathered this summer at the California Historical Radio Society's headquarters in Alameda, Calif. — dubbed Radio Central — for the annual Radio Day by the Bay. Attendees toured the facility, bid on vintage radios during the auction, watched live performances and cheered on inductees into the Bay Area Radio Hall of Fame, all in support of the radio-focused nonprofit.

CHRS has been in a new building for a couple of years (this year's event was the second held at this location) but is still putting the finishing touches on the place.

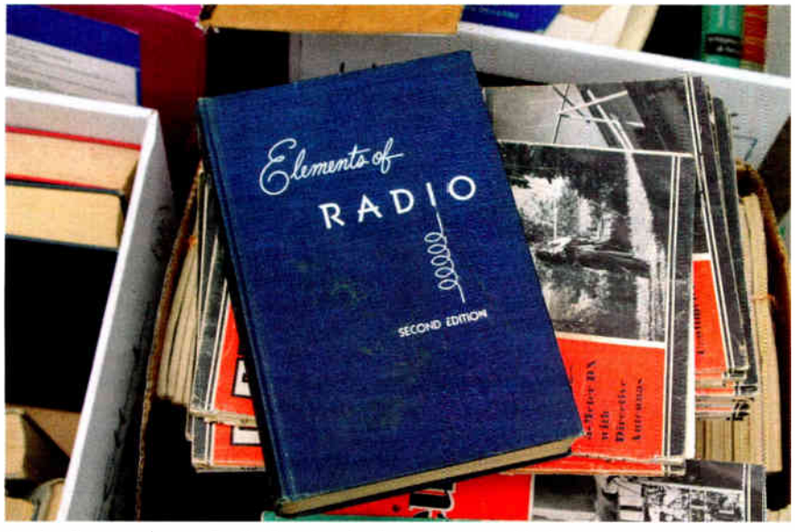
In part because CHRS now owns its own dwelling, the former Sunset Telegraph and Telephone Building, the event's fundraising aspect is critical. President Steve Kushman told me, "There is a ton of work left at Radio Central." He shared a long to-do list: making seismic upgrades, remodeling a bathroom, adding an elevator, building rooms to house various parts of the CHRS including the hall of fame, and working on the exterior to restore its "original 1900 architectural style, which is California Mission Revival."



It's an auction preview at Radio Central!

Photos by Jennifer Waits

A red radio/turntable is on display at Radio Central during auction preview.



At the flea market at Radio Day by the Bay, above and below.

The nearly 400 attendees (twice as many as 2014's count) probably didn't notice the dust. They were largely fixated on the antique radios and vintage radio equipment that filled the main hall. Radio Day by the Bay attracts many radio fans because of its live auction of collectible radios and gear.

In addition to the auction, the event had an outdoor flea market full of electronics, radio manuals and old radio station equipment, including reel-to-reel machines. I also spied a 1970s-era tape deck with a jukebox motif.

A short jaunt up the street, the Kofman Auditorium at Alameda High School (a historic gem in and of itself, with a grand entrance framed by commanding columns) was the place to bid on auction items and to see live performances. There was a silent auction in the lobby, with a range of experiences and things to choose from, including private radio station tours by San Francisco Bay area-media luminaries like Cheryl Jennings, news anchor at KGO(TV) in San Francisco, and Stan Bunger, morning anchor on San Francisco radio station KCBS(AM).

We arrived just in time to catch the end of one phase of the live auction (there was intense bidding on a funky red radio/record player) and to see the announcement of the 2015 inductees into the Bay Area Radio Hall of Fame.

HALL OF FAMERS

Nearly six years ago, the CHRS and the Bay Area Radio Hall of Fame realized that it would be beneficial to work together. The groups are now under one umbrella, along with the Bay Area Radio Museum. Bay Area Radio Hall of Fame inductees are announced live annually during the event.

Items on display at California Historical Radi

This year's inductees (*http://bayarearadio.org/site/hof/*) include program hosts Dusty Street, currently at SiriusXM's Classic Vinyl station, and Lissa Kreisler of KBAY(FM). KCBS(AM)'s Mike Colgan in the news category and Coach John Madden in the sports category were recognized. Additionally, Gil Haar, former news director at KNEW(AM), KNAI(FM) and Magic 61, among other roles, and Elma Greer, former KSFO(AM) music director, were cited as radio pioneers. Harvey Stone, former general manager/president of KBLX(FM), was honored in the executive/manager category. Ken Nielsen was recognized as an engineer/

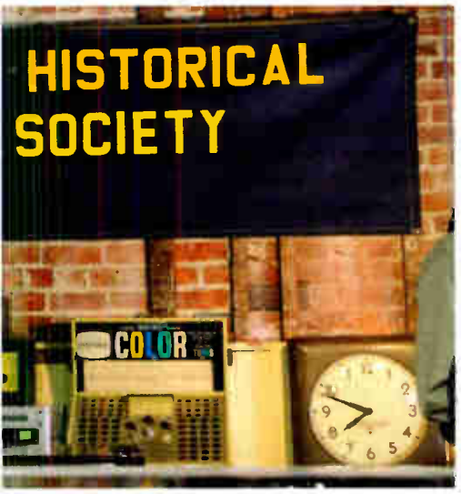
educator; he was responsible for the San Francisco Unified School District launching KALW(FM), the first west coast FM station. And Peter Scott was inducted in the specialty category for his work at KSJO(FM) and KSFO(AM).

Honorees were also feted at a luncheon and ceremony in September.

LIVE ENTERTAINMENT

Old-time music fans then were in for a real treat, as the Golden Gate Radio Orchestra took the stage for a nearly hour-long set of live music, with guest vocalists singing hits like "Summertime" and "Time on My Hands."

It's a Radio Day by the Bay tradition to present a live radio drama re-enactment, but this year's was a bit different. Former Bay Area commercial radio station KPEN(FM), which was also honored by the Bay Area Radio Hall of Fame as its Legendary Station for 2015, played a starring role. Founders James Gabbert and Gary Gielow recounted a bit of the station's history (they started KPEN in 1957 in an 1800s-era adobe



Society's Radio Central.

hut when they were students at Stanford University) before launching into a recreation of a version of "War of the Worlds" that KPEN personnel had performed and broadcast in stereo on Halloween in 1964. The California Historical Radio Society's Radio Dog Theater produced and performed the radio drama.

More than 300 people filled the auditorium for "War of the Worlds," which had a cast of Bay Area radio luminaries, including Michael Bennett, Stan Bunger, James Gabbert, Gary Gielow, Steve Kushman, Monterey Morrissey, Celeste Perry, Kevin Radich and Kim Wonderley. Terry McGovern directed.

For those who missed the festivities, the "War of the Worlds" presentation, Golden Gate Radio Orchestra performance and the Bay Area Radio Hall of Fame announcements are viewable on CHRS's YouTube channel (*http://tinyurl.com/ns834cr*).

A Golden Gate Radio Orchestra performance in the Kofman Auditorium.

As he reflected on the event, Kushman said, "My favorite moments were seeing Radio Central and the Kofman auditorium packed with happy guests and the smiling faces of people carrying home radios and electronic treasures." He added that "producing and acting in 'War of the Worlds'" was also a highlight, telling me, "That was a thrill."

A long-time college radio DJ, now at KFJC(FM), and co-founder of Radio Survivor, Jennifer Waits also works as a research associate on the Library of Congress' Radio Preservation Task Force.

Belar Eases HD Radio Delay for KQMV

Software-hardware combo works at keeping digital and analog diversity delay aligned

USERREPORT

BY DAVE RATENER
Chief Engineer
Hubbard Radio Seattle

SEATTLE — HD Radio diversity delay has been a much-discussed topic in the industry over the past 12 months. We've finally reached a point where manufacturers are announcing products and solutions to time-align analog FM and HD broadcasts.

I've had a look at some of the different systems in the market, all of which have interesting benefits. To date, however, it seems to me that Belar is delivering a product with the best set of tools and functions.

I've been using Belar Electronics modulation monitors since joining the industry 30 years ago. Belar has always offered reliable products, and our early experiences with its Automatic Delay Correction software follow that same path.

ORIFT CORRECTION

Built into the Belar FMHD-1 mod monitor, Automatic Delay Correction gives broadcasters the option to correct signal drift through connectivity with an HD Exporter, audio processor or separate delay line. We have installed the software at two sites for KQMV(FM), serving the Puget Sound region of Washington state. Our main transmitter site is on Tiger Mountain, where the software communicates with a Nautel exporter; and our backup site resides on Cougar Mountain, where the architecture employs an Omnia .9 audio processor.

At the Tiger Mountain site, the Nautel exporter adjusts the delay on the HD audio signal by looping the HD audio feed through the analog delay line in the exporter. This allows us to run a constant delay in the audio processor on the analog composite while adjusting the delay on the HD audio side. On Cougar Mountain, all delay exists in the audio processor on the analog audio path. The software is working well at both sites.

Diversity delay has been such a hot topic because the signal between analog and HD can drift almost anywhere within the coverage area. This is due to a drop in signal strength, which commonly happens between buildings, driving through tunnels or in fringe coverage areas. When signal strength drops, the HD broadcast should blend into the analog signal. If not time-aligned, listeners experience an unpleasant stuttering effect due to variances of the typical eight-second delay between HD and analog feeds.

The connectivity between Belar and our exporter and processor makes it easy to solve this problem.

Since the software is so new, we worked with the Belar team to configure the system. Setup was fairly simple. Upon launching the software, the first step is to enter the IP address of the component being controlled (exporter, processor, delay line). The software immediately begins adjusting the time delay based on what the monitor is receiving off air. The software interprets the signal characteristics, adjusts the component upstream and feeds the correction. This happens in a continuous loop to ensure consistency.

The software delivers dynamic visual displays on the monitor window. There are a few key indicators to watch. At the top of the window, a yellow bar indicates signal loudness. At the bottom, a second yellow bar shows the time alignment, with activity to the left conveying "analog lagging," and movement to the right communicating that the analog signal is leading.

A red bar above the yellow time alignment bar rests at zero, if everything is in sync; if it moves left or right, the system will automatically adjust to compensate for the discrepancy and return the value to zero. Manual corrections are also possible via the front panel, if desired.

There are some more enhancements on the way. A significant challenge to delay correction is that the signal often drifts outside the traditional correction window. This means that the visual display cannot be used. Belar intends to expand this time window to ensure users can visually comprehend the drift beyond several seconds.

Belar is additionally working on a multisync scanning function that can loop between six stations and their corresponding delay devices. This will be useful at our Cougar Mountain site, which is also the primary site for KRWM(FM). We will use two separate inputs on the FMHD-1 to serve different RF feeds and frequencies.

I suspect that the overall system will evolve further as we move forward. For the time being, Belar is offering a working technology that makes it easier for engineers to keep track of diversity delay. It's one less problem to worry about.

For information, contact Mark Grant at Belar Electronics in Pennsylvania at (610) 687-5550 or visit www.belar.com.

TECHUPDATE

DEVA DB7007 HAS HIDDEN TALENTS

The DB7007 is DEVA's second generation digitally-tuned FM Re-Broadcast Receiver, equipped with two DSP-based FM tuners.

Upon audio loss at the inputs, the DB7007 notifies the engineering staff and switches to the second backup RF station. In case of a detected failure with the second station the DB7007 shifts to a designated IP stream or MP3/AAC back-up audio source player. The backup source priority is user-defined. The audio files and playlists can be uploaded in the device's internal memory from a PC, via any FTP client.

The DB7007 has an easy-to-read, high-resolution OLED graphical display, front-panel alarm indicators and bright bar graphs with up to 40 LED segment indicators that allow reading at a glance of the MPX, left and right audio and the RF level. The RF (IF) signal is digitized as soon as it enters the device, and signal processing is then made through DSP algorithms, guaranteeing measurement reproducibility over time. The IF bandwidth filters ensure signal selectivity.

The RDS information contained in the processed MPX signal is displayed as RDS/RBDS data and detailed RDS/RBDS statistics. The band analyzer presents an overview of available FM signals, plus the RF signal strength. Scans can be performed within any section of the FM band in four frequency steps. A spectrum diagram displays the relation RF level vs. frequency.

The DB7007 can be also controlled through the built-in Web server with a standard browser used to monitor the status or to make any adjustments.

For information, contact DEVA Broadcast in Florida at (305) 767-1207 or visit www.devabroadcast.com.

TECHUPDATES

25-SEVEN SYSTEMS VOLTAIR 2.0 ENHANCES MONITORING FEATURES

25-Seven Systems, part of the Telos Alliance, officially introduced the Voltair Watermark Monitor/Processor at the spring NAB Show, though it says hundreds of units were in the field by then.

It says that the unit allowed broadcasters an unprecedented level of visibility into the watermark process used for ratings measurement, and the ability to verify that the content they were broadcasting could actually be detected by Personal People Meter measurement devices.

The recently released version 2.0 brings more detail to the data available, with various optional levels of Confidence Data Extraction features, including the ability to download spreadsheets containing historical one-minute and 15-minute "standard" confidence data dating back to original installation of the unit, and "enhanced" confidence data resolutions as short at 4.8 seconds for data captured after installing the update.

This data is also available to external systems in raw form, which allows broadcast networks to incorporate the data into their analysis infrastructure and inform programming decisions on a larger scale.

The free software update is available to existing Voltair customers for download via the company website. A trial license for "Enhanced" Confidence Data will be made available to all customers as part of the upgrade as well.

For information, contact The Telos Alliance in Ohio at (216) 241-7225 or visit www.telosalliance.com/voltair.

DAYSEQUERRA TIMELOCK CORRECTS HD RADIO DELAY

DaySequerra says its M4 TimeLock products provide sample-accurate monitoring and correction of HD Radio diversity delay.

Consisting of the M4.2 TimeLock and the M4DDC TimeLock, both offer sample-accurate measurement, SNMP, universal Web server, email alarming and GPI alarm tallies on the rear panel. Firmware is field downloadable and updateable and offers an easy upgrade path. The front-panel LCD screen displays network IP address, alarm conditions, audio levels, digital audio quality and RF quality.

Both offer a universal Web server interface that shows both the number of samples and milliseconds of error and dynamic percentage of correlation between the analog and digital audio signals.

The M4.2 TimeLock supports both AM/FM HD Radio and will generate IP-based correction vectors compatible with Orban 8600HD, Omnia 9 and 11 and Wheatstone processors along with both GatesAir HDE-200 and Nautel HD Radio exciters. By using a compatible air processor or exciter it provides a clean method for dynamically correcting diversity delay. HD Radio Artist Experience is displayed via the Web server interface along with RBDS and HD Radio PAD/SIS.

The M4DDC TimeLock has dual audio paths for both analog and HD Radio content via AES3 digital audio. Using its Level-Lock algorithm it can correct for polarity inversion and match the HD Radio audio level to the analog signal with 1 dB accuracy. It offers a fast diversity delay correction solution, and it is PPM-friendly. It offers a 16-second correction delay and a ballgame mode that is automatically set via the received broadcast's delay bit. Transitioning in and out of ballgame mode is quick and preserves PPM integrity. Separate AM and FM M4DDC TimeLock models are available.

For information, contact DaySequerra in New Jersey at (856) 719-9900 or visit www.daysequerra.com.

Nautel Phones Home for Northwestern

Automated maintenance makes life much more pleasant for broadcaster

USERREPORT

BY GARY L. ELLINGSON
Director of Engineering
Northwestern Media

FARGO, N.D.—Purchasing a broadcast transmitter is a significant investment for any organization. Not only must the asset be depreciated over time, hopefully a very long time, but the operational and maintenance costs must be factored in. When problems occur, how quickly can the cause be determined and remedied? In situations where human resources are stretched thin and experience within those human resources varies widely, the selection of a qualified device becomes even more important.

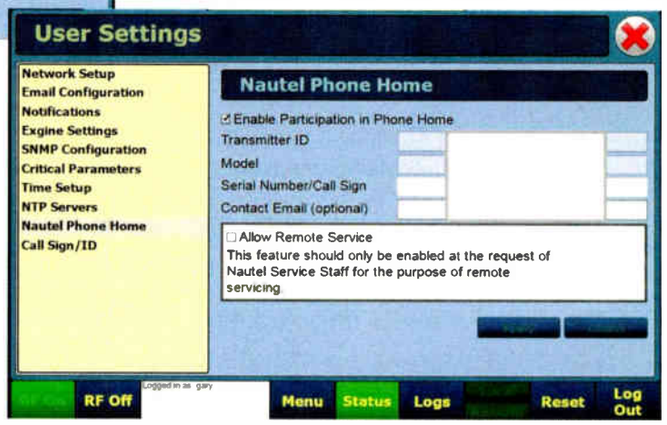
When we upgraded transmitters at our two 50 kW AM facilities, we selected Nautel. The product has significant operational history, is of conservative engineering design and represented a good value over time. Because of the software-based approach, the transmitter can be upgraded easily and feature sets can be expanded as the need arises. One additional aspect of this software base has a significant impact on monitoring, troubleshooting, and repair.

I received an email from Nautel asking if we needed assistance. These exchanges occurred before I received a call from the local engineer.

Enter the Nautel Advanced User Interface and the Phone Home feature. This AUI, available on both Nautel AM and FM product lines, allows the user to monitor transmitter activity at an incredible depth, much deeper than that easily obtainable with traditional remote control systems.

This level of monitoring enables the user to spot trends and locate trouble spots before becoming an off-air event. Because of the modular approach, most servicing can be done while on air. Because of the conservative design, problems in any one (or more) modules simply cause a reduction in output power until such time as repairs can be made.

With the Nautel Phone Home enabled, remote monitoring takes on a much more extensive aspect — almost like having factory-level service on call to a specific device at any time.



When configured properly in cooperation with Nautel service staff, Phone Home generates email alerts to designated personnel in addition to alerting Nautel support. Because of the prearranged access, Nautel support personnel can gain access to the transmitter and locate the problem(s), sometimes before the primary contact person (me) is even aware there was a problem. This has happened to me several times when out of the office.

Citing one example: I was out of the office attending the NAB Show. I received an email from Nautel Phone Home stating that a PA module had faulted but the transmitter was still making 52.5 kW of power. Shortly thereafter, I received an email from Nautel customer service asking if we needed assistance in locating and correcting the problem. These two exchanges occurred before I received a call from the local engineer asking if I was aware of the problem. The faulty components were quickly located, shipped, and upon returning to Fargo, the repairs were made.

This level of support relieves significant pressure in the field. I have been in broadcast engineering long enough to know the feeling of being alone late at night, usually in inclement weather, dealing with a product which is no longer supported, but still having to make the repairs necessary to restore on-air operation as soon as possible. There are two seats in an aircraft cockpit for a reason. I am very happy to fly with Nautel in the co-pilot seat.

For information, contact Wendell Lonergan at Nautel in Nova Scotia at (902) 823-5131 or visit www.nautel.com.

TECHUPDATE

2WCOM MM01 HAS MONITORING FEATURES

2wcom's MM01 is a new compact multirole solution for audio over IP contribution and distribution. Targeted primarily at studio-transmitter link applications, MM01 offers monitoring functionality along with versatility and redundancy.

With the wide variety of implemented standards like AES67 and Ravenna on top of it, the MM01 fits into most network infrastructures. The MM01's audio synchronization, delivered to microsecond accuracy, also makes it suitable for applications where precise timing is essential, such as SFN FM networks.

The MM01 includes remote monitoring capabilities through its asymmetric audio return channel and system audio data log functionality. For easy remote maintenance, upgrades and control, detailed logs and status information from the MM01 can be analyzed by 2wcom's centralized management system, or by third-party network management systems. Daily or event-based tasks such as firmware and configuration changes, redundancy switching and content exchange can be automated. The MM01's hardware and software concept offers the versatility to adapt to future requirements through its built-in support for features like https, SNMPv3, detailed syslog capabilities, and Web GUI.

The MM01 offers network-wide economies by combining both encoder and decoder functionality within the same device, simplifying infrastructure and reducing both CapEx and OpEx. The MM01's flexible and automatic redundancy support is designed to accommodate a wide range of possible sources, from economical DSL lines to satellite.

Offering comprehensive support for today's most widely-used audio codecs, including AAC and Enhanced aptX, the MM01 also supports dual streaming and Pro MPEG FEC.

MM01 offers a front-panel display, jog wheel along with remote control audio inputs and outputs, serial inputs and outputs, GPIOs, redundant IP interfaces and dual redundant power supplies.

For information, contact 2wcom in Germany at 011-49-461-66283015 or visit www.2wcom.com.

YOU DESERVE OPTIONS

Eliminate HD Radio air chain time alignment issues automatically

Belar is the industry's most trusted innovator for modulation monitoring for over 50 years. We help broadcasters worldwide intuitively solve air chain problems and maximize signal performance across AM, FM and HD Radio - with exceptional accuracy and flexibility.

Our Automatic Delay Correction software simplifies HD/FM time alignment, giving broadcasters the freedom to adjust delays in industry-leading processors, exporters and precision delays. This Belar innovation measures and communicates adjustments to the front of the air chain, eliminating system redundancies, complexities and costs. Innovative Automatic Delay Correction features include:

- **Multi-Scan function for delay corrections on up to 6 stations in a market**
- **Automatic expansion/contraction of time window for fast accurate corrections**
- **Ramping function for smooth transitions between time adjustments**

Learn more about how Belar brings the most value to HD Radio Diversity Delay at

WWW.BELAR.COM

BELAR

610-687-5550 • BELAR.COM • SALES@BELAR.COM

When accuracy counts, count on Belar.

Manufactured in the USA

RadioCuba Deploys Audemat Systems

State broadcaster now is also putting WorldCast gear to use in other countries

USERREPORT

BY JUAN CARLOS SISTACH
Operations Director
RadioCuba

HAVANA — At RadioCuba, we are enthusiastic users of WorldCast Systems' equipment for signal monitoring and remote control and have been for many years. More recently, we have been using the knowledge and experience we have built up using this equipment to roll out turnkey monitoring and control projects for broadcasters in other countries, particularly in Venezuela.

NETWORK

As the state radio and TV broadcaster for Cuba, we operate a network of more than 800 transmitters nationwide, reaching 99 percent of the population. Since 2003, we have managed this network from our national control center, which seeks to monitor the quality of signal and operations throughout the country. Our monitoring architecture is built upon the Audemat AM Monitor, FM Monitor and TV Monitor units (formerly known as Goldeneagle) from WorldCast Systems. For the automation and remote control of our transmitter site network, including many unattended sites, we use the Audemat Control Modular (formerly known as IP2Choice). The Audemat Broadcast Manager software is used to aggregate the information from this vast network of devices and provide a single management interface to supervise and control all sites.

VENEZUELA

Our team of specialists have installed and operated this network for several years with support from the WorldCast team, and we felt that we had enough experience that we could aid other broadcasters. Having carried out broadcast projects in countries such as China, Angola, Mali and Surinam, RadioCuba is experienced in international projects.

One of the more recent projects was for Radio Nacional de Venezuela, a fellow state broadcaster. As part of the expansion of their AM transmitter network, they recognized the need to ensure that the new network was adequately monitored and controlled. RadioCuba proposed a turnkey solution that included the creation of a national control center, similar to our own, enabling nationwide supervision and control.

We scoped out the project and its requirements and selected the Audemat AM and FM Monitors as the key platforms for their nationwide radio signal monitoring.

Once configured, the units require little to no user intervention, operating quite autonomously, and we like the range of quality monitoring capabilities. For RNV's remote control network, we again used the Audemat Control Modular. Besides our familiarity and experience with the unit, there are several key advantages to the Audemat remote control devices over the others that we considered.

One is that the Audemat units come with their own ScriptEasy software. This enables us to generate or "script" our own programs and ensure that the site operates as we, or in this case, RNV, wish. For example, we can establish back-up and failover procedures that initiate automatically upon conditions that we predetermine. All the tools are provided so, with some training, the operators can be independent with the equipment.

CONTROL

With the Audemat Control Modular, we were able to establish a professional network to remotely manage and control all the transmitters throughout the RNV network as well as several other broadcast units that were located on the transmitter site. We also used the Audemat units to monitor and act upon environmental variables at the transmitter site.

Following on the success of the RNV installation, we carried out a similar turnkey installation with another Venezuelan broadcaster, REDTV. We installed an AM, FM and TV monitoring network, and for the remote control network, we used the Audemat Control Silver, as well as the Modular unit. The Control Silver is a compact, DIN rack-mountable unit that is suitable for smaller sites with less associated equipment; it still offers ScriptEasy so the functionality we need is there.

Overall, we find the WorldCast Systems' monitoring and remote control equipment reliable, fully-featured and professional. We value the modularity and versatility in terms of number and type of connections together with the range of variables that can be monitored and the ability to combine data from multiple sites nationwide in one intuitive interface.

With our confidence in this equipment high and our own monitoring and control network established as a center of excellence, we at RadioCuba are now working to share this expertise with other broadcasters.

For information, contact Tony Peterle at WorldCast Systems in Florida at (305) 249-3110 or visit www.worldcastsystems.com.

TECHUPDATES

CTP SYSTEMS UPDATES DBBOX2

CTP Systems has announced the release of its first firmware update for the dBbox2.

The dBbox2 is a second-generation handheld audio test unit designed for the broadcast market. It allows monitoring, metering and generation of analog, AES and S/PDIF audio from a pocket-sized box.

The dBbox2 can also test for phantom power and two-wire power; work as a four-wire unit, a microphone amplifier, a digital-to-analog or analog-to-digital converter; and test and generate MIDI signals.

With the release of CTP's version 2 firmware, the dBbox2 can also send and receive analog or AES audio at the same time for loop testing, test audio phase, check two-wire audio levels and even test an XLR, BNC or MIDI cable.

Firmware updates are free to dBbox2 users; the manufacturer says it has a policy of continuously updating the unit. CTP Systems says the dBbox2 has proven popular with audio engineers and installation technicians in its eight months on the market.

For information, contact CTP Systems/SCMS Audio at (800) 438-6040 or visit www.scmsinc.com.

ABOUT BUYER'S GUIDE

Radio World publishes User Reports on products in various equipment classes throughout the year to help potential buyers understand why colleagues chose the equipment they did. A User Report is an unpaid testimonial by a user who has already purchased the gear. A Radio World Product Evaluation, by contrast, is a freelance article by a paid reviewer who typically receives a demo loaner. Do you have a story to tell? Write to **bmoss@nbmedia.com.**

INOVONICS HAS NEW FM MODULATION ANALYZER WITH NETWORK INTERFACE

Inovonics has introduced the 531N FM Modulation Analyzer with Network Interface, replacing its familiar 531 FM modulation monitor.

The 531N has the same look and feel of the original model but now incorporates IP networking and additional new features. The 531N supports the extended FM range 76–108.1 MHz in 100 kHz increments along with 110/220VAC power supply for worldwide distribution.

Front-panel functions are accessible from laptop, tablet or smartphone, including remote audio monitoring of the off-air signal. The dynamic Web Interface now decodes and displays a station's important RDS data, and offers baseband FFT (spectrum), audio XY (stereophony) and program peak density (loudness) readouts as well.

The Web interface has SNMP support, and alarms are integrated with email/SMS dispatch. Inovonics says the 531N remains unique in offering AM noise metering and an AM noise output to help tune a transmitter.

For information, contact Inovonics in California at (831) 458-0552 or visit www.inovonicsbroadcast.com.

DAVICOM WARNS OF APPROACHING LIGHTNING

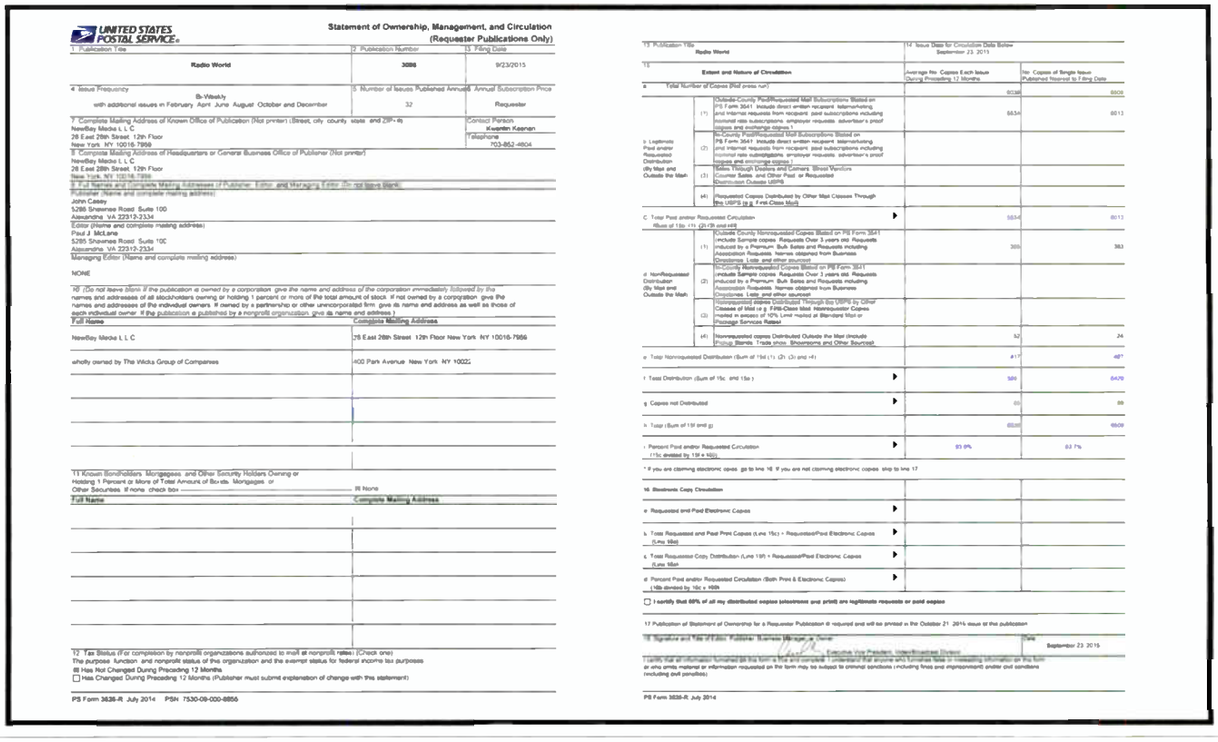
Davicom's DVLD Lightning Detector is an add-on sensor for the company's intelligent remote monitoring and control systems. It is based on a circuit that is designed to detect the approach of lightning storms automatically by analyzing and recognizing the electromagnetic signature of lightning strikes.

In addition, the circuit contains a hardwired averaging and distance estimation algorithm that provides the distance to the leading edge of the storm.

Together, the DVLD and Davicom units can be used to detect approaching lightning storms, to send alarms when the storm reaches a certain minimum distance, to deactivate or disconnect sensitive equipment and to log the storm's track.

The DVLD connects to the Davicom units through a long-distance RS-485 serial link and USB adapter combination.

For information, contact Davicom at (877) 282-3380 or visit www.davicom.com.



Statement of Ownership, Management, and Circulation (Requester Publications Only)

1. Publication Title	2. Publication Number	3. Filing Date
Radio World	3086	9/23/2015

4. Issue Frequency	5. Number of Issues Published Annually	6. Annual Subscription Price
Bi-Weekly with additional issues in February, April, June, August, October and December	32	Requester

7. Complete Mailing Address of Known Office of Publication (Not printer) (Street, city, county, state, and ZIP+4®)
NewBay Media L L C
28 East 28th Street, 12th Floor
New York, NY 10016-7959
Contact Person: Kwantin Keenan
Telephone: 703-852-4804

8. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer)
NewBay Media L L C
28 East 28th Street, 12th Floor
New York, NY 10016-7959

9. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor (Do not leave blank)
Publisher (Name and complete mailing address)
John Casey
5286 Shawnee Road, Suite 100
Alexandria, VA 22312-2334
Editor (Name and complete mailing address)
Paul J. McLane
5285 Shawnee Road, Suite 10C
Alexandria, VA 22312-2334
Managing Editor (Name and complete mailing address)
NONE

10. (Do not leave blank. If the publication is owned by a corporation, give the name and address of the corporation immediately followed by the names and addresses of all stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, give the names and addresses of the individual owners. If owned by a partnership or other unincorporated firm, give its name and address as well as those of each individual owner. If the publication is published by a nonprofit organization, give its name and address.)

Full Name	Complete Mailing Address
NewBay Media L L C	28 East 28th Street, 12th Floor New York, NY 10016-7986
wholly owned by The Wicks Group of Companies	400 Park Avenue New York, NY 10022

11. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities. If none, check box → ☒ None

Full Name	Complete Mailing Address

12. Tax Status (For completion by nonprofit organizations authorized to mail at nonprofit rates) (Check one)
The purpose, function, and nonprofit status of this organization and the exempt status for federal income tax purposes:
☒ Has Not Changed During Preceding 12 Months
☐ Has Changed During Preceding 12 Months (Publisher must submit explanation of change with this statement)

PS Form 3526-R, July 2014 PSN: 7530-09-000-8855

13. Publication Title: Radio World	14. Issue Date for Circulation Data Below: September 23, 2015	
15. Extent and Nature of Circulation	Average No. Copies Each Issue During Preceding 12 Months	No. Copies of Single Issue Published Nearest to Filing Date
a. Total Number of Copies (Net press run)	8038	8608
b. Paid Circulation (By Mail and Outside the Mail) (1) Outside-County Paid/Requested Mail Subscriptions Stated on PS Form 3541. Include direct written request, telemarketing, and Internet requests from recipient, paid subscriptions including nominal rate subscriptions, employer requests, advertiser's proof copies, and exchange copies.	6634	6613
(2) In-County Paid/Requested Mail Subscriptions Stated on PS Form 3541. Include direct written request, telemarketing, and Internet requests from recipient, paid subscriptions including nominal rate subscriptions, employer requests, advertiser's proof copies, and exchange copies.		
(3) Sales Through Dealers and Carriers, Street Vendors, Counter Sales, and Other Paid or Requested Distribution Outside USPS®		
(4) Requested Copies Distributed by Other Mail Classes Through the USPS (e.g. First-Class Mail)		
c. Total Paid and/or Requested Circulation (Sum of 15b (1), (2), (3), and (4))	6634	6613
d. Nonrequested Distribution (By Mail and Outside the Mail) (1) Outside-County Nonrequested Copies Stated on PS Form 3541 (include Sample copies, Requests Over 3 years old, Requests induced by a Premium, Bulk Sales and Requests including Association Requests, names obtained from Business Directories, Lists, and other sources)	369	383
(2) In-County Nonrequested Copies Stated on PS Form 3541 (include Sample copies, Requests Over 3 years old, Requests induced by a Premium, Bulk Sales and Requests including Association Requests, names obtained from Business Directories, Lists, and other sources)		
(3) Nonrequested copies Distributed Through the USPS by Other Classes of Mail (e.g. First-Class Mail, Nonrequestor Copies mailed in excess of 10% Limit mailed at Standard Mail or Package Services Rates)		
(4) Nonrequested copies Distributed Outside the Mail (Include Pickup Stands, Trade Shows, Showrooms, and Other Sources)	52	24
e. Total Nonrequested Distribution (Sum of 15d (1), (2), (3) and (4))	417	407
f. Total Distribution (Sum of 15c and 15e)	5051	5470
g. Copies not Distributed	60	89
h. Total (Sum of 15f and g)	8038	8608
i. Percent Paid and/or Requested Circulation (15c divided by 15f x 100)	93.9%	93.7%

* If you are claiming electronic copies, go to line 16. If you are not claiming electronic copies, skip to line 17.

16. Electronic Copy Circulation	
a. Requested and Paid Electronic Copies	
b. Total Requested and Paid Print Copies (Line 15c) + Requested/Paid Electronic Copies (Line 16a)	
c. Total Requested Copy Distribution (Line 15f) + Requested/Paid Electronic Copies (Line 16a)	
d. Percent Paid and/or Requested Circulation (Both Print & Electronic Copies) (16b divided by 16c x 100)	

☐ I certify that 50% of all my distributed copies (electronic and print) are legitimate requests or paid copies.

17. Publication of Statement of Ownership for a Requester Publication is required and will be printed in the October 21, 2015 issue of this publication.

18. Signature and Title of Editor, Publisher, Business Manager, or Owner — Executive Vice President, Interactive Division — Date: September 23, 2015

I certify that all information furnished on this form is true and complete. I understand that anyone who furnishes false or misleading information on this form or who omits material or information requested on the form may be subject to criminal sanctions (including fines and imprisonment) and/or civil sanctions (including civil penalties).

PS Form 3526-R, July 2014

Burk ARC Solo Rides High in Wyoming

Plenty of options and control choices aid far-flung transmission network

USERREPORT

BY PAUL MONTOYA
Director of Engineering
Wyoming Public Radio

LARAMIE, WYO. — The first remote control system I can remember working with was a Rust system that used a stepper relay and would tie to its remote counterpart at the transmitter site over a Mountain Bell DC loop circuit. When I think about where we are now with remote monitoring, it's truly amazing.

The latest product I have been using at Wyoming Public Radio is the Burk ARC Solo. It is a remote control unit with everything I need in one box.

PROGRAMMABLE

The ARC Solo is a 2 RU black box with only one button on the front (local/remote) and two lights (remote and alarm). The back of the unit has all the interconnection terminals for relay control, metering and status. There are 16 relay channels available. They can be configured as eight lower and eight raise or 16 raise or 16 lower. The user chooses the configuration via the GUI.

The ARC Solo provides 16 metering channels (–10 VDC to +10 VDC) and 16 status channels (DC voltage or switch closure). Since these are all on the back via compact Phoenix connectors, this means no more dangling ribbon cables or 3 RU relay panels. I always hated my remote control unit taking up half the equipment rack.

The only other connectors on the back are the power connector, the RJ-11 telco connector (we don't use this, but it's nice to have available), an RJ-45 Ethernet connector and two RCA phono jacks (audio-in and audio-out). Audio monitoring is available via the telco connection. I would love to have it streamed over IP too.

The ARC Solo has a true HTML5-capable Web GUI built into the unit. The main screen is the "channels" screen. This page is simple and to the point. It is easy to understand and easy to identify problems. I don't need cute representations of meters and gauges and buttons and dials. This is 2015, folks.

There are three columns: one each for "metering," "status" and "commands."

The metering column gives you the meter reading and a colored dot. The colored dot can indicate a "good," "concerning" or an "alarming" situation for each channel. Users program the thresholds of each alert. Users can even select the color. I just used the standard green, yellow and red. Users can also set the unit to send attention notifications notify by email when a channel reaches a certain programmable threshold (low or high).

So far we have deployed about seven units and plan to install about eight more over the next year.

For status, users set the dot color parameters and the status "value" name can change upon condition change. Alarm notifications can also be set for status changes.

The command column is a little different. As explained above, users can set up their own raise versus lower layout. I normally just set all channels for "raise" because many devices aren't strictly on and off.

The "Jet" commands are for scripting items to happen. I haven't used them much with Wyoming Public Radio; however I have used them for pattern and power changes for AM stations. They work well. Burk's AutoPilot is used to create the Jet flowcharts. Users do not need to purchase a license to use this part of AutoPilot, but it would be convenient if Jet flowcharts could be directly set up through the Web GUI.

The "system" area is where all the setup for the unit occurs. I won't go into much detail as this would take up much more space and time than necessary. However, I will say that navigating the menus in this area is straightforward. This area is used for setting up the layout of the channels page, alarm thresholds, email alert setup, firmware upgrades, phone lists, meter calibration, users, time and calendar and much more.

At Wyoming Public Radio, we operate 26 transmit facilities around the state including translators. At transmitter sites we use ARC Solo to control the transmitters and to perform other functions like monitoring rack and room temperatures and checking the voltage coming into the building and coming off the UPS. We can also use the ARC Solo to reboot the exporter, saving a trip to the transmitter site. At translator sites we don't need the power of the ARC Solo, so we take a different approach.

Overall, I have found the ARC Solo to be the perfect unit at WPR sites. So far we have deployed about seven units and plan to install about eight more over the next year.

For information, contact Burk Technology in Massachusetts at (978) 486-0086 or visit www.burk.com.

TECHUPDATE

V-SOFT MICROWAVE-PRO 2 PROVIDES MICROWAVE SIGNAL ANALYSIS TOOLS

Featured Program: Microwave Pro

V-Soft Communications recently released Microwave Pro 2, a microwave frequency allocations and signal analysis program for use with broadcast auxiliary services, Part 101, COALS and CARS projects.

The company says that this release uses the universal frequency coordinator's NSMA methodology, an industry-standard propagation model.

According to V-Sift it is now possible to define a microwave path as a bidirectional system. When a bidirectional path is loaded from the ULS database, it automatically will have the return path loaded and ready for analysis. When examining a bidirectional path, interference in both directions is done simultaneously, saving the user the time of a more tedious analysis. A library of common frequency pairs for various bands is included.

An integrated, polygon-based mapping package is now internal to the program and coordination studies can be mapped out showing some or all of the paths considered in the study. The new point search study allows the user to identify microwave paths on a map that come close to crossing a specific set of geographic coordinates. This can be used in the process of studying the possible impact of a new wind farm or large structures on a planned microwave path.

The program includes an advanced algorithm that will determine an adjusted C/I objective for non-standard situations. This is useful in situations when two path frequencies are not exactly the same and not exactly a full channel apart.

The program also contains a large library of microwave antenna patterns that include antenna gain and bandwidth. Using one of V-Soft terrain databases, Microwave Pro 2 will graph the radio path over terrain profiles, showing Fresnel clearances from the transmitter to the receiver.

For information, contact V-Soft in Iowa at (319) 266-8402 or visit www.v-soft.com.

CONSULTANTS

ACOUSTICS

ANTENNAS/ TOWERS/CABLES

WANT TO SELL

CCA FM8000G 107.9, 50129.9 hrs, like new; 4-Bay Jampro antenna deicers, gd cond; 4-bay Shively circul polar FM antenna, manual. sherry@prtcnet.org, or 859-533-5635.

AUDIO PROCESSING (INCLUDES ON-AIR)

WANT TO BUY

Teletronix LA-2A's, UREI LA-3A's & LA-4's, Fairchild 660's & 670's, any Pultec EQ's & any other old tube compressor/limiters, call after 3PM CST - 214 738-7873 or sixtiesradio@yahoo.com.

AUTOMATION EQUIPMENT

WANT TO SELL

DIY-DJ Version 2.0 is now available. Over 500 copies of DIY-DJ, a Linux based radio automation system, have been distributed and now version 2.0 is available. Voice tracking, join satellite feeds, do unattended sports and remote events, temperature announce, scheduler, automatic cut editing on import, and much more. It's FREE. If you are using version 1.0 or would like to try DIY-DJ, go to krwsfm.com, register and down load your free full version. The only thing we ask is that you let us know if and how you are using the software. Call (406) 679-0527 or email krws@digitaldevelopment.net for a copy today.

MICROPHONES/ HEADPHONES/ SPEAKERS/AMPS

WANT TO SELL

1934 RCA 77A double ribbon microphone, originally used by Arthur Godfrey at WFBR Baltimore. 100% perfect condition. Contact Bill Cook, 719-684-6010.

WANT TO BUY

RCA 77-DX's & 44-BX's, any other RCA ribbon mics, on-air lights, call after 3PM CST, 214 738-7873 or sixtiesradio@yahoo.com.

MISCELLANEOUS

WANT TO SELL

I'm selling between 150 and 200 cassette tapes that consist of old-time radio shows, sports shows, some local New York radio talk shows, etc... Must take entire collection and the price is negotiable. Please call me for details and, my phone number is 925-284-5428.

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

WANT TO BUY

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

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

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

I'm looking for San Francisco radio recordings from the 1920's through the 1980's. For example newscast, talk shows, music shows, live band remotes, etc. Stations like KGO, KFRC, KSFO, KTAB, KDIA, KWBR, KSFX, KOBY, KCBS, KQW, KRE, KTIM, KYA, etc, I will pay for copies... Feel free to call me at 925-284-5428 or you can email me at ronwtamm@yahoo.com.

Looking for a broadcast excerpt of a 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.

DISTRIBUTOR DIRECTORY

The following distributors serving the broadcast industry would be glad to help you with any of your requirements.

RECEIVERS/ TRANSCEIVERS

WANT TO SELL

Free sample SCA decoder. 417-881-1846.

RECORDING & PLAYBACK HARDWARE

WANT TO BUY

Large or small collections of 16" transcriptions or 12" transcriptions, not commercial LPs. Bill Cook, 719-684-6010.

Schnader telescriptions 16 mm musical films produced in the early 50 s. Bill Cook, 719-684-6010.

Standard Short-tune series. Bill Cook, 719-684-6010.

TAX DEDUCTIBLE EQUIPMENT

Donations Needed: All Volunteer, Non-profit Low Power community radios stations need Equipment. Will offer tax deduction letter, You determine donation value, We will pay shipping. Equipment shared between three Wisconsin stations. Looking for Mics, Mixers, field equipment, etc. You name it. Email: Dan@WIECradio.org.

TRANSMITTERS/EXCITERS/TRANSLATORS

EMPLOYMENT

HELP WANTED

E.W. Scripps/Milwaukee has a rare opportunity for a **Chief Engineer** for WTMJ-AM and WKTI-FM. A leader who combines digital experience with solid background in RF, audio and studios. WTMJ-AM is a 50 kw/10 kw DA-2. Please send materials to Tom Langmyer, VP/General Manager (*tom.langmyer@scripps.com*) and visit the Careers page at Scripps.com to apply. EOE

POSITIONS WANTED

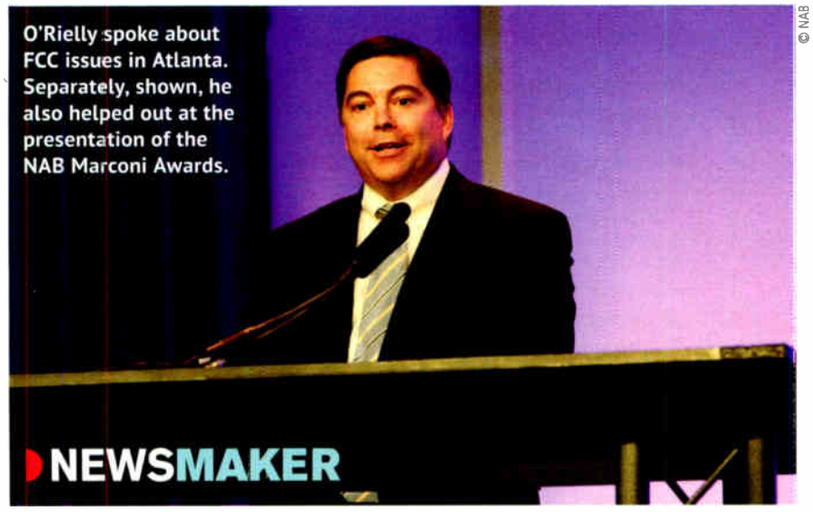
Are you a **small market station** needing a **good nuts & bolts** engineer in the Los Angeles area? I will make your station shine! CET, fully FCC Licensed. Available for Full/Part-time/Contract work. Available immediately. Mitchell Rakoff, 909-446-6820, mitchellrakoff@yahoo.com.

Experienced radio station manager seeks new management opportunity. More than 39 years experience in radio. Willing to relocate. Family-friendly format(s) preferred. Send details about your management opening to: radiogm@hotmail.com.

Extremely knowledgeable and articulate racing writer/talk show host Adam Amick is available for shows, correspondent, features, etc. Check out www.bleacherreport.com for samples Call 214-384-5812 or email: adam@rubbinsracingshow.com.

O'Rielly: We Need Action on Pirates

Commissioner also addressed AM translators and regulatory reform in Radio Show address



O'Rielly spoke about FCC issues in Atlanta. Separately, shown, he also helped out at the presentation of the NAB Marconi Awards.

© NAB

FCC Commissioner Michael O'Rielly spoke at the fall Radio Show in Atlanta. Here are his remarks as prepared for delivery.

Broadcasting in general, and radio in particular, are on everyone's mind at the commission. Topics like pirate radio enforcement, AM revitalization and other reforms to lighten regulatory burdens on the industry are finally on their way to receiving proper attention.

PIRATE RADIO

As many of you know, my thoughts on the subject of pirate radio are pretty clear-cut. I view the protection of licensed spectrum from harmful interference as one of the fundamental obligations of the FCC.

Far from being cute, harmless or even somehow useful, pirate radio represents an attack on the integrity of our airwaves. Broadcasters from many states have been working hard this year to bring much needed attention to this serious problem and provoke a stronger enforcement campaign by the commission. And as a result, we recently committed to develop a comprehensive policy and enforcement approach to pirate radio in collaboration with outside stakeholders.

Such a commitment is all well and good, but without continuing pressure the promised document will remain "in development" and enhanced enforcement efforts in a holding pattern for a long time to come. That's why, last week, I published my own draft policy statement to get the ball rolling and hopefully inspire others to join the dialogue. As summer has turned into fall, we need to make it a priority to come to an agreement before Halloween, or at the latest, Thanksgiving. It's time to put together a game plan and start executing.

The commission should make clear that any unauthorized operation within the FM and AM bands is strictly prohibited, and put into action an enforcement plan designed to disrupt and terminate all pirate radio stations. In order to do this most effectively, the commission will need to attack these operations at their core, through limitations on funding and housing, until no one wants to work with them again.


iStockphoto/gerkoken

Today, pirate operators are being enabled by building owners and managers, product advertisers and political campaigns, concert promoters and venue operators, and many other entities. The vast majority of legitimate companies and associations, however, want nothing to do with facilitating illegal activities. So we need an education component to make it less likely that anyone in the chain knowingly or unknowingly assists pirate radio operations in any capacity.

Moreover, within the realm of our authority, there is a lot we can do to bust up pirate radio stations, including collaborating with federal, state and local law enforcement, and other local authorities. For instance, I doubt most buildings are zoned for broadcasting purposes, certainly not in residential areas with children, so let's work with local building inspection officials. In most instances, these stations are not hiding; we know the exact locations of their operations. Heck, the New York State Broadcasters Association mapped out the illegal stations in New York and New Jersey and all the commission needs to do is show up at those addresses to serve the papers.

Critics have argued that this approach is naïve, and it will not have any impact on pirate radio stations. Until someone puts out a better plan, beyond appeasement or huge increases in enforcement personnel, I suggest we pursue these actions with a willingness to adapt as necessary. At the same time, we need to explore targeted and narrow changes in federal law to expand the commission's authority in this area.

AM RADIO REVITALIZATION

Switching topics, let me turn to the state of AM radio and the commission's efforts to revitalize the band.

I know this is of great interest to many of you, especially since it has been a long time coming. The good news is that the wait is almost over and the commission is preparing to make some decisions; the bad news — and I am only referencing press reports because I am prohibited from sharing the contents of any circulating item — is that not all of the previously proposed fixes are in play. If these reports are accurate, certain people at the commission oppose an AM-only translator window through which AM stations could obtain translators to operate in the FM band.

Before I get too far into substance, it is only appropriate to acknowledge the work of others on this issue since I came to the commission in the middle of the debate. Specifically, we would be nowhere without the leadership of my colleague, Ajit Pai. I like to say that Commissioner Pai knows more about AM radio than I ever will. In addition, I should recognize the work of my other colleague, Commissioner Mignon Clyburn, during her time as acting chair, to get us to this point.

Fundamentally, the question of opening an AM translator window comes down to whether one supports the concept of AM radio and its revitalization as necessary in order to serve as a communications medium for the American people.

In other words, should the commission try to ensure a future for AM radio or should we let nature take its course as this band continues to decline in many markets? Are AM stations financially struggling to the point of threatening their existence? Differing minds could have different opinions, but *if* AM radio deserves help and revitalization via FCC policy changes, *then* broadcasters have always been clear: The AM translator issue is the number one solution, and everything else is a far distant second. So the question is how can it be left out of any package of reforms?

This audience certainly knows the

(continued on page 30)

CORRECTION

The article "NRSC Gets Technical at Fall Radio Show" (Sept. 9 issue) incorrectly referred to the RDS subcommittee instead of the RBDS subcommittee when discussing the work of the RDS Usage Working Group.

O'RIELLY

(continued from page 29)

value and benefits of translators. In this case, an AM translator window could help solve the nighttime shutdowns or reductions in power required of some AM stations. It also would allow some stations to serve a greater portion of their communities. And greater market reach and longer service times mean increased likelihood of achieving financial viability.

The arguments against this proposal have been interesting, to say the least. It's been described by some as a spectrum giveaway, which seems quite ironic given the commission's creation of a spectrum "reserve" to tilt the broadcast incentive auction outcome in favor of certain companies. But in order to figure out whether an AM translator window would be fair, all you have to do is talk to potential competitors. If this were an unwarranted action not needed to save AM radio, outside parties that could be harmed would be expected to complain. Instead, I've talked to a number of radio owners that own FM-only stations and those that own both AM and FM stations. These are the most likely to oppose AM radio getting translators over FM stations or anyone else. Yet, to a person, those owners support an AM-only window. It may not be in their financial interest to do so, but they see the value of AM radio and want to see AM stations succeed. This *should* mean something to the commission.

The bottom line: If there is agreement that it is important to revitalize and maintain an AM broadcast band, and set this as a public policy goal, we should take efficient and effective action. I am not sure it is helpful to implement a list of smaller measures that will have only so much value in the scheme of things, while rejecting an idea that many argue is really necessary.

REGULATORY REFORM

Some of you may have heard me speak at other broadcaster events this year about a shift in emphasis that has the potential to supercharge your efforts to improve the regulatory environment for your businesses.

In a vast, abundant marketplace with ever-expanding options for audio and video content, broadcasters must constantly change to compete, and as this process plays out it is only fair that your obligations be constantly revisited as well. With this strategic adjustment, it will be possible to move beyond calls for regulatory parity based on more burdens for various players, and center instead on a model of fewer burdens for all.

There are so many elements of the regulatory landscape that have completely outlived their utility in today's hypercompetitive entertainment world, and you shouldn't have to take them as given. Recent success in modernizing the contest disclosure rules shows what can be accomplished with the right focus. We have seen that common sense really can eventually win the day, and by sticking with this approach I think it will be possible to catalyze many more badly-needed reforms in areas such as sponsorship ID, EEO compliance in recruiting, and — who knows? — maybe even the positively archaic media ownership rules.

As always, I greatly appreciate your willingness to work with me, and I welcome your thoughts and input on the challenges you are facing and ways I can help. As the commission moves forward on these and other policy initiatives, your continued engagement will help shape the outcome in important ways.

READER'S FORUM

RADIO CAROLINE

Thank you for the article on Radio Caroline ("The Ocean Is Cruel to Broadcasters," Sept. 1 issue).

I was stationed in Bamberg, Germany, in the U.S. Army in the mid-1960s.

A lot of G.I.s listened to that sig, better than American Forces Network.

Fred C. Shetler, K3VMS
Retired Broadcaster
Port Royal, Pa.


18 RADIOWORLD | radioworld.com

FEATURES

The Ocean Is Cruel to Broadcasters

One businessman recounts his experiences working with Radio Nord and Radio Caroline

ROOTS OF RADIO

BY MARK PERSONS

In an earlier issue we related a story about the career of Dick Witkowski, who has been in the business for 58 years as on-air talent, salesman, station owner and consultant (radioworld.com, keyword Witkowski). Here we look at another colorful part of his history.

Offshore broadcasting is not in Dick Witkowski's blood, but he did have no excuse when he became involved. Witkowski lived two streets over from radio engineer Glen Callison in Dallas, Texas. They were friends when Callison teamed on with an offshore broadcaster. One thing led to another, ultimately resulting in the sale of some broadcast equipment.

The Radio Caroline ship is shown. Note its 300-foot tower.

hoisted onto an abandoned World War II gun platform.

Naturally, Witkowski had to find yet another transmitter for them. Even with

Stockholm, Sweden, in the Baltic Sea. It took to the air in 1961 after several incidents of storm damage at sea. In 1962, only 14 months after first signing on, the ship lost its anchor in a storm and had put to port for more repairs, and at that time, a new Swedish law required a final shutdown.

MORE OFFSHORE AAAARGH

Find further information at www.radiocaroline.co.uk. RW has also reported on an interesting Radio Caroline smartphone app (see radioworld.com, keyword Shiver).

One challenge of this work, Witkowski says, was that O'Rahilly was concerned their telephone conversations might be overheard by authorities. To confuse potential eavesdroppers, O'Rahilly referred to transmitters as "trucks." For example, he wanted a truck that would "go 50 miles per hour," translating to 50 kW. Witkowski complied with this request and the station's power was increased to 50 kW, serving 20 million people. Radio Caroline had more listeners in 1964 than the three British Broadcasting Corp. networks combined, Witkowski remembers.

ROUND TWO

Caroline's anchor chain broke in 1980, and the ship sank, ruining all the equipment aboard. Radio engineer and part-time announcer Peter "Chicago" Murtha was sent to the United States to pick up a replacement transmitter, again supplied by Witkowski.

It was a 50 kW RCA Ampliphase, which could modulate to 150 percent positive. This was a real plus to get a loud sound on the dial, Witkowski notes. The new Radio Caroline ship was equipped with a 300-foot tower, taller than the ship was long. Tons of ballast were used near the ship's keel to counterbalance and stabilize the pendulum effect of the tower. Radio Caroline was back on the air in 1983.

Dick Witkowski

50 kW RCA Ampliphase transmitter on Caroline

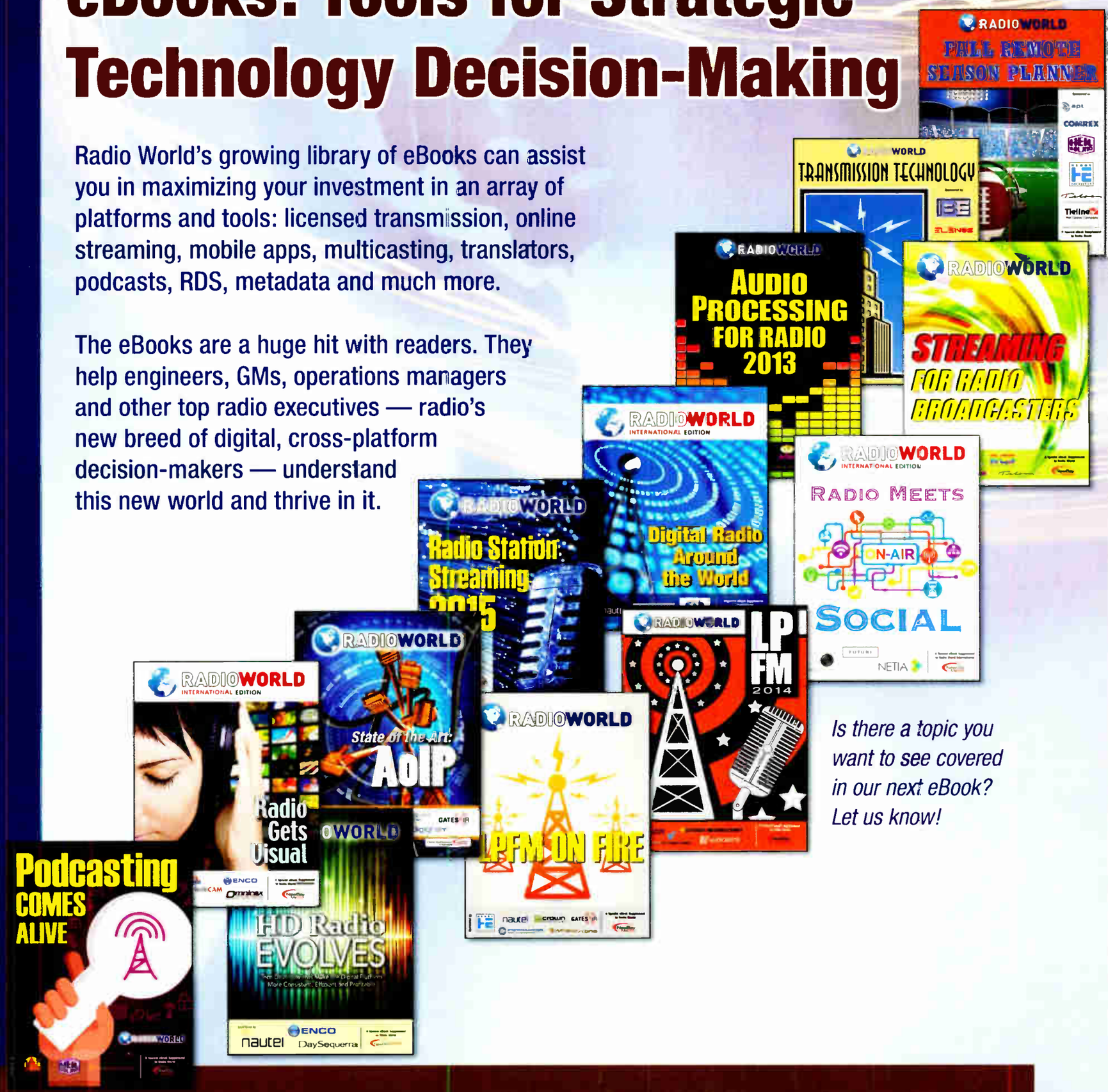
ADVERTISER INDEX

This listing is provided for the convenience of our readers. Radio World assumes no liability for inaccuracy.

eBooks: Tools for Strategic Technology Decision-Making

Radio World's growing library of eBooks can assist you in maximizing your investment in an array of platforms and tools: licensed transmission, online streaming, mobile apps, multicasting, translators, podcasts, RDS, metadata and much more.

The eBooks are a huge hit with readers. They help engineers, GMs, operations managers and other top radio executives — radio's new breed of digital, cross-platform decision-makers — understand this new world and thrive in it.



Is there a topic you want to see covered in our next eBook? Let us know!

Visit radioworld.com/ebooks

THE INTELLIGENT NETWORK

Finding YOUR Sweet Spot with FM-55 is Easier Than Unwrapping a Candy Bar

We've engineered FM-55 to make it easy for you to craft your on-air sound to be clean, loud, and sweet - no matter what your format. FM-55 comes with presets created by our broadcast audio perfectionists to cover virtually every type of programming. Just dial it up and instantly your sound gets a sonic facelift – one your listeners will love. Like giving candy to a, well, you get the picture...

Wanna tweak? We give you a toolbox that lets you get at every parameter in FM-55 to take control and sculpt the finest sound you can - YOUR signature sound. Best part is, FM-55 is exceptionally cost effective/cost competitive – the fastest growing choice in under-$3K FM processors! Give your listeners pure ear candy – contact us today and get FM-55 for your airchain now.

Nutrition Facts

Intelligent iAGC	Smart Stereo Enhancement	Bass Management System 3.0	Multipath Control	Wheatstone® baseband192	WheatNet-IP Compatible
Produces a consistent, spectrally-balanced sound regardless of density variations in incoming source material. Essential for different media formats.	Specialized automatic level and spectral management algorithms provide a wide but extremely stable 'on-air' stereo image.	Circumvents bass-related distortion. Increased depth, feel, and clarity of bass impact without affecting mid and high frequency content.	Mitigates market and terrain-specific multipath behavior, reducing the problem of multipath-triggered receiver-induced stereo blend.	A single AES/EBU cable between the processor and a current solid-state FM transmitter carries the digital baseband signal for exceptionally clean sound.	Control the FM-55 and stream its audio to and from anywhere in the WheatNet-IP audio network.

MAKING THE ABSOLUTE BEST IN RADIO FOR OVER 35 YEARS

RULE RADIO NOW

Wheatstone
BROADCAST AUDIO PERFECTIONISTS

phone 1.252.638.7000 | wheatstone.com | sales@wheatstone.com