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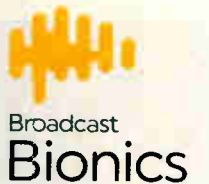
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**TWR's Bonaire Facility Gets 440,000 Watt Makeover** page 6



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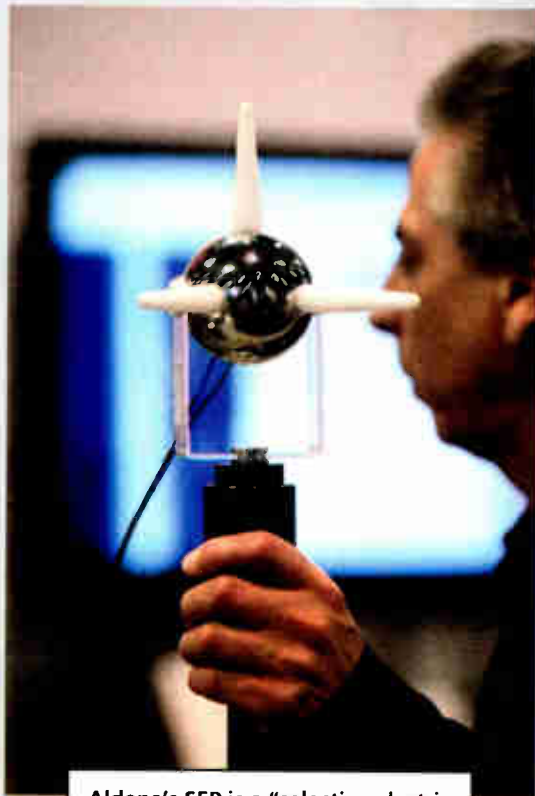
Radio World (ISSN: 0274-8541) is published bi-weekly with additional issues in February, April, June, August, October and December by NewBay Media, LLC, 28 East 28th Street, 12th Floor, New York, NY 10016. Phone: (703) 852-4600, Fax: (703) 852-4583. Periodicals postage rates are paid at New York, NY 10079 and additional mailing offices. POSTMASTER: Send address changes to Radio World, P.O. Box 282, Lowell, MA 01853.

# NAB Show in Pictures

Chairman Ajit Pai talks to attendees at a reception during NAB Show. He highlighted his efforts to modernize and streamline regulations, announced a proposal to address translator interference situations and gave an accounting of recent pirate radio enforcement.



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Robin Roberts signs a book at the NAB Bookstore. She received the NAB Distinguished Service Award.

## FROM THE EDITOR Paul McLane

We honored Larry Wilkins, below center, with the Radio World Excellence in Engineering Award for 2017-18. Radio World's John Casey is at left with us. We chose Larry in appreciation of his lifelong work as an engineer; his commitment to ongoing technical education; his service to organizations like the Society of Broadcast Engineers and the Alabama Broadcasters Association; his work in EAS, Amber Alerts and the Alternative Broadcast Inspection Program; and for being a true friend to our industry.



John Staley Photography



Jim Peck

Larry is welcomed into the circle of winners of the Radio World Excellence in Engineering Award by past recipients, from left, Clay Freinwald (2007), Jeff Littlejohn (2008) and Wayne Pecena (2014); and from right, John Lyons (2006) and Gary Kline (2009). I'm behind to the right.

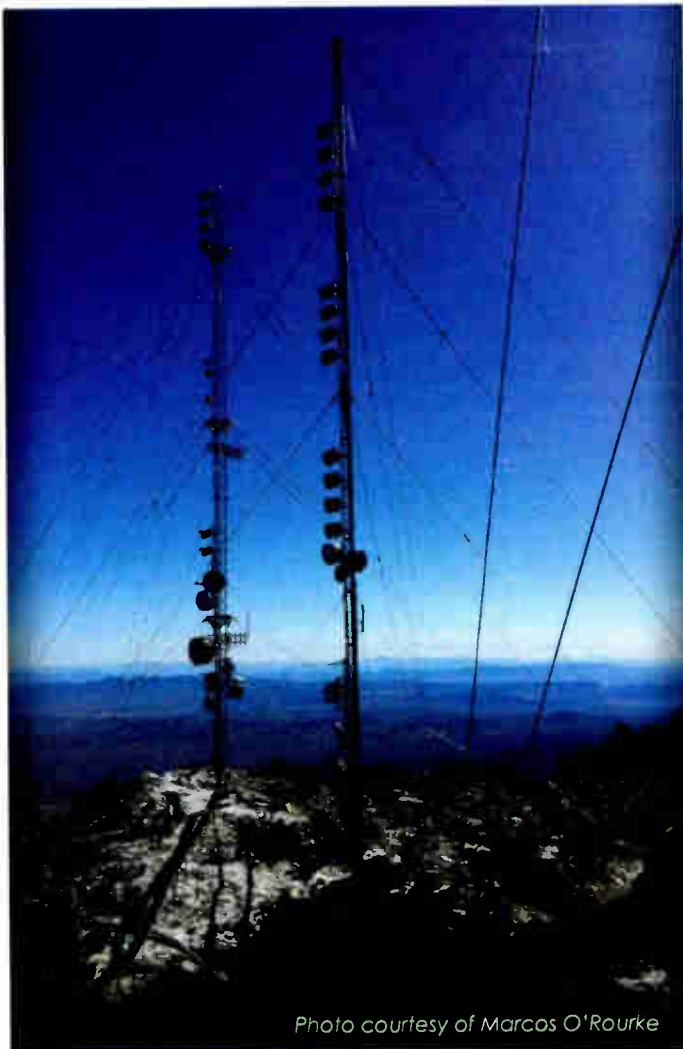


Photo courtesy of Marcos O'Rourke

## THE FASTEST WAY TO THE TOP

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# THIS ISSUE

MAY 9, 2018

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Takashi Kouzuma eyes a board in the Calrec Audio booth. U.K.-based Calrec introduced Type R, a modular, expandable, IP-based radio system.

Jim Peck

FCC Commissioner Jessica Rosenworcel blasted those in "the highest level of our government" who use the fake news label to denounce real content. In a session discussing press freedom, she expressed horror at how the derisive term has made its way into the vernacular — "how this reflexive put-down has become an efficient way to dismiss an argument; how it has complicated what we believe is true and false; and how that has chilling consequences for those who seek to report — without fear or favor — on the news we need to know."



Jim Peck

# ON TIME

On Time  
On Time  
On Time  
On Time

## All the time.

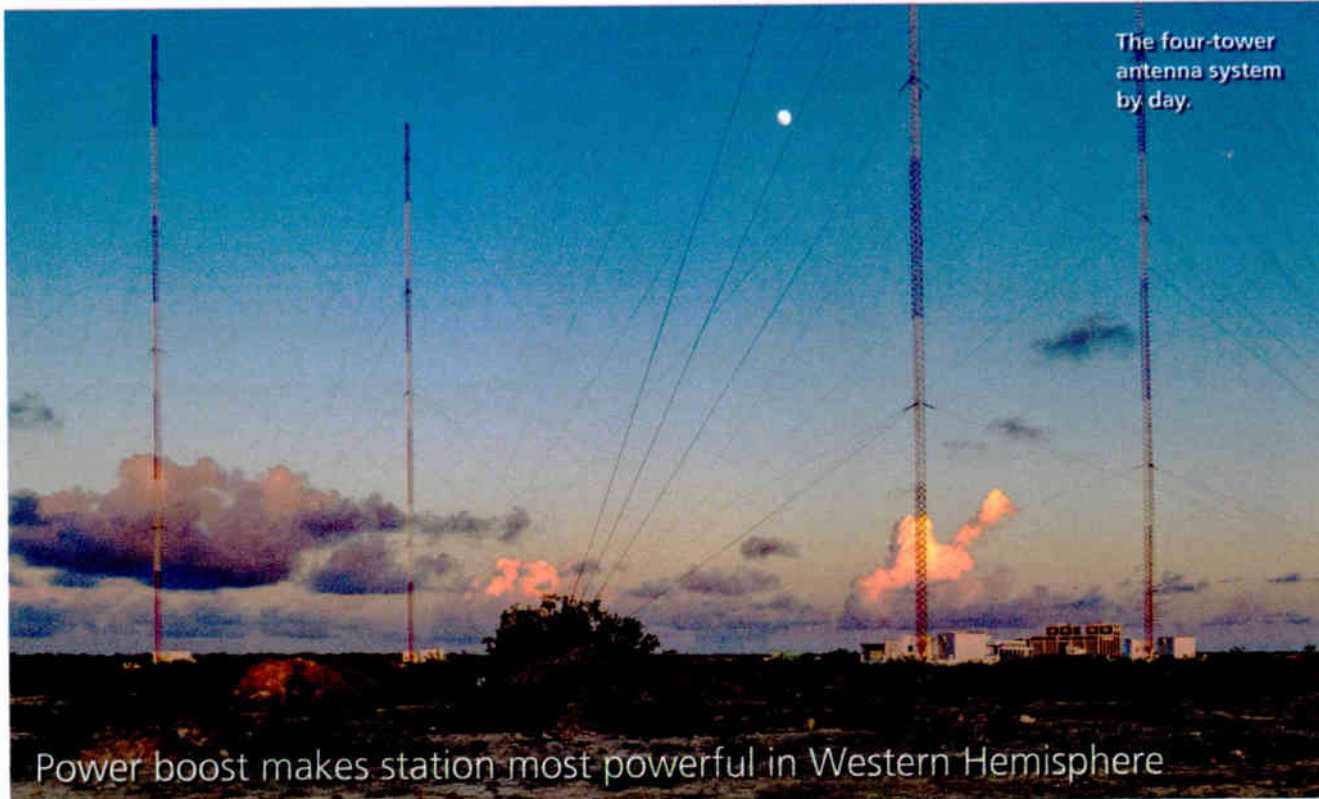
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# TWR's Bonaire Facility Gets 440,000 Watt Makeover



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said Libby. "We had supporters from the U.S., Europe and Latin America. Actually, about 10 percent of the donations came from Latin America, which is remarkable when you look at the economy in many of these countries."

"I had people tell me that we would never accomplish it; it will never happen. But it did happen. It's an amazing story — literally almost one miracle right after another."

Libby noted that the power boost would not likely have been possible without the advances that have been made in broadcast technology, though, citing the greater than 90 percent efficiency of the Nautel solid-state transmitter selected for the project, and also the ability to operate with a much smaller staff.

"With the efficiencies now, you're able to do it at a cost that is doable at that kind of power level," he said. "Technology has moved forward. Back in the day TWR had close to 100 people doing live radio out of Bonaire. With today's technology you're able to do it in a more cost-effective and labor-effective environment."

In addition to Nautel, Libby lauded the efforts of Tom King and Kintronic Labs in achieving the upgrade. "Kintronic did a superb job of creating the antenna solution," he said.

## PREPARING FOR THE POWER BOOST

King said the project was done in phases as funding became available.

"It started with the construction of new tuning houses at the tower bases, and they also had to prepare a room in the transmitter building where the old transmitter had been," he said. "We started work on the RF system in early 2017, and this was shipped and installed and they went on the air with it in July, using their existing 100 kW transmitter."

The next step was the ordering of the Nautel transmitter, which occurred in spring of 2017. Delivery took place in December, with installation following in the transmitter building space vacated by the removal of the tube-type big rig.

(continued on page 8)

BY JAMES E. O'NEAL

In an era when most operators are reluctant to spend even very modest sums maintaining AM broadcast facilities, a southern Caribbean Island medium-wave broadcaster has "gone for the gold," rebuilding its transmission facility and boosting power nearly five-fold from 100 kW to 440 kW.

The rebuild was more of a "second coming" for the 800 kHz facility, located in Bonaire, an island that is part of The Netherlands, situated about 100 miles off the Venezuelan coast. The station is owned and operated by Trans World Radio, one of the world's largest evangelical media organizations.

According to Lauren Libby, TWR's president and CEO, the station went

on the air in 1963 at the 500,000-Watt level, but costs associated with operating and maintaining a high-power tube-type rig eventually forced a cutback to 100 kW in 1998.

He explained that the decision to boost the station's power to near its original level was made a few years ago when the need was recognized for a large regional station in Latin America to supplement the small FM operations on the air in that region.

"We also had a lot of people in Cuba asking us if we could increase the



Lauren Libby, TWR

power to cover the island with Christian programming," said Libby. "One of the primary motivations was to bring hope and encouragement to Cuba, Venezuela [and] to the whole Latin American region — even down into Brazil — to provide quality Christian programming. Its purpose is basically to encourage people, and to give hope in a world where hope is a pretty precious commodity. That's why we increased the power."

The superpower move didn't happen overnight, though.

"This was almost a \$4 million project and it began about four years ago,"



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# BONAIRE

(continued from page 6)

"I went down to the island with my youngest son in January to do final pattern adjustments," said King. "They went to full-power operations and had a dedication ceremony on the 30th of January."

The new transmitter feeds a previously-installed multi-pattern directional antenna system, allowing the station to target specific audiences during different times of day.

"In 1999, we implemented a totally new antenna array for them," King said. "It consisted of four 450-foot towers in a 'box' configuration, with the long side of the array going east-west to produce a broadside pattern going north and south. They also have a separate 'Caribbean' pattern with one tower driven and the others acting as parasitic elements."

Hands-down, at its current power level approaching half a million Watts the facility is now the most powerful medium-wave outlet in the Western Hemisphere.

Asked why the originally licensed 500,000 Watt operating power wasn't replicated, Wendell Lonergan, head of broadcast sales at Nautel, said that with off-the-shelf hardware, the medi-



Under a starry nighttime sky.

Courtesy TWR



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The new transmitter and associated equipment.

um-wave transmitter coming closest to delivering the original 500 kW wallop is the NX400 model.

"The NX400 is rated at 400 kW," said Lonergan. "However, all of our transmitters have a 10 percent overhead, and TWR decided to go with this model. Otherwise, they would have had to purchase two units and combine them, which would be considerably more expensive. This is a group that

runs on donations and they have to have a critical eye as to operating costs. With a transmitter that's more than 90 percent efficient and running MDCL (modulation-dependent carrier level), this filled the bill and they're very happy with it."

Even so, the TWR Bonaire station is the island electric utility's single biggest customer.

(continued on page 11)



# More than Just an IP Codec

## Introducing Record and Playback on the ViA



The screenshot shows the ViA mobile application interface. At the top, it displays the time 'May 10th 10:43 AM' and signal strength indicators for 4G and 20% battery. The main menu includes 'Record', 'Record Mix', and 'Manage Recordings'. A recording progress bar is visible with a timer at '00:00:18' and 'Space Remaining: 2.3 GB'. Below the screen, a large circular graphic is divided into three sections: a green top section labeled 'Stream', a red bottom-left section labeled 'Rec', and a blue bottom-right section labeled 'Play'. A central music note icon is positioned in the white space between these sections.

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# TagStation Builds a Radio Attribution Ecosystem

Industry initiative seeks to provide a standard around which OTA broadcasters can coalesce

## NEWSMAKER

BY PAUL McLANE

Paul Brenner is among industry leaders who believe radio needs an “end-to-end, industry-standard data attribution platform.” He and his colleagues at TagStation and NextRadio are trying to build just that; and they spent much of the recent NAB Show telling others about it.

TagStation is the arm of Emmis Communications that developed the NextRadio app, which combines local FM radio reception on smartphones with internet connectivity. But TagStation is about more than FM chips in phones; and now it’s working hard to position its Dial Report attribution platform — which uses user data from NextRadio as well as other station apps — to play a crucial role in measuring digital audiences for terrestrial stations.

The company describes Dial Report, which was introduced last year, as the “only first-party attribution and listener intelligence platform measuring the performance of radio.” It provides analytics and insights about advertisers’ on-air campaigns by measuring results and listener behavior, giving location-based data, demographics and radio listening data within 48 hours of spots airing. Furthering this effort, TagStation in April announced a collaboration with Ad-ID (see sidebar).

We checked back in with NextRadio CEO/President Paul Brenner.

**Radio World:** You said it’s important for the radio industry to focus on “fighting back against platforms rather than chasing brand-based protectionism.” Can you explain?

**Paul Brenner:** Radio needs a common industry-supported metadata content and reporting solution to provide the same level of detail about consumer behavior and campaign performance that platforms like digital, TV and out-of-home advertising capture. In other

words, selling audience is the innovation needed, and a common platform is a necessary part of the solution. A shift towards census-based, data-driven programming and selling has to occur if OTA radio wants to fight for share of advertising dollars and compete with non-broadcaster platforms now and in the future.

aligned with radio measurement to make that audience even more valuable.

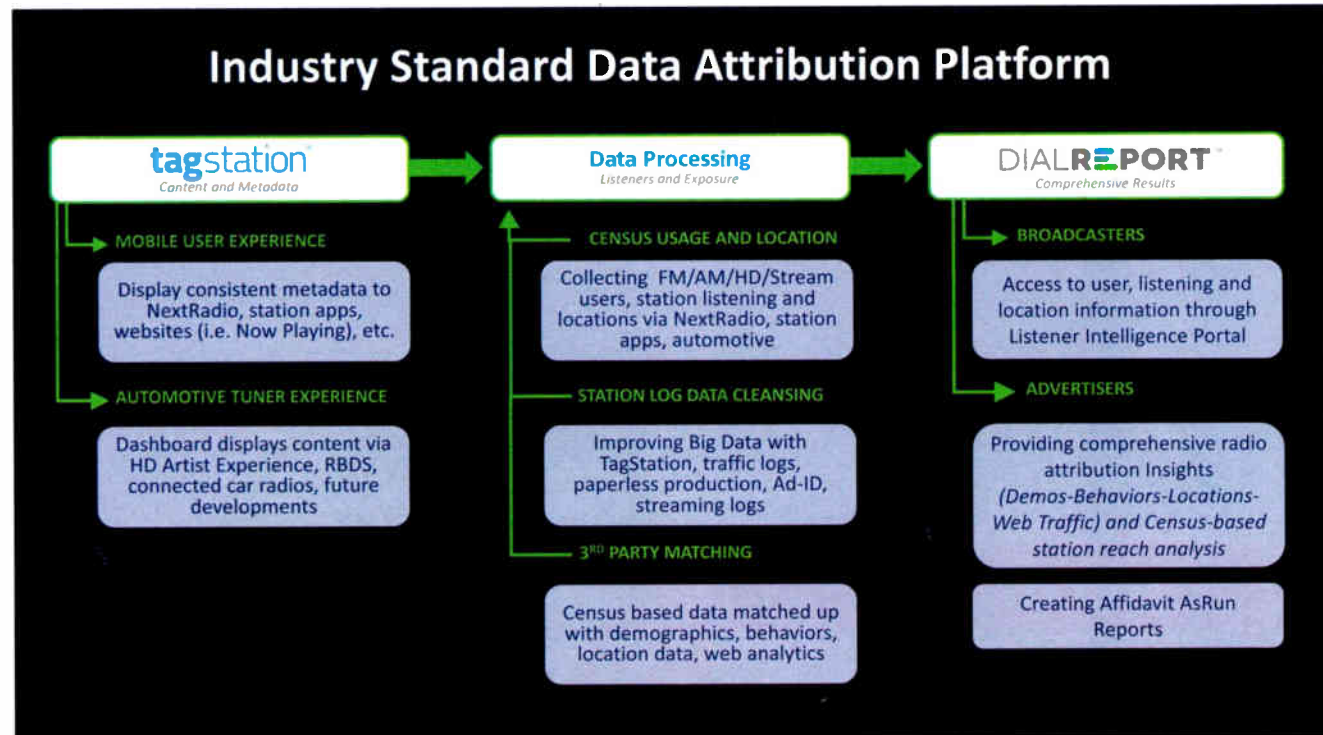
The role broadcasters can play is to work towards a unified system and strive for better processes. Metadata is the origin of offering insights into how radio drives consumer action, and how that correlates to the advertiser’s radio buy, down to the creative level. An end-to-end industry-standard data attribution platform could facilitate a consistent method for inputting radio and advertising content. Consistent and

accurate tagging for over-the-air advertising is a critical first step towards achieving the granular level reporting that data attribution provides.

**RW:** Presumably Emmis wants NextRadio and Tagstation to be at the center of any such data attribution system. Why should the broader industry consider taking such an Emmis-based approach?

**Brenner:** A significant challenge any industry faces when working to provide

(continued on page 12)

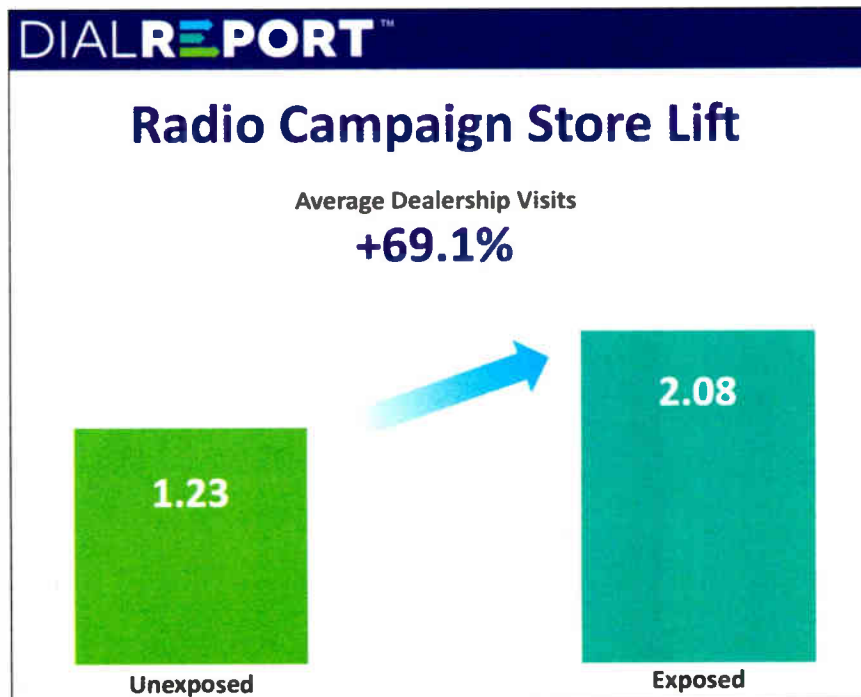


The envisioned ecosystem.

**RW:** Why do we need an industry-standard data attribution platform and what role should one play?

**Brenner:** Post-campaign affidavits and AsRun logs compared back to the initial ratings-based radio investments are no longer sufficient for proving radio works. Our team hears that firsthand from advertisers and agencies. There is even further proof when you look at how advertisers are shifting dollars away from radio towards attribution-enabled platforms selling the value of their audience and how marketing investments are more targeted to the desired outcome.

Historical radio looks like this: Sell airtime based on ratings, reach and frequency. Build packages where digital or NTR are add-ons or “value adds” to grow the investment or affect the results. Radio has a large enough and broad enough audience that selling airtime based on a much more detailed, specific, census-based audience should be the planning exercise. Digital measurement should be



This graphic from TagStation illustrates one measure in the data attribution platform; it shows average dealership visits almost 70 percent higher among those exposed to a dealership’s campaign.



# BONAIRE

(continued from page 8)

“We used to have our own diesel generators when we were running both the 500,000 Watt medium-wave transmitter, as well as operating shortwave transmitters,” said Libby, explaining that the station’s power plant had been taken out of service several years ago after the tube-type rig was retired and shortwave broadcasting from the island ceased.

“We are now looking at putting in a standby generator,” he remarked.

## “WE DID IT OURSELVES”

One of the more unusual aspects of the transmitter installation is that the station’s operators, assisted by volunteers, did the work themselves.

“This is a bit unusual for a transmitter of this size,” said Nautel’s Lonergan. “However, they had witnessed the NX100 100 kW transmitter installation and had come [to Nautel’s facility] for training on the NX400. I was at the site later and it was a ‘world class’ installation.”

Lonergan said the only real glitch encountered in the project was in getting the transmitter to the site in time for the planned dedication. “Bonaire is not exactly the shipping center of the universe. We had to put our logistics people into overdrive to make the promised delivery date on time, but they did it.”

The NX400 transmitter comprises a power supply cabinet weighing upwards of 5,000 pounds, along with four other units with combined weights of 5,200 pounds. The transmitter was shipped in eight crates from Nautel’s Nova Scotia, Canada facility to Bonaire in a single freight container.

## NOT JUST FOR SPREADING THE GOSPEL

TWR’s Libby said enhanced power and coverage not only help spread Christian programming to a wide area but are useful in other ways.

“When you get into an emergency situation, there’s nothing that beats medium-wave,” he said. “For instance, when the hurricanes came across the Upper Antilles we were on the air every night with weather, encouraging [those affected] and talking to people throughout the region live on the air. The Netherland Antilles government says whenever there’s a disaster, just tune to 800 AM because that’s where you can get information. That was one of the reasons that we did what we did [with respect to the power increase] — to allow the Dutch government to be able to talk to the Caribbean all the way from Saba to Aruba. You need this kind of power in the daytime if you’re going to do that.”

Trans World Radio is one of the larg-



Courtesy TWR

Longtime TWR missionary Brand Swanson, assistant director and program manager of the ministry’s “Shine 800” AM Bonaire station.

est media organizations in the world, based on the number of countries its signals reach and the number of languages broadcast on a daily basis. Libby noted that they broadcast to 190 countries in more than 230 languages every day, and overall coverage and language support exceed that of the BBC World Service and the Voice of America.

James O’Neal is a frequent Radio World contributor; he wrote recently about Alfred Carlton Gilbert, the “Erector Set” man and radio pioneer. Find past articles at radioworld.com, keyword O’Neal.

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## ATTRIBUTION

(continued from page 10)

accurate reporting and data attribution is scale. Therefore, radio must admit that not one single broadcast group alone can deliver the scale needed to compete with non-broadcaster platforms with attribution. We've also recognized that radio stations invest a lot of time and money into their own streaming apps and other playout systems. Both of these points were key factors that motivated us to introduce individual station apps into our offerings.

**A shift towards census-based, data-driven programming and selling has to occur if OTA radio wants to fight for share of advertising dollars and compete with non-broadcaster platforms now and in the future.**

— Paul Brenner

Individual station apps and websites can use all TagStation metadata, thereby utilizing the cloud platform to power metadata and album art, not only in the NextRadio app but in the car dash and other station-owned apps time-aligned with integrated playout systems. A single-source content management system with multi-channel distribution capabilities is not only convenient and more cost-effective for operational staff, but it also reduces the element of human error and increases the accuracy and reliability of radio performance and campaign attribution.

We have worked tirelessly to develop an inclusive end-to-end radio metadata content management service and reporting solution for both commercial and non-commercial broadcasters. This solution was built by broadcasters for broad-



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## COLLABORATION WITH AD-ID

In April, TagStation announced a collaboration with Ad-ID, a joint venture of the American Association of Advertising Agencies ("4As") and the ANA, the Association of National Advertisers.

Ad-ID is a standard for identifying advertising assets across all media platforms. It's described as a secure, web-based central source for the registration of unique IDs that ensures all assets are delivered correctly across all media.

Dial Report Senior VP of Revenue Generation Lisa Pike said TagStation is working with some Ad-ID customers as part of their data process to measure performance of radio ad campaigns. "It is clear that the radio industry would benefit from having the same tracking standards that the TV and digital industries enjoy today," she said in the announcement. Harold Geller, executive director of Ad-ID, said the organizations share the goal of improving

casters, starting with and maintaining our roots in valuing equality and fairness for all broadcasters and leadership around the FM chip smartphone project.

*RW: Where do we stand with your efforts to get more phone makers, including Apple, to activate FM chips in their devices?*

**Brenner:** Android smartphone makers supporting FM chips and NextRadio currently stands in the mid-90 percents of all new phones sold. FM-enabled Android phones are at saturation with development. The key going forward with Android is to show that consumers

will use the technology so the handset makers stay friendly. Use it or lose it.

With Apple, our focus has been on support for CarPlay and a prototype with FM-enabled earbuds that Blackloud announced at the NAB Show, and we have a NextRadio non-production version that supports those earbuds. If the NAB would like to support that solution, then we will move forward. Until then we will continue with the streaming version of NextRadio for iOS and focus on CarPlay in the future.

*RW: What other questions were you asked by radio industry executives and*

radio's ability to track and measure its performance.

The groups argue that spot tracking can be impeded if there are gaps or incomplete information due to inconsistent use of older advertising asset codes within station trafficking. Dial Report measures radio performance directly from radio station playout systems; integrating Ad-ID codes directly into playout systems, the company said, will enable better tracking.

"The first and most valuable step in our data attribution process is to verify that all spots belonging to a brand are identified correctly across our entire network of broadcasters," said Ben Husmann, SVP of product development for Dial Report. "Dial Report uses the Ad-ID API to fill in the blanks and expand spot metadata to include accurate and complete information such as advertiser, product, copy points and more."

As part of the collaboration, the companies plan a webinar on Wednesday, May 23; info is at <https://tinyurl.com/rw-dialweb>.

*technologists at the show?*

**Brenner:** Data attribution and our end-to-end platform were the main story lines at the spring show. TagStation, NextRadio, individual station apps, websites and auto data inside the Dial Report are all major components that people did not fully realize given so much attention historically placed on FM chip and NextRadio. The consistent questions from radio industry executives, both operators and vendors, was, "How can we get more involved?" The vision was clear and people jumped into the conversation with great interest.

## IN CASE YOU MISSED IT

A sampling of recent headlines delivered to Radio World readers in their free daily NewsBytes e-newsletter. (Click the Subscribe tab at radioworld.com, then Newsletters.)

### ► The House Passes Digital Music Licensing Package

Music Modernization Act headed to the Senate — with no changes foreseen in the performance royalty situation for broadcast radio.

### ► Pai Tells Broadcasters "More Modernization on the Way"

The chairman shared a proposal to update rules on interference. NAB has suggested that the FCC allow translators to resolve interference by moving to any available frequency using a minor mod and require a minimum number of interference complaints to support interference claims.

### ► SECCs Must Provide Updated Multilingual EAS Activity to the FCC

New guidance is available to SECCs on how best to prepare and file info on multilingual EAS activity.

### ► Engineering Legend Clyde Haehnle Dies at 95

In 1944 he was part of the team at Crosley that designed and built the Voice of America Bethany, Ohio, transmitting station that operated for five decades.

### ► Radio Engineer JC Carollo Passes Away at 72

JC, as he was known to colleagues and friends, was the former director of engineering at WGN(AM) in Chicago.

### ► It's Official — Clyburn Leaving Commission

Following months of speculation, Clyburn, one of the two seated Democrats on the panel, announced her plans to step down. Geoffrey Starks' name has been floated.

### ► John David to Receive National Radio Award

NAB President/CEO Gordon Smith said, "The entire broadcast radio community has benefitted enormously over the years from John David's dedication, knowledge and his one-of-a-kind sense of humor. ... He is the consummate radio broadcaster and his service to radio makes him well-deserving of this honor."

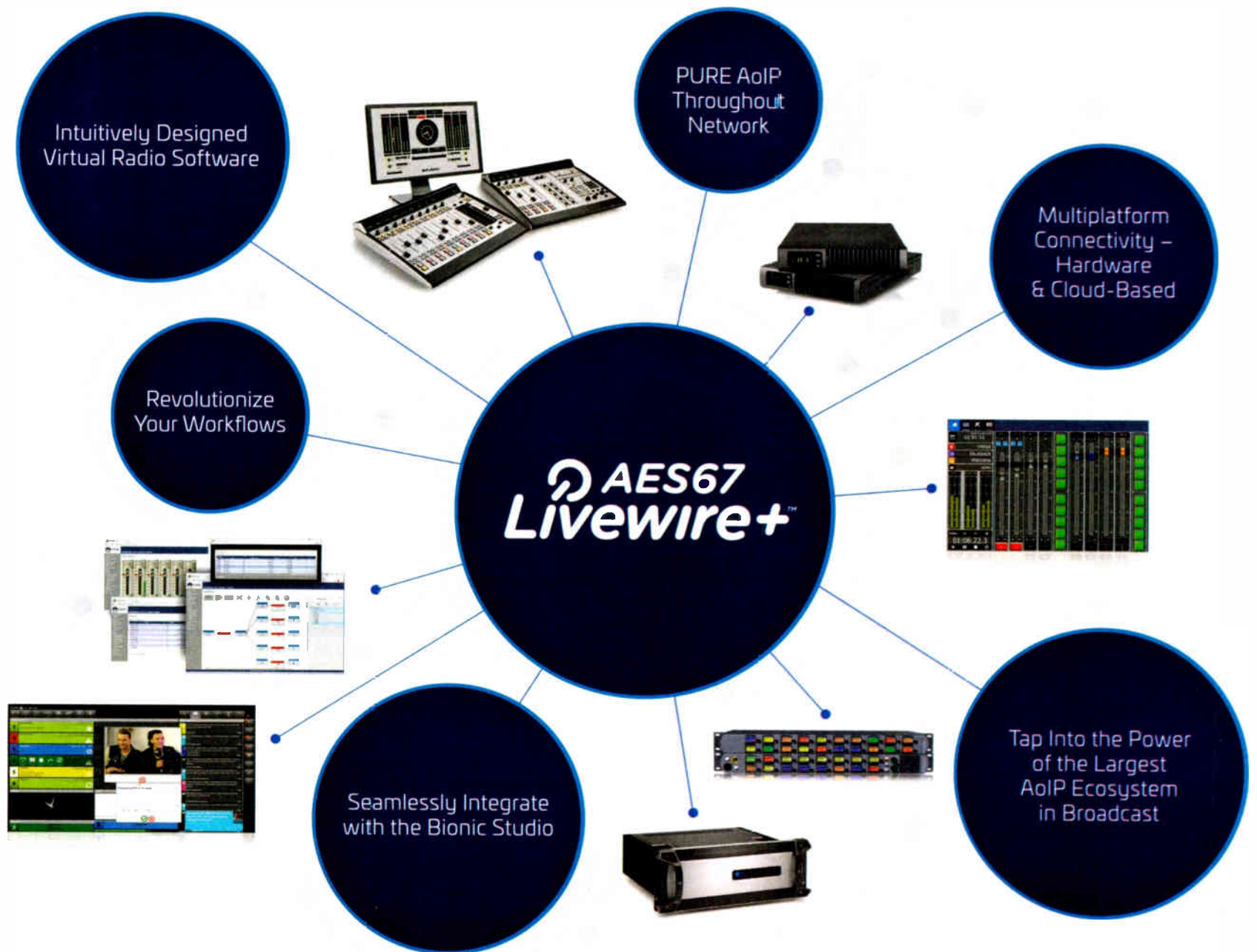
### ► FCC Releases Results of 2017 EAS Test

Some 96 percent of all test participants successfully received the test alert, and about 92 percent retransmitted it. Radio stations performed even a bit better.

### ► Xperi Announces Two Connected Car Partnerships

The parent of DTS and HD Radio has agreements with streaming radio content aggregator Radioplayer Worldwide and with broadcast software company RCS.

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# Inspect Your Transmitter Site This Spring



From weeds to cell towers, problems may have cropped up since last time you visited

Fig. 1: Your transmitter site inspection begins before you arrive at the building.

## WORKBENCH

by John Bisset

Email Workbench tips to johnpbisset@gmail.com

Working more efficiently is a must in this day of multiple studios and transmitter sites — especially when you are the sole engineer. So how about a basic checklist to follow as you visit your sites?

As you approach the AM transmitter site, keep an eye out for new construction that could affect your pattern (Fig. 2).

When you arrive, inspect your driveway chain, gate, fencing and locks to maintain security. Be sure to lubricate locks at least twice a year, quarterly in

harsher environments. Work the mechanism to ensure that the lubricant coats internal parts.

If appropriate, install an outdoor “wildlife” camera near the entrance. These cameras are motion-activated, and some have the ability to capture images at night. If you have an IP link back to the studio, consider a “live” IP camera to surveil the site.

Before entering the building, take a few minutes to walk around the outside. Check for vandalism: broken floodlights, holes in the building wall, graffiti or other problems. Notify the sheriff or police of any discoveries. A police report may be needed should the damage prompt an insurance claim. Be sure to snap pic-

tures of the damage/vandalism with your phone’s camera.

If your building circulates outside air, check the air intakes. Keep them clear of weeds, debris and nesting insects. In a closed air system, inspect the air conditioning. This includes filters and belts on the air handlers. Problems with

If your site has a generator, open the enclosure and check for leaking fluids. Of particular importance are the coolant and oil levels. Are the battery terminals free of corrosion? Look around inside the enclosure, checking for anything unusual including loose hardware or belts and rodent or insect infestation.

If all looks good, run a test of the generator under load, noting and recording all the engine readings. A load test



Fig. 2: AM engineers need to keep an eye out for new tower construction. Cell towers can seem to appear overnight!

weeds growing around the building can be eliminated by spreading a weed barrier or heavy black plastic along the perimeter of the building, then covering the plastic with crushed stone. This also deters snakes and rodents, which like the camouflage of grass and weeds.

is necessary because the generator may run fine until the load of the transmitter is connected. Better to find out now than when you need it.

If you are not familiar with the transmitter site generator, check the rate of fuel consumption under load. Determine your fuel tank capacity and calculate how often the tank must be filled during an emergency. You’ll save stress later if you take the time to determine this information now. Also consider how fuel will be delivered. Has your generator been professionally serviced? You’ll find that money well spent; not only can a service technician teach you, but should a generator fail during an emergency, you’ll already have a relationship established with a service company.

What else should we look for as we drive in and walk around our property? Email me your ideas. In the next issue, we’ll discuss some things to check inside the building.

We live in a world full of computers; the radio facility is no exception. With so many in use — especially at clustered stations — it’s important to keep track of your hardware.

Tech experts with whom I’ve spoken generally agree that computers should be replaced after five years or so. H&R

(continued on page 16)

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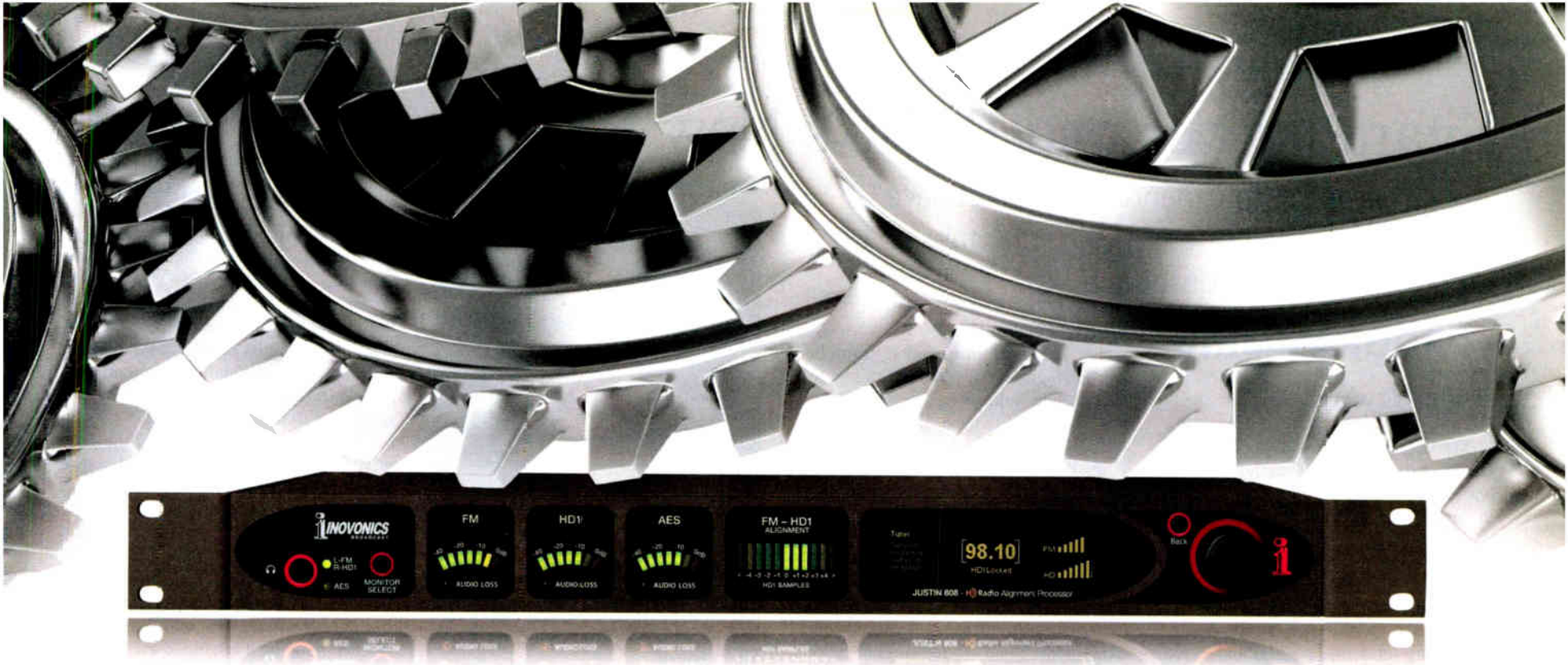
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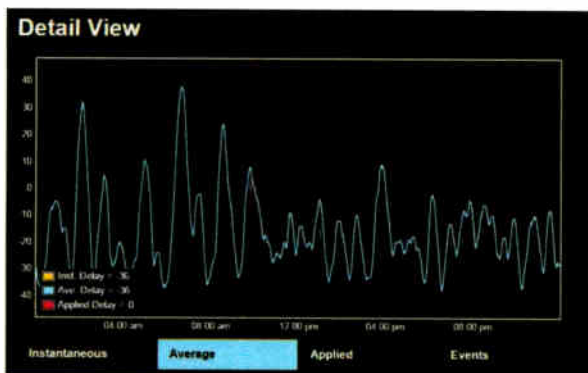
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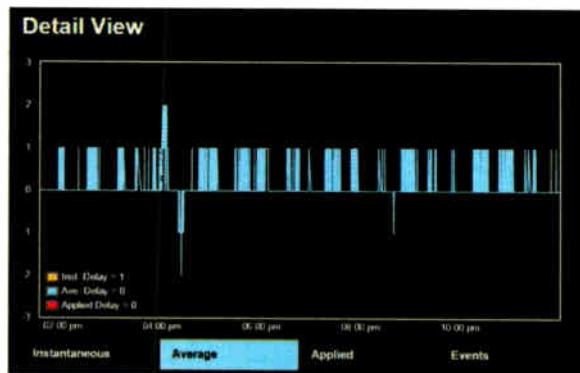
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# Sitara Nieves and Radio's New Reality

She's charged with expanding "Marketplace" podcast and video offerings, keeping tabs on how stories are consumed

## PROGRAMMING

BY JENNIFER WAITS

Marketplace's Executive Director, On Demand Sitara Nieves fell in love with radio during her graduate studies in journalism at Columbia University. Although early in her career she imagined a future as a novelist or a print journalist, the allure of audio captivated her, and she is now working on the new frontier in public radio: overseeing on demand audio and video endeavors for American Public Media's "Marketplace."

**It's both about reaching audiences where they are and also just being able to have the room to create new things.**

— Sitara Nieves

Launched over the air on Jan. 2, 1989, as "Marketplace: The International Magazine of Business and Finance," what was once a single radio program has expanded to include several nationally syndicated radio shows, podcasts, social media channels and a content-rich website with access to program archives, video and more.

Nieves has had a bird's-eye view of its expansion, having joined the outlet in 2012 as senior producer and showrunner for "Marketplace with Kai Ryssdal" and then serving as interim executive producer for the entire Marketplace brand.

In her newly created role as of November 2017, Nieves is charged with not only expanding Marketplace's podcast and video offerings, but also with keeping tabs on the evolution of how listeners, readers and viewers are consuming its business/economy-oriented

programs and stories.

It's a logical progression from her previous gigs at the daily radio news show "The Takeaway" at WNYC and the Economist (where she was a multimedia producer, including working on podcasts), as well as from her schooling.

During grad school, she got her first taste of audio storytelling, producing a weekly show — some episodes aired on student-run radio station WKCR(FM) called "Uptown Radio" with other students in her program.

Drawn in by that experience, Nieves explained, "I had started in grad school ... with a print focus and had changed to radio ... and just absolutely fell in love

with the way you can paint scenes and tell stories through sound and all of the creative ways that you could use sound ... and just the medium overall."

In her new role at Marketplace, Nieves is working to expand on demand



Sitara Nieves

content (podcasts, video and on demand audio) by building new programs as well as by augmenting the offerings of current shows.

She explained, "Marketplace ... for the last 26 years or so has been a suite of very successful radio shows, and over the past couple of years we've been in the process of transforming from that suite of radio programs to more of a multimedia enterprise, still focused on the core idea of raising the economic intelligence of the country, which is our mission."

### MULTIMEDIA MISSION

In the course of that, Marketplace has created new podcasts, hired a video team and has been increasing its digital

presence. Nieves weaves it all together.

"My role is really a way to build on the strengths that we have with podcasts, like the 'Uncertain Hour' or 'Make Me Smart' and really be able to grow both those shows and create new shows that reach a different audience than the amazing people who already listen on our broadcast channels and then the same thing for video. It's taking the core strengths of what Marketplace does and the huge audience potential of what's in our core mission and finding new ways to tell those stories."

As a journalist, Nieves sees the creative possibilities with multimedia storytelling; as an executive, she's also keenly aware of the changing media landscape in 2018, where listeners, viewers and readers may be just as likely to find Marketplace content on Facebook or Alexa as they are to hear it on the terrestrial radio dial. Plus, these worlds may be blurring even further, as video content gets built into newer smart audio devices.

"We have a core broadcast audience, and we don't want to not serve them, but there's a lot of people who obviously don't listen to the radio in the same way as they once did."

She added, "It's both about reaching audiences where they are and also just being able to have the room to create new things: new shows, new videos that just take Marketplace in different directions and play on the strengths that we have ... there's that beautiful mix of reaching new audiences and also being able to flex creative muscles and journalistic muscles and tell stories in new ways."

Whereas Marketplace's website pro-

(continued on page 18)

## WORKBENCH

(continued from page 14)

Block too lists a five-year depreciation period for computers and peripherals.

In a broadcast setting, the reality is that computers may be operated for very long periods. To help you keep track of hardware's age, Fig. 3 shows a simple, effective method. Using a labeler, note the date the computer was installed. You can track this data on your engineering desktop. This information also will be helpful in budgeting when hardware should be replaced.

Sometimes it's easier to strip your Cat-5/6 cable and affix the RJ-45 connectors than buy pre-made cables. Platinum Tools has released an informative connector termination guidebook that is free for the asking.

Head to this link to obtain your copy: <https://tinyurl.com/ybga8fy6>.

Contribute to Workbench. You'll help fellow engineers and qualify for SBE recertification credit. Send Workbench



Fig. 3: Label computer hardware to keep track of aging equipment.

tips and high-resolution photos to [johnpbisset@gmail.com](mailto:johnpbisset@gmail.com). Fax to (603) 472-4944.

Author John Bisset has spent 48 years in the broadcasting industry and is still learning. He handles western U.S. radio sales for the Telos Alliance. He is SBE certified and a past recipient of the SBE's Educator of the Year Award.

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## MARKETPLACE

(continued from page 16)

vides many audio offerings (podcasts, etc.), the video side of on-demand is oriented mostly towards its social media audience. Recent short video pieces have delved into obscure federal crimes, NAFTA regulations and self-driving car technology.

"Most of our videos are social videos, so you'll find them more easily on Facebook and YouTube." With a growing video team, she said, "part of what I'm working on right now is ... making sure that what we make is more discoverable ... I think it's worthwhile eventually to have a beautiful home for what we make, especially when there is a series on our site. So, that is in the works eventually, but the priority right now is on social video."

### SPIN-OFFS

Video is also part of Marketplace's year-long project about the 2008 financial crisis, "Divided Decade." A dedicated web page includes an introductory video and audio stories and has a call for participation from the Marketplace audience, seeking questions and personal anecdotes.

Nieves said that the project "explores how the country has changed economically, culturally and politically in those 10 years, specifically looking at a whole range of things from where housing is now to what's happened in the financial world."

She said people have been submitting heartfelt stories to the Divided Decade team via email, Facebook,



Sitara Nieves, right, attends an editorial meeting at Marketplace Productions in downtown Los Angeles.

Twitter and Instagram; this will provide plenty of fodder for multimedia pieces for the project.

"I'm really excited about that project in part because there is a lot of opportunity for really compelling video series."

A sign of the importance of podcasts is a new, formalized process to stoke the creative fires at Marketplace. "We just started a podcast pitch season for staff to pitch podcast ideas, which I'm very excited about."

The outcome of the inaugural season would be a new podcast to launch in fall 2018.

Nieves predicts that methods for discovering and accessing on-demand audio and video will continue to change and improve, describing the space as a constantly evolving ecosystem with plenty of competition.

"It's a really great time to be in this job," Nieves said. "Really excellent things" are being produced, and she senses an appetite for more.

## TRENDS IN CODECS — FROM DESIGN TO APPLICATION

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Find out what some of the world's leading radio broadcast mavens look for when choosing a codec, their preferred means of setting up a connection, how they successfully integrate IP into their broadcasts, ways they deal with packet loss and how they creatively maneuver the issue latency and error correction/jitter.

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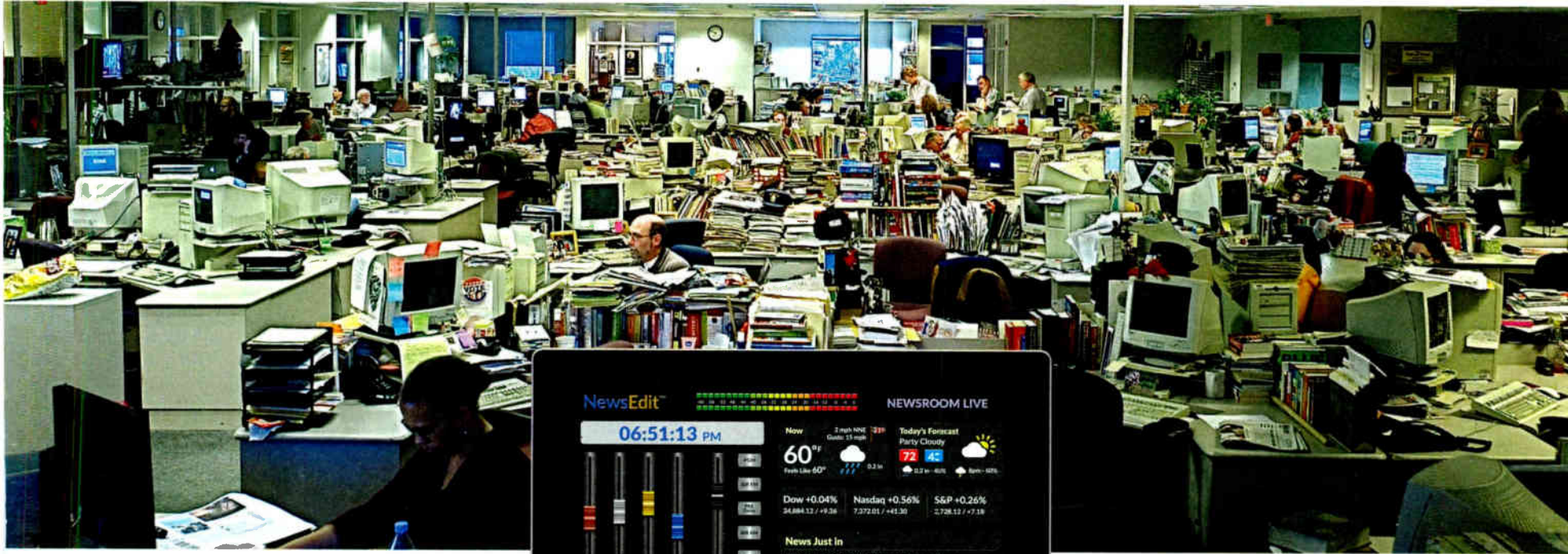
Don't take our word for it, find out for yourself. Contact Lynx or your broadcast equipment retailer for a no-obligations trial of the E22, E44 or AES16e cards.

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Good advice.

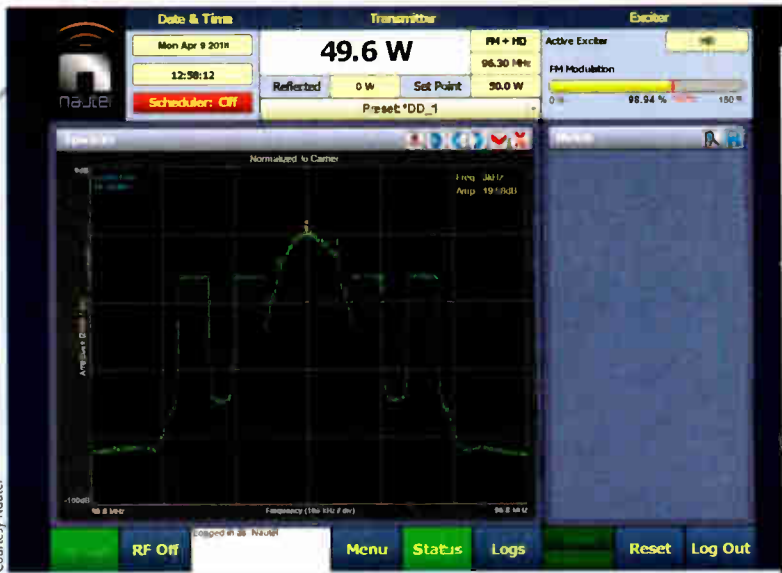


Jim Peck

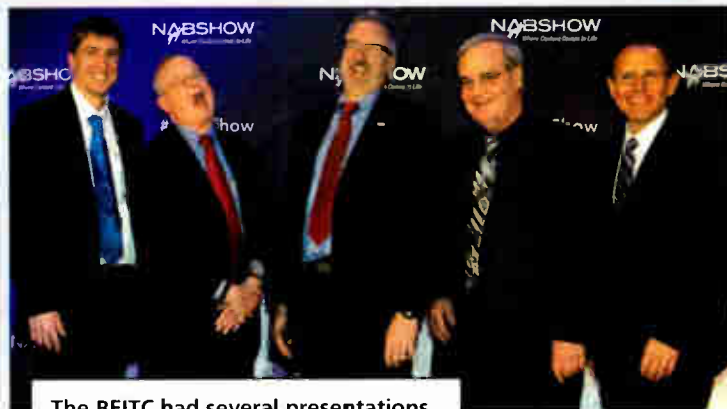
NAB honored stations for commitment to community service. Receiving Crystal Radio Awards were KFOR(AM) Lincoln, Neb.; KGSR(FM) Austin, Texas; KTAR(FM) Phoenix; KTTS(FM) Springfield, Mo.; KXLG(FM) Watertown, S.D.; WHKO(FM) Dayton, Ohio; WINS(AM) New York City; WSOY(AM) Decatur, Ill.; WTMX(FM) Chicago; and WWJ(AM) Detroit. Five-time NAB recipient WTOP(FM) was honored with the NAB Crystal Heritage Award.



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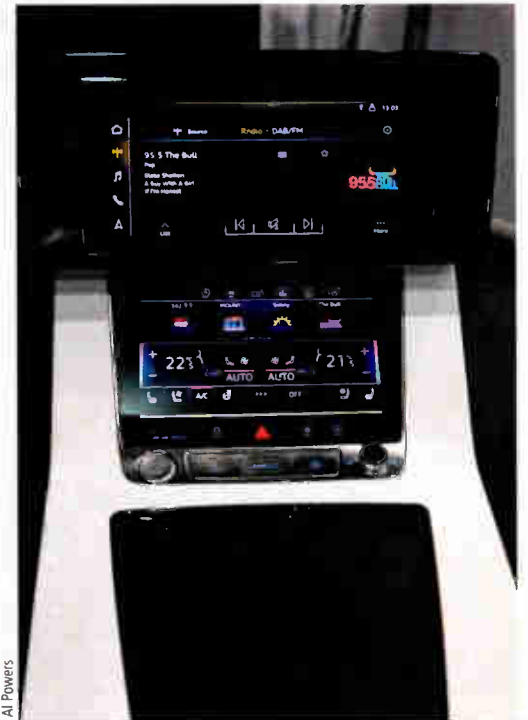
Courtesy Nautel



Jim Peck

The BEITC had several presentations about HD Radio matters. Shown from left are Nicholas Paulin of ERI, consultant Glynn Walden of Entercom/CBS Radio, David Layer of Pilot/NAB, Russ Mundschenk of DTS/HD Radio and Martin Stabbert of Townsquare Media.

Nautel, Pilot and Beasley's KKLZ(FM) demonstrated the ability to transmit multiple IBOC sidebands within a station's signal using Nautel HD Multiplex. The demo, in partnership with Xperi, provided two independent IBOC sidebands on each side of KKLZ's regular analog carrier. It featured loops of audio on 96.0, 96.2, 96.4 and 96.6 MHz and provided capacity for up to 12 HD Radio audio services in addition to the FM carrier. The demo at left followed all-digital FM tests this year at KKLZ in which various test signals, including a 600 kHz-wide HD Multiplex signal, consisting of three pairs of IBOC sidebands, were transmitted during overnight hours and demonstrated OTA reception of 15 separate audio services.



Al Powers

RadioDNS was one of the first organizations to push "hybrid" radio. Its functionality is now available in Europe in the Audi model A8. Features include auto switching between broadcast radio and streaming; universal station preset; and improved station navigation. The not-for-profit project is pushing an open standards approach and hopes to make it available in other regions, makes and models.



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Radio leaders talk about how to fast-track radio's future including industry efforts to engage with the auto industry. From left: Fred Jacobs of Jacobs Media; Carolyn Beasley of Beasley Media and NAB Joint Board Chair; Bill Hendrich of Cox Media; Tim Murphy of Entercom; and Steve Newberry of NAB.



© NAB

# OLD DOMINION



© NAB

Old Dominion performed at the "We Are Broadcasters Celebration" held on the new Main Stage, set up adjacent to the North Hall exhibits.



Al Powers

Matt Levin talks with Frank Maurizio about Stereo Tool, a software-based audio processor that can be used for both live and file-based processing, made by Thimeo Audio Technology.

Mike Erickson of Wheatstone makes a point about processing. Conference planners made more use of engagement or e-poster sessions — under the name "ENGAGE!" — in a room with several speaker stations, allowing attendees to hop from one to another or stick with just one. Speakers were encouraged to have about 20 minutes of material and could then repeat it or dig deeper depending on attendee interest.



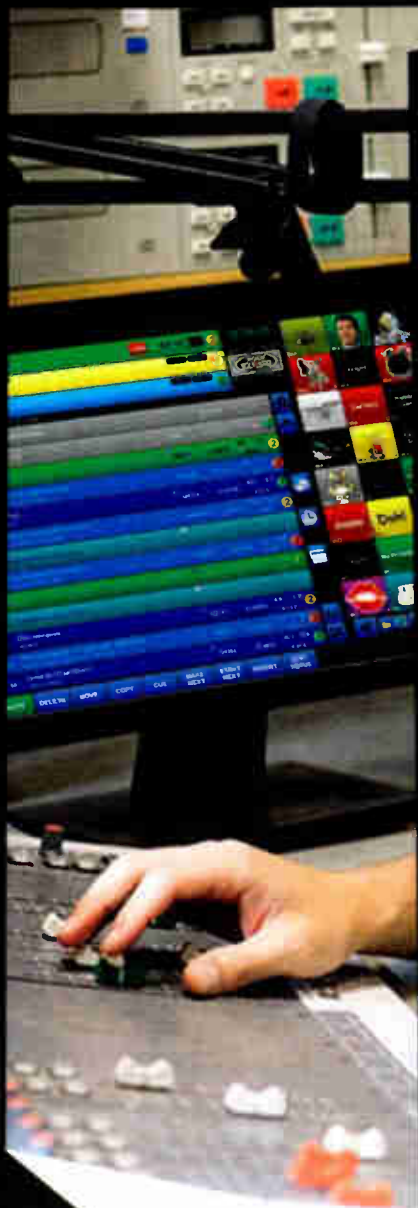
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# Five Ways New Automation Tech

As media organizations consolidate, the challenge of harmonizing business objectives, corporate cultures and workflows bubbles to the surface as former competitors combine and seek future success together.

**T** rue to form, the merger of Sirius and XM Satellite Radio in July 2008 left the combined SiriusXM with different automation systems at the former XM plant in Washington, DC and at Sirius HQ in New York—not to mention the 250 radio stations that needed to be on the same page.

“The challenge was developing systems that could combine the assets of essentially three different legacy systems and compiling them into one that could be understood by a centralized playout system,” says Paul Bachmann, SiriusXM’s senior director of media engineering. SiriusXM worked with RCS on the project, and in the process they discovered five new ways RCS Zetta could supercharge its workflow.

## 1. TRUE COLLABORATION

It’s one thing to give everyone access to a work product, allow them to modify it, and call it “collaboration.” It’s quite another to enable true collaboration. For SiriusXM, the distinction was most apparent when it came to multiple people working on logs.

Without live, real-time synchronization of changes being made by multiple employees to a log, the “heavy foot” of technology can step on workflow efficiencies, says Bachmann. He recalls seeing changes made to one part of a daily log disappear



before his eyes when someone else, working on a different part of the log, published their changes.

RCS Zetta eliminates this productivity-killer by allowing programmers to work on separate parts of a log simultaneously without their changes undoing those of others.

## 2. LOCAL METADATA ACCESS

Why hobble the workflow of employees working remotely? Wouldn’t it be far better to give them access to the same metadata they have when they’re in the office? The answer is apparent, and the benefits for SiriusXM extend beyond enhancing productivity, to producing better, more timely content.

For example, country star Carrie Underwood might be performing the National Anthem at a Nashville Predators game in which her husband, Mike Fisher, is playing. While the SiriusXM channel covering the game may have the performance, producers on satellite radio services’ country channel shouldn’t “have to scrape around online for it,” says Bachmann.

A simple Zetta query, enabled by the magic of metadata, makes it possible to find Underwood’s rendition, replicate it, and push the audio to the SiriusXM country channel in seconds.



# Supercharges SiriusXM's Workflow

## 3. REPLICATION

SiriusXM has tapped into the power of replication far beyond audio assets, metadata, and enabling of true collaboration.

“This function makes it possible to replicate entire channels to other locations,” says Bachmann. “Say our Hits1 channel wanted to be in Orlando for a week doing stuff over at our studios at Universal. We could basically build them their library and everything they need while they’re on the flight to Orlando. When the Hits1 producers arrive, their channel assets would have been replicated and delivered via the Internet.”

Zetta’s replication function also offers robust disaster recovery, says Bachmann.

## 4. POWERFUL AUDITIONING

Zetta automation further enhances the workflow with its new auditioning module and minibar. These tools make it fast and easy to find the exact assets that are required.

Jumping quickly to a song intro, hook, or ending is convenient, and marking a point to jump to can be done with a single customizable touch of a button.

Different audio file formats and sampling rates pose no problem for Zetta either, because it easily mixes and matches content regardless of how it is stored—another boon to smooth auditioning and playback.

With Zetta, audio can even be captured on one machine and played back, aired, or auditioned at multiple locations at the same time. Zetta makes it possible to play back from different parts of the same file at different times as audio is being captured by the original machine.

## 5. MOBILITY MATTERS

When personnel are on the road, they rely on Zetta2GO, the mobile, browser-based version of Zetta. Zetta2GO offers the same functionality as Zetta.

The interface and user experience are also similar in many respects, thus maintaining the productivity of personnel when they’re on the road. In fact, the two products are so similar that it is sometimes difficult for users to look at the screen and tell them apart.



## The Zetta Difference

RCS has drawn on its decades-long experience working with thousands of radio stations to create its Zetta radio automation software.



Zetta takes a modular approach to workflow, which means separate playout, sequencing, and UI. All functions have their own launcher app. Workflows are only limited by the imagination of stations deploying the multi-user automation system, and Zetta automation and playout can be controlled via the Zetta2GO suite of applications from a smartphone or tablet.

More information is available at:  
[rcsworks.com/zetta](http://rcsworks.com/zetta)

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# Ken Thomas Finds the Big in Small-Market Radio

Thomas and his co-host build social media to help the community

## ON-AIRTALENT

BY KEN DEUTSCH

The town of Brainerd, Minn., is nestled northwest of Minneapolis and is home to about 14,000 folks. The big annual events there include a Fourth of July celebration and a kids' fishing clinic. And Brainerd is home to WJYY(FM)'s Ken Thomas, recently honored with the NAB Marconi Radio Award as the country's small-market radio personality of the year.

The Marconis recognize stations and individuals for their excellence and performance in radio. Radio World checked in with Thomas to find out what it's like doing radio in Brainerd.

"It's just the two of us running the



Ken Thomas in the studio

**If one wants to put in the time, make some sacrifices to get a foot in the door and go up the ladder, it's a very satisfying career in terms of every day being different, an adventure and a challenge.**

— Ken Thomas

show," Thomas said, referring to himself and his on-air partner of 13 years, Tess Taylor. "In small-market radio, there's no producer. We do it all ourselves."

### WJYY

WJYY is a 100 kW, Class C1 FM, part of a six-station cluster owned by Hubbard Broadcasting and employing about 27 full- and part-time employees. Thomas, a 33-year veteran of the station's morning show, enjoys the slower pace of life in small-town America.

"The best part is that you get to know everyone, including the movers and shakers. You build a lot of social capital," he said. "We want to be involved in the events like the chili cook-off, but

there's a long list. We emcee a lot of benefits and walks and participate in the local parades. Brainerd is unique because it's in the heart of the lake country in northern Minnesota.

"Our normal population of about 60,000 around Baxter and Brainerd probably doubles over the summer because of the resorts and the cabin owners. We have a national drag racing event here, and the Jaycees run the largest ice fishing contest. We also have a big concert every summer, Lakes Jam."

"Ken is amazing," said Taylor. "He's brilliant, caring, sensitive, quick-witted and hilarious. His sense of humor billows through the building. A pro in every sense of the word."

Referring to her morning show on-air partner as her "work husband," Taylor mentioned his generosity.

"He takes time out of his Thanksgiving holiday to volunteer at our local Community Thanksgiving Dinner," she added. "He also volunteers periodically at our local Sharing Bread Soup Kitchen. To take time out like that is so very admirable. But that's Ken."

Sometimes the humor of their morning program comes from the hosts, but



Tess Taylor

sometimes it comes springs from the listeners.

"We had a live, on-air contest," recalled Taylor. "And this was very new into our working relationship, and we were trying to get into a groove. The trivia contest went like this.

"Ken asked the question: 'In ancient Greek times, when a man wanted a woman to marry him, he would toss *this* to her. If she caught it, it meant yes. If she did not, it meant no. What would the man toss?' After three or four incorrect responses, one caller popped up and said 'sausage?' And I said with an innocent giggle, 'Yep 'cause nothing says 'I want to marry you' like tossing your gal your sausage!'"

"By the way, the correct answer should have been 'apple.'"

### SOCIAL PRESENCE

Facebook is another way Thomas likes to stay in touch with his listeners.

"My partner Tess handles that," he said. "And it's become huge. We are reaching individuals who tell us they feel like they are listening to friends."

Radio World asked Thomas his thoughts on the future of radio.

"As a career choice, it's more difficult to get into the field than when I chose it," he said. "There are not as many entry-level jobs. But if one wants to put in the time, make some sacrifices to get a foot in the door and go up the ladder, it's a very satisfying career in terms of every day being different, an adventure and a challenge. Especially when you're on the air trying to be fresh and think of something new to connect to the audience. It's interesting and satisfying when you hear back from clients and listeners and regular people in the community who talk about how invaluable radio has been to them in their endeavors."

For those who think that small mar-

ket means small rewards, Thomas asks you to reconsider.

"If there was one last thing to tell you, it's that over the years I have had the privilege to work for some great owners and operators who were passionate about serving the community," he said. "That's one of the most satisfying things that we do as radio stations. We have won three [NAB] Crystal Radio Awards and have been nominated more times than that."

Thomas continued, "We have come up with some innovative ways of teaming up with law enforcement agencies to get the word out about road closures and emergencies. That is what radio does best, serving the community. It is a joy to work with so many great people."

Ken Deutsch's 1970s radio career included a guest spot as a "celebrity judge" in the Sylvania, Ohio, "Bean Queen" beauty contest. He says things went downhill from there.





Attendees wait for shuttle buses. NAB reported about 93,000 registrants compared to about 103,000 the year before.

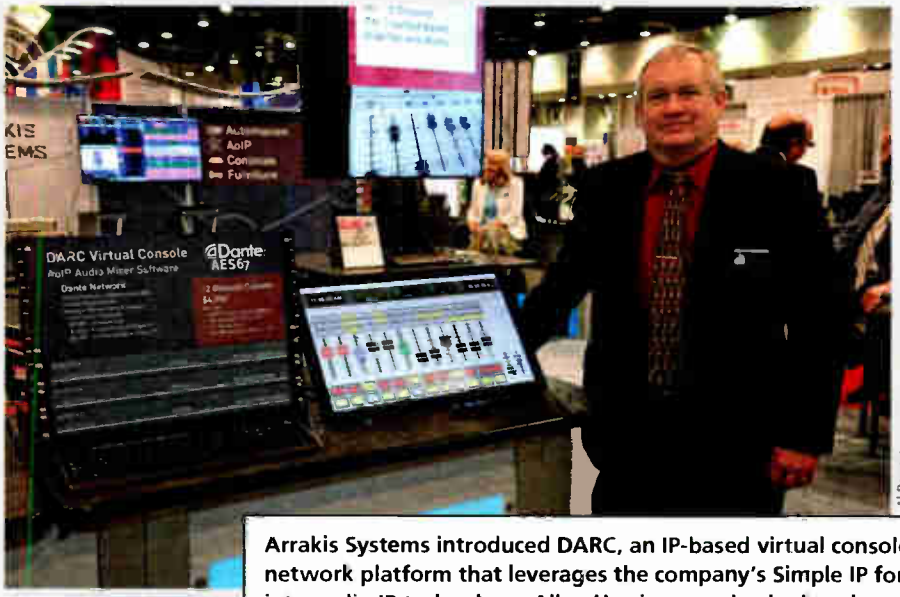
Jim Peck

# Aftermarket Solutions




Jim Peck

A display of aftermarket digital radio products in the Xperi/DTS booth.




Al Powers

Arrakis Systems introduced DARC, an IP-based virtual console/network platform that leverages the company's Simple IP foray into audio IP technology. Allen Harrison works the booth.



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Radio executives are seeking to maximize smart devices and mobile apps. Discussing that were Beasley Media EVP of Digital Steven Meyers and Hubbard Radio VP of Digital Strategy Jeremy Sinon, shown with moderator Emily Reigart, Radio World content manager.

Bob Tarsio of Broadcast Devices



Chris Wygal

NAB Engineering Achievement Awards were presented to Mark Aitken, Sinclair Broadcasting Corp.; Clay Freinwald, Freinwald Technical Services; and Tom Jones, Carl T. Jones Corp.



Jim Peck

The Burk Technology Precision RF Sensor is part of the company's new Arcturus RF Site Monitoring Systems system but is also sold separately to connect directly to any remote control as a standalone product. Holding it is Paul Shulins, who joined Burk as vice president/chief technology officer last fall; he'd been director of technical operations for Greater Media Boston for 28 years.



Cool concept! Past recipients of NAB Engineering Achievement Awards participated in a Joint Keynote Address. (We don't want to know how much this group would charge by the hour for technical consulting.) From left: Rich Friedel, Ira Goldstone, Rich Chernock, Mark Richer, Tom King, Merrill Weiss, Tom Silliman, John Turner, Ron Rackley, Larry Thorpe, Glynn Walden, Frank Foti (rear), John Kean, Ben Dawson, Bob Seidel.



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Broadcasting Hall of Fame Inductee Alex Trebek salutes the audience. Vanna White, right, and Pat Sajak, obscured, were also among the inductees.

© NAB

Megan Williams, product manager for NPR, addresses the Public Radio Engineering Conference about the MetaPub project and developments in emergency alerting.



Jim Peck



Jim Peck

Closeup of a Ward-Beck Systems product display. Its AMS Series is a line of rackmount audio monitors for broadcast applications.



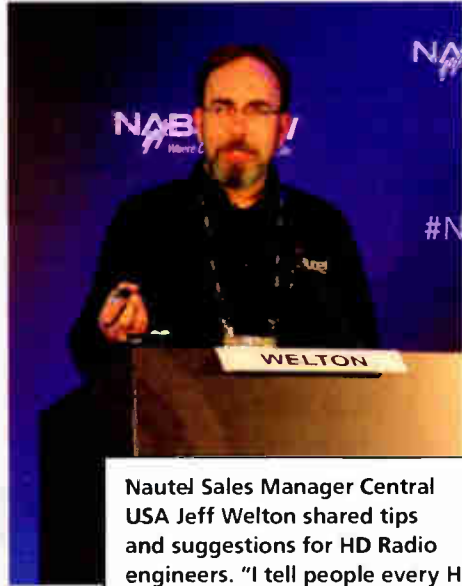
Al Powers

It's a big convention center.



Jim Peck

Members of the National Radio Systems Committee gather for Radio World's camera.



Paul Kaminski

Nautel Sales Manager Central USA Jeff Welton shared tips and suggestions for HD Radio engineers. "I tell people every HD Radio install is situational, there is no one right way to do an install."



Stylin' on the show floor.

Jim Peck



Communications students from Ryerson University, Toronto, led by program director and professor Richard Grunberg, kneeling left, explore the show floor. They wore camouflage to blend in and not draw attention to their sponsors.

Jim Peck



Comfy shoes are the footwear of choice for any informed showgoer.

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# YES Approves of Comrex LiveShot

Video codec makes possible reliable simulcasts for sports network

## USERREPORT

**BY JACK KESTENBAUM**  
Director of Technical Operations  
YES Network

**NEW YORK** — The YES Network is a regional sports network owned by 21st Century Fox and the New York Yankees. We cover New York Yankees baseball, Brooklyn Nets basketball and Major League Soccer's New York City FC, along with other programming. I've served as director of technical operations for the YES Network since it was founded in 2002.

For a number of years, I've been coordinating remote broadcasts for "The Michael Kay Show." Michael Kay is the play-by-play announcer for our Yankee baseball coverage and the headliner for the show, which is heard Monday through Friday from 3 to 7 p.m. on WEPN/ESPN Radio in New York. YES produces and airs a live video simulcast of that show with a simple one-camera setup.

Before adopting the Comrex LiveShot IP video codecs, our simulcast programming would go out via satellite at 9 MHz. I pay close attention to new developments and technology, and when I saw LiveShot and its competitors appearing on the market, I was intrigued.

I'd been familiar with Comrex for a long time. "The Michael Kay Show" is transmitted on ESPN Radio with Comrex's Access box, so we were already using Comrex equipment regularly. In my experiences, the products I've used have been, in most cases, bulletproof; and the customer service is beyond reproach. So I was moved to learn more about LiveShot.

Initially, we used LiveShot and satellite simultaneously, but as we've gained confidence, we've switched fully to LiveShot. For "The Michael Kay Show," we're using LiveShot exclusively. The technology has been proven to work con-

sistently, and we've gotten more comfortable trusting it with our broadcasts.

Recently, we've begun using LiveShot's SD return video feed, and Michael Kay loves it. We place a monitor where he can see it clearly, and he can easily see when he's in a two-box or when we're in commercial. Return video has been an incredibly useful feature for us.

I've tried other bonded cellular products, and one of the reasons I ultimately chose Comrex is the history behind the company. Comrex has been in broadcasting for more than 50 years, and as noted, the customer service has been excellent. So far, any questions that

we've had are answered instantly.

We're very satisfied. The form-factor of LiveShot Portable is unique — it's very portable and lightweight, which distinguishes it from other bonded cellular products. And LiveShot also contains some unique features, like two-

way video and IFB capability. These features, combined with reliable customer service and bulletproof connections, made LiveShot the choice for us.

**For information, contact Chris Crump at Comrex in Massachusetts at 978-784-1776 or visit [www.comrex.com](http://www.comrex.com).**



## TECHUPDATES

### ENCO VISUAL RADIO LEVERAGES DAD AUTOMATION

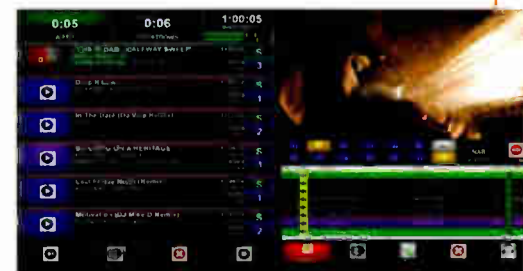
ENCO says that its Visual Radio offering uses the capabilities of its DAD radio automation and management interface to deliver a multimedia experience to web and mobile audiences.

Interoperability with various production systems means radio broadcasters can support a range of functions from content acquisition through scheduling and delivery from a unified platform, including targeted advertising support to help monetize online programming.

It said Visual Radio's operational flexibility is particularly important for radio broadcasters familiarizing themselves with video production workflows. It delivers music videos, program audio and interstitials (targeted ads, promos). ENCO said the management interface eliminates the need to learn new software and manage multiple content libraries; customers benefit from an intuitive live-assist application to suit the operator's preferred balance of manual and automated control.

ENCO says the solution offers intelligence that eliminates some of the more complex tasks associated with high-end, studio-based video production. For example, a voice-controlled camera application will switch between hosts and guests during live radio programming, triggered through recognition of "hot" microphones. Operators can create custom rules to display all camera feeds at once and assign dedicated graphical overlays to frame each shot. Tighter integration with graphics software simplifies the user experience, including management and integration of live social media feeds, visual effects and transitions.

**For information, contact ENCO in Michigan at 248-827-4440 or visit [www.enco.com](http://www.enco.com).**



### 3N1 ADDED TO RUSHWORKS VDESK RADIO/TV PRODUCTION SYSTEM

The VDesk Radio/TV production system integrates Rushworks' 3n1 multifunction PTZ camera with its Talk-Take automated video switching based on voice-activation. The company says that combination provides excellent coverage for the host and the guests with "hands off" switching, thus no additional workload on the producer. The lower cost provides good return on investment, it added.

The 3n1 includes a 20x optical zoom lens and a wide-angle fixed lens, with each of the internal cameras having independent HD-SDI outputs. When the 3n1 is placed on the guest desk, the PTZ camera covers each participant with a medium close-up preset. When Talk-Take is active, VDesk switches between presets and the wide shot automatically, using the wide shot as a cover shot. When the preset is reached, the system then "takes" the shot. Using this capability, there is no need for a camera operator. Presets can include the host; or a second small camera can be dedicated to the air personality.

VDESK Radio/TV can stream its output directly to an ISP by connecting it to a network.

**For information, contact Rushworks in Texas at 1-888-894-7874 or visit [www.rushworks.tv](http://www.rushworks.tv).**



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**TECHUPDATES**

**STUDIOCAST VIDEO SOLUTION ENRICHES RADIO**

StudioCast says its automated visual radio system is intended to provide streamlined video coverage for radio broadcasters.

Its HD8 auto IP video switcher features functions like graphic insertion, titling and logos, graphic composition and display of messages coming from social feeds. It can record the signal in high definition and stream to several sources simultaneously and supports the main camera PTZ control protocols available on the market.



In addition, the firm says, StudioCast's automatic algorithm manages action shots, as well as analyzing microphone audio levels and duration.

StudioCast automatically selects the most suitable camera angle and manages tight or wide-angle shots. In order to avoid untimely switching when several speakers talk simultaneously, the system alternates wide shots or "picture-in-picture" type compositions where several cameras appear at the same time. The company says it developed this algorithm to resemble human operation as closely as possible to guarantee accurate video coverage of each speaker.

Manual switching, panning and zooming, adding graphics or playing clips from hard disk is possible with a tablet interface. Users can manage StudioCast via an automation system and can also play artists' video clips along with a playlist.

There are dedicated cameras available, but each SDI PTZ camera can be used with a Sony, Panasonic or Pelco D control protocol. Other sources include IP cameras or PC screen capture. StudioCast can be interfaced through IP with the AEQ, Axia, DHD and Wheatstone mixers or via its optional audio bridge to connect to any other analog console.

For information, contact StudioCast in France at +33-1-60-64-21-21 or visit [www.studiocast.fr](http://www.studiocast.fr).

**WINMEDIA VISUAL RADIO SIMPLIFIES MEDIA CONVERGENCE**

The WinMedia Visual Radio solution is based around a radio and TV playout system. This, the company says, unifies the content chain by managing assets and covering every aspect of the production and delivery chain, including scheduling and advertising.

WinMedia Visual Radio incorporates the StudioCast engine to provide an end-to-end solution that can be tailored to requirements.



Providing users with a combination of automated camera switching, radio playlists with graphic overlays, WinMedia declares that the system "pushes the limits of media convergence by enabling RJs to directly control video playlists by using WinMedia intuitive on-air interface."

During live-assist or 24/7 automation, the StudioCast system automatically captures images without human intervention required. WinMedia controls StudioCast through a set of commands that are based on predefined scenarios.

For information, contact WinMedia in France at +33-494-102-101 or visit [www.winmedia.org](http://www.winmedia.org).

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# Are Broadcasters “First Responders”? Let’s Not Confuse Roles

Some might call this splitting hairs, but others say the distinction is crucial

## COMMENTARY

BY CHRIS IMLAY

*The author is general counsel of the Society of Broadcast Engineers. This commentary was published in the March 2018 edition of The Signal. © SBE*

I attended a hearing of the Senate Commerce Committee recently, at which both ARRL and NAB had witnesses testify on the respective importance of amateur radio and broadcasting in emergency alerting and disaster response. FCC had a very compelling witness also: Ms. Lisa Fowlkes, the chief of the Public Safety and Homeland Security Bureau, testified on the FCC’s investigation of erroneous emergency alerts.

It was really riveting testimony from all witnesses, and the hearing was fascinating. It dealt specifically with the “false alarm” of an imminent missile attack in Hawaii recently; how such a thing could happen; why it took more than half an hour to rescind the alert and calm the panic in Hawaii; and how to make sure such a nightmare never happens again.

On a broader basis, the hearing testimony provided insight into the function

of broadcasters, mobile wireless service providers and amateur radio operators in emergency alerting.

### RESPOND VS. INFORM

The testimony of NAB was, I thought, simply excellent. It stressed the important role of broadcasters in front-line emergency alerting, and the reliance of the general public on broadcasters to disseminate emergency information in real time. NAB has asserted that in a disaster situation, 57 percent of the public turns to radio and television broadcast stations for updates and information in emergencies. This is an impressive number in a time of ubiquitous text messaging and other alerting platforms.

So broadcasters are indisputably “kings of the hill” in emergency alerting. But is it fair to call them “first responders”?

One might question that label, inasmuch as it is traditionally associated with, and limited to, police, fire and rescue and EMS personnel. Years ago, I prepared some testimony for an ARRL witness at a congressional hearing about federal support for first responders in spectrum allocations. I likened amateur radio ARES and RACES participants to first responders.



For that, I had my head handed to me by the then-CEO at ARRL. He told me in no uncertain terms that this would not sit well with first responders, who were the principal served agencies of ARES and RACES. I never drew the analogy again.

Last September, the Senate passed S. 102, the Securing Access to Networks in Disaster Act (SANDy as it came to be known; referencing the 2012 superstorm that ravaged the East Coast). S. 102 was a slightly different bill than H.R. 588, passed in January of 2017 by the House; but they have the same basic intent.

Since the House and Senate Bills are different, the differences had to be resolved by Congress before being sent to the president for signature. Both bills have the same effect with respect to the role of broadcasters in emergencies. They provide for access by “essen-

tial service providers” to emergency locations and disaster sites “necessary for establishing temporary or restoring wireline or mobile telephone service, Internet access service, radio or television broadcasting, cable service, or direct broadcast satellite service.”

Both bills specify that the term “essential communications services” means “wireline and mobile telephone service, Internet access service, radio and television broadcasting, cable service, and direct broadcast satellite service.” This is a great thing. It allows broadcast engineers to access disaster locations to restore broadcast service during or following a major disaster, and

it acknowledges the important role of broadcasters in emergency alerting.

Some states have adopted “first informer” state statutes that have the same effect. But access by broadcasters in this context must be uniform throughout the 50 states and territories in order to solve the problem of access to disaster areas for re-institution of broadcast service.

Inside Radio last September reported the passage of the SANDy Act by the Senate and claimed that the bill “designat(ed) radio and TV as ‘first responders’ during natural disasters.” Actually, the legislation doesn’t do that exactly. “Essential service providers” and “first responders” are not at all synonymous, and the latter term is not found anywhere in either bill.

NAB has carefully avoided misuse of the term “first responders” as well, and good for them for doing so.

NAB was quoted as saying that when hurricanes hit, as they did last fall, “hometown radio and TV stations play a lifesaving role as ‘first informers’ during times of emergencies, and this legislation will provide local broadcasters with access to vital resources to stay on the air when disaster strikes.”

First informers: absolutely. Access to disaster sites to restore broadcast facilities by broadcast engineers: critical.

*(continued on page 38)*

## READER'S FORUM

### WORKBENCH JOKE

John Bisset’s “breaker identifier” in his Workbench column (“A Shocking Way to Identify a Breaker,” RW April 11) is a stupid, dangerous way to figure out which circuit is which.

The idea presumes that the breaker is in good condition, the wiring is properly sized, and that the breaker is sized correctly so that it fires before the one that feeds it does. If any of these assumptions are wrong, you could have an electrical fire.

There are powerline-safe tone tracers that you can purchase from places like this: <https://tinyurl.com/yao5yv9>.

I know the Workbench column is about cheap tricks, but this one could cost you far more than it saves. I strongly recommend you inform your readers that this is not safe.



Jacob Brodsky, PE

*John Bisset replies: That was published tongue-in-cheek — something an engineer found at a site and snapped a picture of. Some engineers who’ve seen it got a laugh; but our apologies to anyone who took it literally. Mr. Brodsky is right — there are devices at big box stores with a switch designed to identify breakers.*



**READER'S FORUM****BLOCKCHAIN**

I would like to thank Radio World for the article on blockchain technology by Margot Douaihy ("Need to Know: Blockchain") and the discussion by Paul McLane ("Will Blockchain Find a Place in Radio?") in the April 11 issue.



Personally, I have a blind spot of ignoring technology that is overly "hyped," so I admit this was my first chance to overview exactly what the hype is all about. Once again, the editors or Radio World have made sure I am informed and helping to keep me prepared for the future.

With regards to potential broadcast applications, I wonder if EAS could be a potential user of this technology. I remember back when EAS first rolled out, that Gerald LeBow expressed concerns about potential "hacking" of the system. Better security will certainly be part of future EAS upgrades. But no matter how secure, the ability to audit the system rapidly would be beneficial, and it would seem that blockchain could be the key to doing so, particularly in the context of potential cyberwarfare scenarios. A better audit trail, perhaps with some sort of feedback loop, could not only allow post-hoc analysis and troubleshooting, but perhaps could prevent hacking in the future.

Thanks again, Radio World, for teaching me what I didn't know to learn about.

Rolf Taylor  
Rocket Engineering and Consulting  
Annandale, Va.

**BROADCAST ENGINEERING CONNECTIONS**

Responding to "Antenna Physics' Illuminates Fundamentals in 160 Pages":

Thank you, James O'Neal, for the kind words regarding my book "Antenna Physics, an Introduction."

It seems that over the years my connections to broadcast engineering keep coming back. I was a broadcast engineer from 1975–82, mainly in radio in the Pacific Northwest. You might want to share the following story with your readers.

My other brief revisit to radio broadcast technology was in the late '80s when I wrote the first description of using DDS (direct digital synthesis) for FM broadcast exciter modulation. This technique replaced the inherently non-linear old reactance modulator technique by two orders of magnitude. The title of the article was: "Audio to RF: a Completely Digital FM Broadcast Stereo System," 43rd Annual Broadcast Engineering Conference Proceeding, National Association of Broadcasters, 1989.

Many years later, I was visiting Eugene, Ore., including some of my old radio broadcast contacts. Chris "Ichabod" Murray took me on a trip up to the main transmitter site for the Eugene area. He told me that this technique was now the industry standard for FM analog broadcasting. I was very surprised and Chris seemed equally surprised that I wasn't aware of it ... we had quite a laugh over that.

Now, of course, digital FM is taking over, eliminating the need for the analog stereo FM composite baseband. In retrospect, I was very happy to have been the first to apply DDS to an application that has expanded the enjoyment of high-fidelity FM radio over many years. I had often wondered why FM jazz and classical music seemed to sound much better than I remembered back in my BCE days!

Thanks again for the review and reminding me of my time building and maintaining radio stations back in the day.

Bob Zavrel  
CEO  
Plum Valley Systems LLC  
RF/Antenna Engineering Consulting  
Elmira, Ore.

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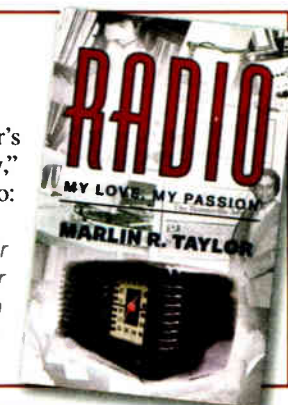
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Who said beautiful music was dead?

Following up the book review of Marlin Taylor's tome ("The Father of Beautiful Music Tells His Story," RW April 11): Check this out and give it an ear, or two: <https://wjibfm.wixsite.com/jib-fm97>.

Warren Schroeger  
Chief Troublemaker  
"JIB on the Web" / <http://wjibfm.com>  
Boston

**FIRST RESPONDERS**

(continued from page 37)

"Essential Service Providers": absolutely valid description of broadcasters and broadcast engineers. Congress needs to get this legislation to the president pronto, and he needs to sign it without any further delay.

But let's not confuse roles here.

"First responder" is a term that should be limited to those who really fit the classic description. The term is defined in U.S. Homeland Security Presidential Directive, HSPD-8 which provides the following definition: "those individuals who in the early stages of an incident are responsible for the protection and preservation of life, property, evidence, and the environment, including emergency response providers as defined in section 2 of the Homeland Security Act of 2002 (6 U.S.C. § 101), as well as emergency management, public health, clinical care, public works, and other skilled support personnel (such as equipment operators) that provide immediate support services during prevention, response and recovery operations."

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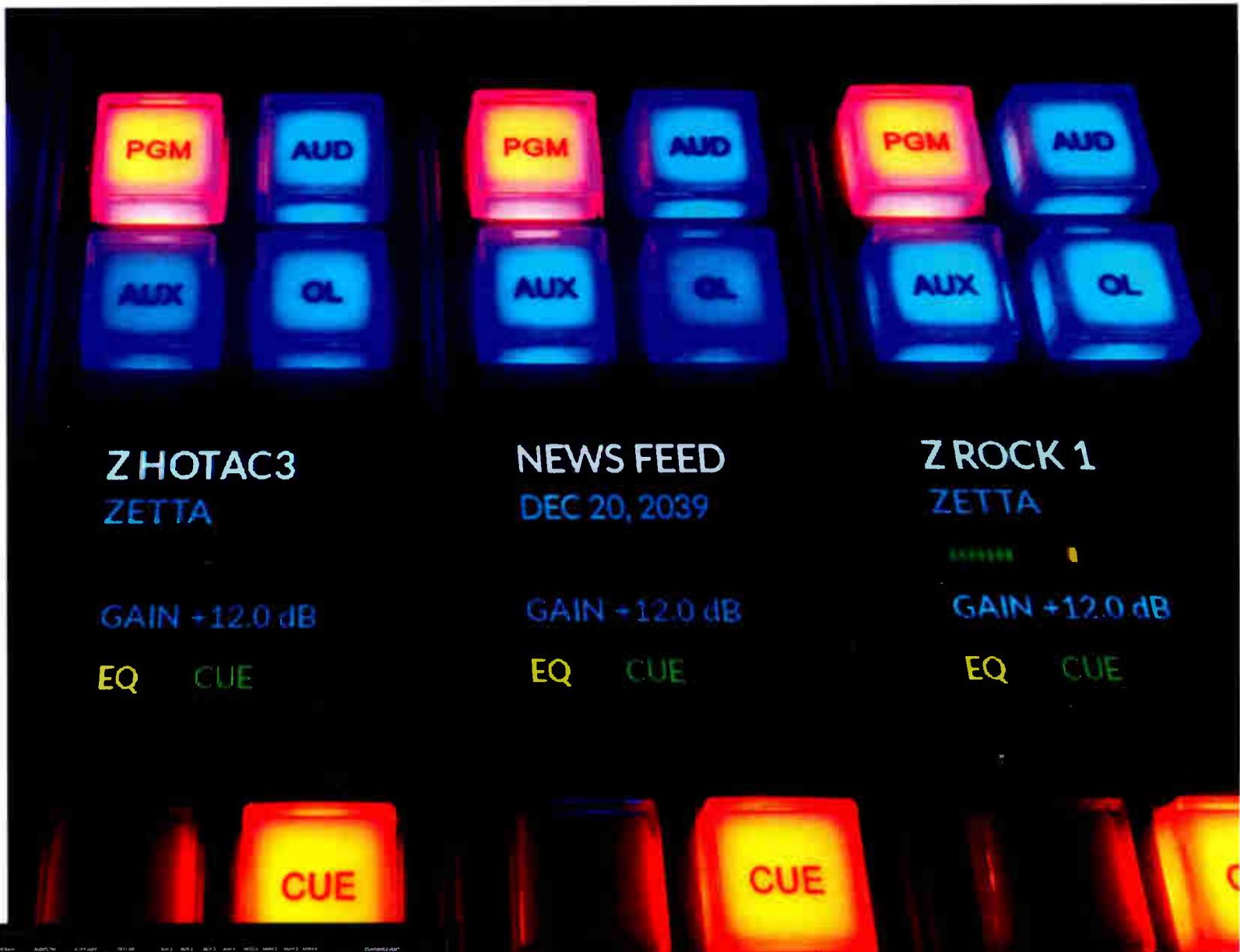
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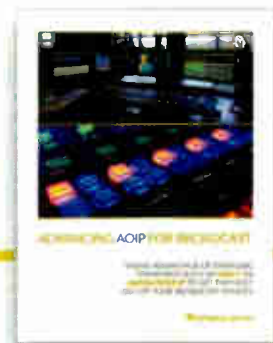
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