SHOOT VIDEO FOR RADIO LIKE A PRO — Page 26

NewBay

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Radio Seeks Smart Speaker Home Audience

Let's call it "SSO": Broadcasters are getting hip to the need for smart speaker optimization

CONSUMER ELECTRONICS

BY RANDY J. STINE

Radio's path to more in-home listening may sound something like this: "Alexa, play WRIF 101FM in Detroit."

Voice-driven technology in today's connected home is creating new opportunities for terrestrial radio broadcasters to tap a market, even as the sales of tabletop radios have evaporated in the United States, experts say. Smart speaker systems like Amazon Echo and Google Home can readily stream radio stations, via web streams like TuneIn and iHeartRadio, and can be programmed to find individual station streams. It appears broadcasters are eager to tap in to the technology.

Smart speakers use voice-recognition technology and artificial intelligence to act as a multi-purpose — and relatively inexpensive — in-home entertainment device.

In Jacobs Media's 2017 Techsurvey 13, approximately 11 percent of core radio listeners had an Amazon Echo or a Google Home. Estimates are that up to 10 million Amazon Echo internet-connected "smart speakers" have been sold in the United States, so the numbers are substantial, and soaring sales are expected, underscoring the opportunity for the radio industry. RBC Capital Markets predicts Amazon's voice assistant Alexa could generate $10 billion in worldwide revenues for that company by 2020.

Even FCC Chairman Ajit Pai told Radio World earlier this year that he is fond of his voice-controlled appliance. "We have an Amazon Echo at home, so one of the great things about that is you can tell it, 'Alexa, play 88.5 [WAMU],' and you can listen while you're making dinner to whatever station you want. I cer-

(continued on page 8)

Bringing Back the Preset Buttons

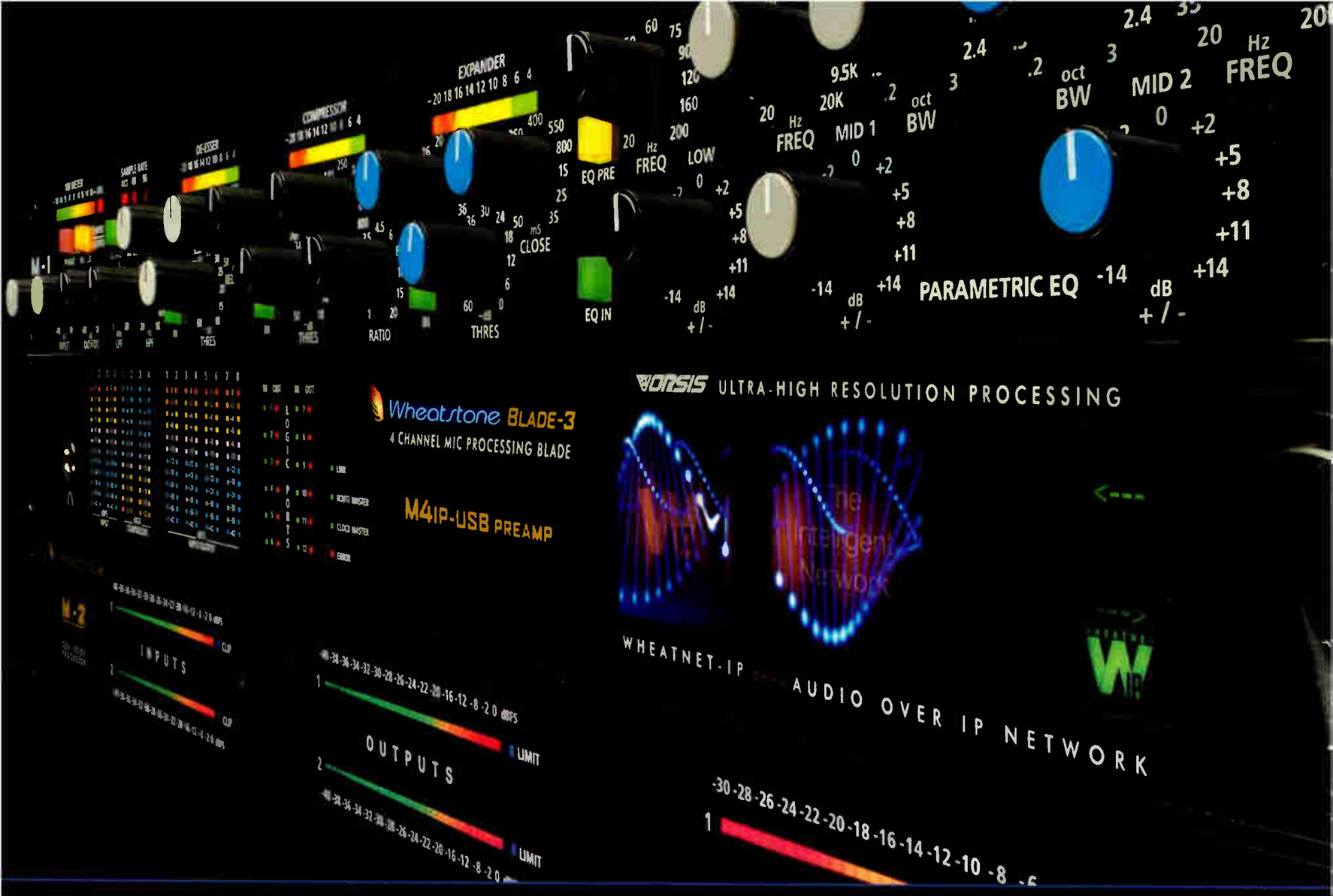
XAPPmedia promo image

Millions of smart speakers can be voice-commanded to tune B100

BY JAMES CARELESS

Anywhere from 8.2 million to 10 million Amazon Echo internet-connected smart speakers have been sold in the United States to date, according to various analyst sources. All of these smart speakers are controlled by voice commands, via their onboard Alexa voice recognition software.

(continued on page 3)



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PRESETS

(continued from page 1)

Today, thanks to an Alexa "Skill" application developed by tech company XAPPmedia, all of these Echos can be voice-commanded to tune to Federated Media's B100, WBYT(FM) in South Bend, Ind., simply by saying, "Alexa, enable B100."

According to XAPPmedia CEO and co-founder Pat Higbie, this was the first instance in which Alexa could be commanded to find a radio station by its brand name, rather than its FCC-assigned station identification.

"Given the investment we have made in building the B100 brand in our market, this is huge," said James Derby, Federated Media's chief strategy officer this spring.

"XAPPmedia's B100 Alexa Skill ensures that millions of Amazon Echo listeners will be able to find us using the brand name we're known for, and stakes out this 'smart speaker' territory for us worldwide."

HOW IT WORKS

The functionality of the B100 Alexa Skill is built upon two factors. The first is the ability of the Alexa voice recognition system to "learn" new voice commands by having these spoken words associated with specific applications such as B100 or features of those applications. In this instance, this means associating the words "Alexa, enable B100" with a request to access the B100 audio stream through an Amazon Echo, and to then voice-surf through that station's various content options.

The second factor is XAPPmedia's embedding of the necessary data entries within its B100 Alexa Skill; namely voice-activated access to the station's RSS (Really Simple Syndication) data feeds, specific audio channels and podcast library. This large number of entries is required, because the B100 Alexa Skill allows the listener to choose from a range of online country music categories and podcasts by voice, vastly expanding the listener's reasons to stay tuned to B100 online.

"As well as being able to scan through the music channels and podcasts by voice — with the B100 feed giving you tastes of what each one provides — you can skip through songs by voice command, and go to specific B100 programs by name," said Higbie. "With the B100 Alexa Skill, you can do quite sophisticated content discovery and selection without literally ever having to raise a finger."

WHY IT MATTERS

The B100 Alexa Skill gets high marks for its cool factor. But this isn't why Federated Media was attracted to the application. The smart speaker market is

B100 Today's Best & Most Country!

xapp media

A promotional image from XAPPmedia. The company's message about smart speakers: "Amazon Echo is bringing back the preset radio buttons. Will your station be there?"

exploding in 2017 through sales of Amazon Echo, Google Home and Microsoft's expected Cortana smart speaker units, all of which connect to the internet. Apple introduced its HomePod in June.

"Up to 25 million Amazon Echos in the home, 15 million in new Fords and millions more in Volkswagens, Hyundais and BMWs are expected to be sold by year's end," said Higbie. Meanwhile, "The Infinite Dial 2017" report from Edison and Triton Digital stated that 63 percent of surveyed Americans 12+ were aware of Amazon Echo or Google Home smart speakers, while 7 percent own one or more voice-commanded smart speakers — 5 percent for Amazon Echo/Dot with Alexa; 2 percent for Google Home.

Today's smart speakers can be voice-commanded to tune to any radio station stream, just by saying its station ID aloud.

"The trouble is, people know us as B100, not WBYT," said Derby. "So telling Alexa to 'enable B100' before our B100 Alexa Skill was launched wouldn't have worked. Those listeners who didn't know our WBYT call sign would be lost to us."

SKILL POWER

With the B100 Alexa Skill up and running, Federated Media has a direct route to its own smart speaker listeners, plus anyone else who might listen to another B100-branded worldwide. In an internet-connected world, this gives B100 a powerful presence, said Higbie, because no other radio stream is as easy to access using Alexa. Basically, B100 grabbed an unprecedented shortcut to its listeners.

"Understanding the B100 Alexa Skill's edge can be explained by the six preset radio buttons on an old car radio," said Higbie. "Just the act of presetting six stations from all the stations available gave those six a preferential edge in the listener's car. Add the fact that most people only switch between two to three of their presets on a regular basis, and the advantage those radio stations had was profound. The limited selection offered by the convenience of presets gave them an advantage.

"The B100 Alexa Skill gives Federated Media a similar edge over the competition, if not more so," Higbie continued. "The fact that there are 50,000 radio streams online is confusing to listeners. But being able to say, 'Alexa, enable B100'? That's so, so easy."

> **Smart speakers** are a golden opportunity for broadcast radio to regain its place throughout the home.
>
> – James Derby

The fact that the Amazon Echo is gaining such headway in U.S. homes also matters.

"Today, most homes don't have dedicated tabletop radios that they use on a regular basis," said Derby. "At most, they use clock radios in the bedroom, plus the radio in the car. Smart speakers are a golden opportunity for broadcast radio to regain its place throughout the home, and those stations that are the easiest to access by voice command stand to gain the most."

It remains to be seen if B100's Alexa Skill delivers on its profound promise. But Federated Media and XAPPmedia have no doubts. This is why Federated Media is working with XAPPmedia to develop Alexa Skills for its other radio stations. K105 WQHK(FM) in Fort Wayne, Ind., launched in May, so now you can also say, "Alexa, enable K105." The developer says more are on the way. Meanwhile, the company is developing voice-commanded "Actions" to work on Google Home — it recently released an Action on Google for Progressive Insurance — and is actively developing "Skills" to work on Microsoft Cortana.

To see an online demo of the B100 Alexa Skill, go to *https://xappmedia.com/video/alexa-demo-b100-radio/.*

Assume That Everyone Is a Criminal

Randy Woods says radio engineers need to learn to think like nefarious people

RADIO IT MANAGEMENT

Randy Woods is technical director for the Central Florida Educational Foundation. He spoke to us for an article in the Radio World eBook "The Internet of Broadcast Things," available free at radioworld.com/ebooks.

Randy Woods

Radio World: *With all the attention to breaches, it must be tempting to just "disconnect everything." How can media professionals "do it smart" and practice "safe IP"?*

Woods: Yes, it's tempting, but we would get so much less done. From a security standpoint, we need to focus on segmentation and isolation. Depending on what the communications requirements are, this can be accomplished at layer 2 with switches, and VLANs. Another name for this is a de-militarized zone, or DMZ. This isolates traffic, but you still need something to connect that segmented network to the networks that it needs to communicate with, and isolate it from the networks that it doesn't. Using a router, or routing process, you can apply appropriate access control lists [ACLs] to the router interfaces.

If the necessary communication is limited to a known list of IP addresses or networks, this is an easy and acceptable solution. If the communication is from the internet in general, or the device needs to talk to the internet, then deeper packet inspection is preferable, which require a firewall. If you are using some Cisco routers and switches, they have a built-in firewall option called context based access controls, or CBAC for short. This is a cost-effective firewall, but it has limited bandwidth forwarding capability. Various other dedicated firewall options are of course available.

RW: *What kind of questions should engineers and IT managers be asking when working with the growing "Internet of Broadcast Things"?*

Woods: The obvious challenge is to keep the bad guys out of these devices. The less considered aspect is for devices that you are granting third-party access to.

For example, we had an emergency alerting device that we allowed the vendor to connect to, to inject proprietary data into our RDS system, which was then picked up on specialty radio receivers. In this type of situation, you have to assume the worst. You have to assume that the vendor, or bad employee, has a malicious intent, and once they have access to their device, that they might use that device to get to other devices on your network. The best option is to put their devices on an above-mentioned DMZ, and to not allow them to connect to anything they do not need to. In my case, they only needed to talk to the RDS encoder, so on their DMZ, I granted no outbound access.

RW: *How do firewalls play into this conversation?*

Woods: At the internet connection point, firewalls are an absolute minimum requirement. Additional processes such as intrusion detection and/or prevention should also be considered when you are protecting critical data such as personal information from your clients.

RW: *How about virtual private networks?*

Woods: VPNs come in two general forms: remote access, and point-to-point. Remote access VPNs allow your staff to securely access your private network. A big benefit to using this is that you don't have to open holes in your firewall to allow remote administration. Too often a broadcast engineer will open up a hole to do VNC or remote desktop access. At that point, your network security is as strong as your password and/or your authentication process. In my opinion, this practice should never be done. You are just asking to be breached.

Point-to-point VPNs are great for remote sites that you can only get internet connectivity to. Again, they keep you from having to punch a hole in the firewall at either site.

This brings up another topic: Remote, shared sites. It is not uncommon for a broadcaster to be leasing access in a shared building. If a point-to-point VPN is used, gaining access to your studio facility is as easy as gaining access to the remote site system, which in many cases is trivial. Make sure you lock down your equipment at these sites. Strong passwords. Locked racks, and secured network ports. On most managed switches, there is a feature called port security. This allows you to lock down the Ethernet ports to specific MAC addresses. If someone gains access to your rack and tries to plug their laptop into your switch, they will not be allowed access.

RW: *What is required to provide outside entities, such as alarm companies and security services, access to a transmitter site network while maintaining security of the network?*

Woods: Limit their access to a single, static source address. If they cannot provide that, then the answer is no. Then put their devices in a very restrictive DMZ. Only grant access to these devices over the absolutely necessary ports, and never allow them outbound access that they don't need. If their device needs access to the internet, that is not a problem. Just make sure you explicitly deny access to all network address ranges inside your private network first. Then allow them access to the internet. Tell them to use Google's DNS servers,

If a point-to-point VPN is used, gaining access to your studio facility is as easy as gaining access to the remote site system, which in many cases is trivial.

FROM THE EDITOR

Paul McLane

THIS ISSUE

JUNE 21, 2017

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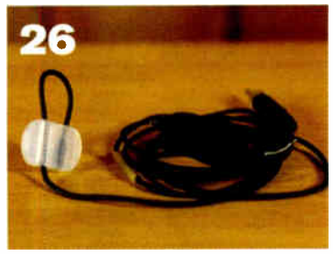

8.8.8.8, and an outside SMTP server if email is necessary.

RW: *What are the best secure methods for station personnel, such as engineers, to access Ethernet-enabled or controlled equipment at a transmitter site (e.g. secure port forwarding, VNC, etc.)?*

Woods: The best option is via a private connection such as microwave, or maybe Metro Ethernet. If internet access is the only transport, remote access VPN is the next best option. If that is not possible, consider something like TeamViewer. Make sure your password is solid, and that you don't let it get into the wrong hands.

RW: *If a backup ISP service is employed at a site that is otherwise LAN-connected to the studio, how is that securely integrated into the network?*

Woods: Just like it would be with a primary internet connection. First start with a managed firewall. If the ISP is only to be used when the LAN connectivity is down, use interior routing protocols to dynamically choose the network's default route. This is done by prioritizing the default route coming from the backup ISP firewall lower than the priority of the default route coming from the main ISP device. How to do that technically is outside the scope of this discussion, but is very easy to do in a managed network using Cisco or similar devices.

RW: *What other questions should we in the industry be asking about this issue?*

Woods: Our engineering community needs to learn how to think like nefarious people. I spoke with a naval commander in the cybersecurity division. Somewhere in that conversation, he said to me, "We love people like you. You build nice, neat, clean networks. Once we get in, we can get to anywhere we want." That was a very offensive statement, but unfortunately, very true. In my past career, I worked to build very robust, high-performing networks and systems. The game has very much changed. We now need to assume that everyone is a criminal, and protect our systems like our reputation depends upon it, because it does.

RW: *Anything else we should know?*

Woods: Many people assume they have some degree of anonymity because there are so many devices on the internet. They think someone with malicious intent would need to do a lot of detective work to find their site and devices, but it's really quite easy.

The *Shodan.io* site is a search engine for the "Internet of Things." By doing a Shodan search for your station's call sign [and] Barix or Burk, for example, you can see pages of listings for broadcast devices that are visible on the internet. Information such as IP address, site type, stream mode, connection status and content type is readily available.

You can save yourself a lot of pain by simply changing the default password on these devices to something more robust.

If you're not convinced that there is a crisis at hand, did you know that there are now exploits for network printers? Yes, printers can have agents installed on them to act as a Trojan horse, or to interrogate the print streams and capture confidential information. I am now planning on building a printer DMZ and isolating those seemingly benign devices as well.

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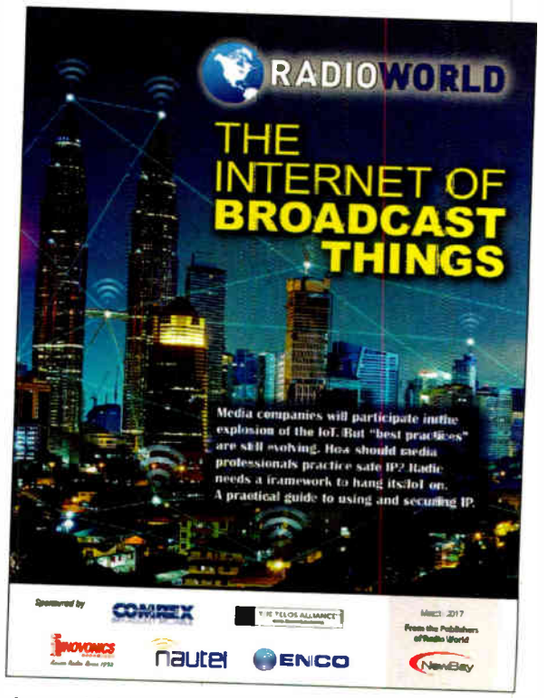
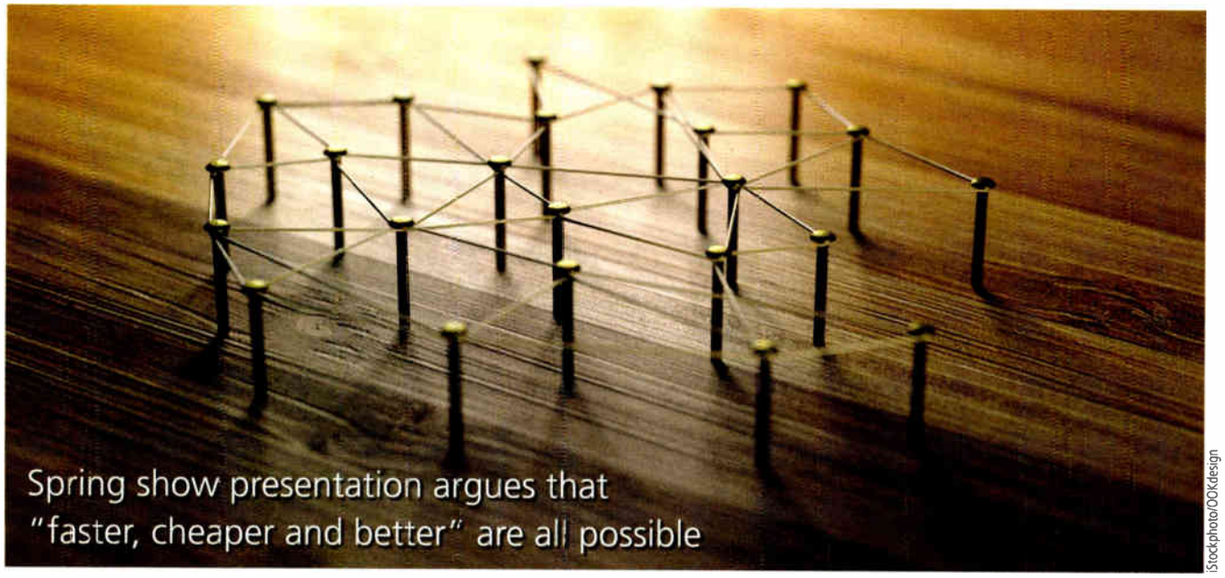


Access this ebook at *radioworld.com/ebooks.*

Shay Preaches Benefits of AES67 and AoIP



Spring show presentation argues that "faster, cheaper and better" are all possible

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RADIO IT MANAGEMENT

BY THOMAS R. MCGINLEY

We've all had to deal with the triple constraint rule of project management: "Of schedule, price and quality, we can have any two but never all three." You have to pick the two most important and tolerate the loss of the third.

Greg Shay, chief technical officer of the Telos Alliance, challenged that axiom in a spring NAB Show presentation in the Broadcast Engineering and Information Technology Conference, aimed at both radio and TV technical audiences.

Shay qualified his claim saying it was only possible in special cases, but that includes the recently adopted AES67 standard for audio over IP.

"Audio over IP intentionally leveraged R&D and technology from the much larger IT industry," he said. The challenge, he said, became figuring out how to use *standard* IT equipment for professional audio.

While competing vendors in the AoIP space mostly use standard IT industry switches for their AoIP networks, they have rolled their own largely proprietary implementations for the rest of the hardware component designs needed to deploy AoIP in a functioning network of studios and connected devices. Routers and mixing consoles of one manufacturer will not work as plug 'n' play with those of another manufacturer in the same operation as the industry had always been able to do in analog and AES3 platforms.

Shay said the power of AES67 helps put an end to that frustration: "The barriers of competing AoIP vendors are eliminated by the use of the AES67 industry standard. Thus technology and vendor cooperation are aligned."

Faster — AES67 allows AoIP products to work faster since they are software-based, enabling quick and easy reconfiguration, rapid prototyping, development and deployment. The total cable count is vastly reduced when designing and building new facilities. And the use of fiber optics brings much easier capacity upgrades as facilities grow.

Cheaper — Shay argued that since "time is essentially money," faster becomes cheaper. At the heart of the AES67 standard is the ability for manufacturers and end users to deploy "high-volume standard IT switches, rather than expensive custom (TDM-based) audio routers." Most AoIP vendors prior to AES67 based their software and hardware component implementations on proprietary designs. AES67 allows AoIP audio to convey through any standard IT Ethernet switch to any manufacturer's AoIP to AES3 or analog audio interface equipment.

The broadcast industry is tiny compared to the IT industry and the other industries it serves. The use of high-reliability IT network equipment is driven by many critical industries. AoIP under AES67 enables broadcasters to harness that hardware advantage in new ways. Deployment can be implemented on virtualized servers and regularized hardware. Online monitoring, diagnosis and easier maintenance come along as a bonus.

Better — AES67 extends the advantages of digital audio over ancient and inefficient analog but also moves beyond the limitations of AES3. Shay listed ways it is better:

- Pristine professional digital audio quality.
- No interference, hum, buzz or grounding problems.
- Reduction / elimination of audio cables.
- Seamless integration of local and remote contribution & production.
- User-friendly. Operator friendly. Journalist / reporter friendly.
- Able to create redundant audio connections, with scalable additional resources (from low to full).
- All data is CRC protected. Corrupt data always known.
- Synchronization, control, audio all on the same wire.
- Smarter systems use some of their power to catch, diagnose and recover problems.

SIP PROTOCOL

Shay described how Session Initiated Protocol as a basic component of the IP communications universe is shared in AES67.

The use of SIP is a valuable innovation in AES67 that is not possible in existing AoIP systems. He cited the example of a studio tech trying to figure out why an audio mic feed was missing in a typical studio router/console operation where the talent was waiting patiently in another studio. SIP offers 45 ways to diagnose the situation quickly and tell where such a problem lies.

Shay stated that "SIP represents a big step forward in the technology of making connections. This can include sophisticated features like forwarding and following, parking a connection to be picked up somewhere else, allowing a proxy to redirect, and as in the example, detailed system self-diagnostics."

He added, "As systems get smarter and more powerful, some of that power needs to be used for self-checking, self-analysis and self-diagnosis. Sophisticated system design should mean simpler operation for the users."

AN AES67 WARNING

Shay believes that real AES67 interoperability must be implemented like the worldwide cellular telephone system.

"The AT&T, Verizon, T-Mobile, Vodafone, EE , KPN, O2 networks can all connect to each other no matter what phone model is used: Apple, Android, Motorola, Nokia, HTC, Samsung ... they can all talk to each other."

However, many popular communications platforms on the internet do not talk to each other: Skype, Google Hangouts, FaceTime, GoTo Meeting, WebEx for example. "Shouldn't it be simple to Skype to a Facetime person?" he asked.

The kicker: All of these share common underlying network protocols, otherwise they could not be carried over the same network.

Shay identified the problem as "app disease:" Vendors using an app to control the customer base. "AES67," he continued, "is a technology standard, not an app."

He cautioned users involved with deployment of products using AES67: "Don't let your products be restricted by one particular AES67 control application, or one vendor's way of working. AES67 technology providers must have their implementations open and flexible, with multiple ways to be controlled and configured, including simple manual configuration."

Shay concluded with advice for users and those contemplating purchase of AoIP equipment for their facilities: "Work with vendors who themselves are strong companies tuned into the creation, use and promotion of industry standards and have been doing so for long enough to deliver with experience and excellence."

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

Tom McGinley is Radio World's technical advisor. He is a veteran radio broadcast engineer with Townsquare Media.

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SMART

(continued from page 1)

tainly rely on that a lot. It's pretty handy," Pai was quoted in RW's March 29 issue.

So the next big thing in consumer tech, it seems, is built around voice command hands-free personal assistants, and the speakers to access them constitute a fast-moving segment. Apple recently announced its HomePod; Microsoft reportedly has a speaker coming.

SKILLS WITH SKILLS

The subject definitely has grabbed the attention of radio broadcasters. The spring NAB Show presented an Alexa boot camp session featuring the Amazon Echo and Alexa interface. NAB officials told Radio World the session, aimed at developers and non-developers, drew tech representatives from numerous major radio broadcast groups.

The seminar focused on developing "skills" required to handle content as well as the distribution challenges involved with voice command technology, according to NAB. Separately there was a joint presentation by Amazon, Federated Media and XAPP that reportedly was also well attended.

NPR and its member stations, as part of NPR's "news everywhere" strategy, have sought prominent placement of station streams on Alexa and Google Home, and there's a new Skill for the NPR One app.

Mike Cooney, chair of the NAB's Radio Technology Committee and VP of engineering of Beasley Broadcast Group, said his company's digital development team has already developed a set of rules to describe each station so they can be found easier, typically involving a combination of call letters, frequency, location and slogan, as if programmed for a search engine.

"When I first began using [Echo] in late 2016 it didn't always find our radio stations. That was before we knew much about it. We have learned it's very important how you put your radio station information in TuneIn or iHeartRadio," Cooney said.

Beasley — which at this writing was considering the use of third-party app developers to develop skills or the Amazon Echo and other smart speakers — expects major growth thanks to the technology. "I think it is so new, a lot of us don't realize what we need just yet," Cooney said.

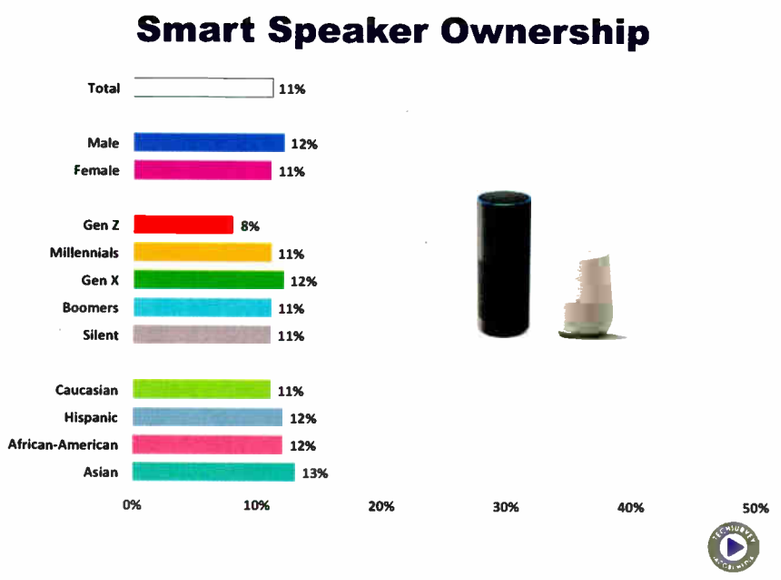
The digital department at Beasley, led by Executive VP of Digital Steve Meyers, develops digital platforms and apps, manages streams, handles ad insertions and oversees websites, according to Cooney.

Cooney himself owns an Amazon Echo in-home appliance and does find himself listening to more radio because of the convenience of using the Alexa voice-control technology.

BUILDING LISTENING?

Radio futurologist James Cridland agreed with Cooney's observation. "Many of my friends claim that their Amazon Echo has not just replaced their radio, but that they listen to more radio as a result."

Cridland, who lives in Australia and is managing editor of media.info, compares the use of Amazon Echo in the home to that of Android Auto in his car and other infotainment systems.



A slide from the Jacobs Media Techsurvey 13 captures ownership among U.S. radio station listeners of a product category that didn't exist not long ago.

> **I think it is so new,** a lot of us are still figuring out what we need to do to make this a good listener experience.
>
> – Mike Cooney

"I can control Android Auto almost entirely by speech. It plays podcasts, streams radio stations and occasionally Spotify," he said.

TuneIn and other aggregators are so far serving radio broadcasters well, but Cridland wonders if radio needs to reconsider its long-term strategy for smart speaker success.

"If the U.S. radio industry is happy about leaving the default 'skill architecture' to TuneIn — a company which isn't in the radio business, doesn't care about radio's future, is a gatekeeper that you don't control and one that actively sells ads in front of your streams — then I might suggest the radio business needs to take a long hard look at itself," he said. He'd like to see radio broadcasters "work together to ensure a strong radio experience in the United States and each country."

Other tech leaders point to the dramatic consumer shift to streaming services on mobile and other channels in-home as radio's best chance to boost listenership quickly.

Pat Higbie, CEO and co-founder of app developer XAPPmedia, said the "space is wide open," with consumers still establishing listening habits.

"Stations should make a push now and start forming those habits about radio listening as the default option," Higbie said. "The market is there for radio to seize."

XAPPmedia is working with radio broadcasters like Federated Media and its WBYT(FM) "B100" in Mishawaka, Ind., to move quickly to build Alexa skills to help leverage the platform, he said.

For example, in May, XAPPmedia client KXEG(AM) in Phoenix, Ariz., owned by Gabrielle Broadcasting, said it became the first Christian broadcaster to launch an Alexa skill. (From its announcement: "To start listening now, simply say to the Echo, 'Alexa, enable Twelve-Eighty The Trumpet skill.' Alexa will confirm the station is enabled and then listeners can simply say, 'Alexa, open Twelve-Eighty The Trumpet' to hear the live stream.'")

Higbie says stations should start by establishing a custom Alexa skill for the Amazon Echo. "This is important because everyone needs to claim their name. Only one B95 can have that name recognized by Alexa. Everyone that comes later will have to choose an alternative name," he said.

"It's even more problematic than the race to grab website URLs. This is about owning that relationship with the customer and not ceding it to an aggregator like TuneIn."

The company believes stations can monetize Alexa skills and has a page on its website devoted to that angle; it said Wendy's, ESPN and Progressive Insurance have participated. Other reasons, XAPPmedia says, include showing a station's personality, facilitating content discovery and offering time-shifted listening: "The best Alexa skills for radio provide listeners with multiple listening options, and on-demand access is an easy place for many broadcasters to start," the company states in a "best practices" white paper.

OPTIMIZATION

Mike Bergman, senior director technology and standards at the Consumer Technologies Association, said he was not surprised by radio's pursuit of a space on voice-driven tech, but hasn't seen enough data to determine whether radio broadcasters are yet capitalizing on listen-at-home integration of their streams in voice-controlled appliances.

"But they are participating heavily in that space and it seems to be a viable outlet for them. The experience for listeners is not really any different than listening on any other computing device, except for the voice-control development," Bergman said. "Radio needs to be present on these devices to avoid substitution."

Bergman said radio's effort to be "being found on smart speaker appliances" is similar to "search engine optimization," with stations needing to educate listeners on the quirks of listening online.

"Voice control is very easy, consumer-friendly and convenient. It's going to usurp the market. But the conversion of manual control from buttons and dials to voice control is very different from how radio typically thinks. Personal assistants will learn listening habits and

(continued on page 10)

More than just an IP Codec...

"ViA's touch screen is a game changer for us. It allows you to access what you want quickly and this is particularly useful when connecting over Wi-Fi."

- John Herath, Director of Operations, Farm Journal Radio

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SMART

(continued from page 8)

preferences, and the smarter and harder radio works now to find a place, the more successful in the space it will be," Bergman said.

Higbie of XAPPmedia thinks radio can go well beyond control to interactive voice engagement. "Radio has always been a one-way communication medium. Voice assistants like Amazon Echo change that paradigm. Listeners can now talk back to radio in real time and be offered a tailored listening experience."

HANDS-FREE, VOX-ACTIVATED

Major radio groups are well aware of what is happening in the home, said Fred Jacobs, president of Jacobs Media. The consulting firm is working with several radio broadcasters on ways to maximize opportunities for potential listeners to find their radio stations on smart speakers.

"More and more devices from robots to cars to security systems are now being enabled with voice commands. The days when we type in search terms into boxes on mobile phones, tablets and computers are fading and becoming secondary to a hands-free, voice-activated environment. Radio needs to move in that direction to fit in," he said.

Jacobs Media offshoot jacapps, a mobile apps firm that has created more than 1,000 apps for the Apple and Android platforms, is now partnering with Amplifi Media to strategize and create voice command solutions for the radio and podcasting industries. The endeavor, named SonicAi, will focus on the Amazon Echo and Google Home appliances.

"Learning the invocation for Echo and then doing the proper programming, so that when people use that command, it will go to your stream is a critical piece. If the listener can't find you it's not good," he said.

SIGNIFICANT OPPORTUNITY

But the introduction of these "hot new gadgets" creates a significant opportunity for the radio industry and podcasters, Jacobs said.

"Our research has shown the presence of radio in homes has been declining, especially among millennials. Our Techsurvey 13 showed 88 percent of homes now have radios — which may seem high, but the answer not too long ago was 100 percent. Anecdotal evidence shows it's challenging to walk into Best Buy and buy one. But these voice command appliances can put radio back in the home. It then becomes a matter of people finding your streams," Jacobs said.

A lot is at stake, according to Jacobs, including the potential for a radio revival on the home front.

"While the workplace is awash with ear buds in cubicles and the car dashboard is crowded with more entertainment options, radio in the home now has a chance to make a revival," he wrote on his blog.

Radio does a mediocre job of letting the audience know where and how to find their stations. Cell phone, streams, now smart speakers … And it all counts.

– Fred Jacobs

Radio broadcasters also should begin thinking about ways to "more elegantly" cover on-air commercials on their streams, which "tends to be a bit clunky" at times, Jacobs said.

"The user experience has to be first and foremost in the process. First, how easy it is to find your station and then how the station sounds when presented."

The first thing a broadcaster should do is educate listeners about how many different platforms radio is now available on and how to find them.

"Radio does a mediocre job of letting the audience know where and how to find their stations. Cell phone, streams, now smart speakers … it's finally dawning on people that a radio station needs to market themselves," Jacobs said.

"And it all counts. The watermark that Nielsen PPM looks for is recorded on these streaming outlets. You can [get] credit for a listener no matter how and where they listen."

HOW ABOUT A CHIP?

Some in the radio industry want to capitalize further on Amazon Echo and Google Home services by pushing for integration of an FM chip in the devices, which would allow for reception of over-the-air radio stations, similar to the NextRadio app for smartphones.

Paul Rotella, president of the New Jersey Broadcasters Association, said incorporating an FM chip into such voice-controlled devices would be better than listening to a radio station's audio stream.

"That would also enable it to be used for local emergency alert warning," he said.

However, Beasley's Cooney doesn't anticipate that development.

"I really don't see this as a viable option. As far as the Alexa user is concerned there is already radio in that device. It's not over the air but instead a radio stream. I just don't think you'll ever get FM chips in all of these voice-controlled connected devices."

Another concern is an increase in streaming royalty fees broadcasters could incur as the growth of listening via smart speaker continues. As people listen more in-home to more radio via these smart speakers, those fees will increase and the cost could be significant.

"It's a balance everyone is still trying to figure out," Cooney said. "At the current royalty rate, if you converted every over-the-air listener into a stream listener, it could potentially put every broadcaster out of business."

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

IN CASE YOU MISSED IT

Radio World and its NewsBytes e-newsletter complement one another; the magazine brings you news analysis, features and deep-dive coverage 26 times a year while the daily newsletter provides a more immediate snapshot of one day's regulatory and technology headlines. To receive the free newsletter, click the Subscribe tab at radioworld.com, *then Newsletters.*

Here's a sampling of what NewsBytes readers learned about in recent weeks:

➤ Mexico Requires FM Chip Activation
The effort to push activation of FM chips in smartphones in North America is getting a boost from Mexican lawmakers, though the tuning function must be "available" in the device in the first place, which seems to leave Apple off the hook.

➤ FCC Sets Date for Translator Auction Window for AMs
The commission laid out the next step in its multi-phase translator approach to "AM revitalization," setting a short window for Class C and D AM stations to apply.

➤ Commission Lays Out Instructions for AM's Next Translator Window
It followed up the above development with detailed instructions.

➤ SiriusXM Invests $480M in Pandora
The satcaster came to the aid of the streamer with an investment of almost half a billion dollars. Pandora is also shedding its ticket business to raise more cash.

➤ Broadcast Engineer Frank McLemore Dies
He died at age 72 after a car crash in Phenix City, Ala. He was a ham operator (N4TKT), former FCC agent/inspector, inspector for the Alternative Broadcast Inspection Program and owner of a two-way radio shop.

➤ New "Blue Alerts" May Be Coming to EAS
The FCC will consider adding a dedicated event code, BLU, for Blue Alerts — and whether a dedicated code can enable nationwide delivery of those alerts.

➤ New International Shortwave Broadcast Guide Available
Teak Publishing announced that the Summer 2017 International Shortwave Broadcast Guide electronic book is available, written by Gayle Van Horn.

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Axia® invented AoIP for broadcast in 2003. Fourteen years later, Axia users enjoy the largest network of AoIP broadcast equipment companies—the 100+ Axia Livewire® partners. When you have Axia gear, you are part of a growing, innovation-driven ecosystem—not locked to just one company's vision of the future.

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Guard Against Porcupines … With a Flower Pot?

Plus a roundup of other useful tech tips from readers

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

New Hampshire Public Radio's Steven Donnell sends in a simple critter anti-climb guard. He placed it around a coaxial line at a transmitter site.

Shown in Fig. 1, the guard consists of a base from a large plastic flower pot that Steven purchased at a big box store. The base has a 2-inch hole in the center that fits perfectly around the 1-5/8-inch line. Steven cut a slit in the plastic to slide it onto the line and used a hose clamp along with a couple of zip ties to hold it in place.

This prevented some pesky critter (Steven suspects it was a porcupine) from climbing the line and chewing on some of the smaller cables.

So here's a question for our readers: When mounting studio microphone booms, and running the mic cable down to a desk-mounted XLR plug, as shown in Fig. 2, how do you prevent the cables from becoming twisted around the boom?

Fig. 1: The base from a flower pot discourages animals from climbing outdoor coax.

Fig. 2: Microphone cable terminated in an XLR.

Fig. 3: However, turning the boom can rip the cable from the connector.

As pictured in Fig. 3, the twisting of the boom eventually stresses and pulls the soldered wires from the connector. Send in your solutions!

Florida engineer John Collinson wrote about the Sencore Z Meter several issues back. It's an excellent test instrument for troubleshooting to the component level. The snag was what to do if the unit needed repair.

After a number of calls and an in-person discussion with a Sencore representative at the NAB Show, it turns out it's not an "all or nothing" thing. Sencore will repair some of their pieces of legacy test equipment, but unfortunately the technician who was assigned to the Z-meter line of test equipment left the company last year and apparently has not been replaced.

John notes that the service manager with whom he was corresponding was very cooperative and gave several hints and helps in troubleshooting. Schematics may possibly be available for a reasonable charge, bearing in mind that one of their ongoing nemeses is parts becoming obsolete.

For repair on other Sencore test equipment, it's likely worth contacting them to explore the possibilities. They seem willing to help to the extent they can.

(continued on page 14)

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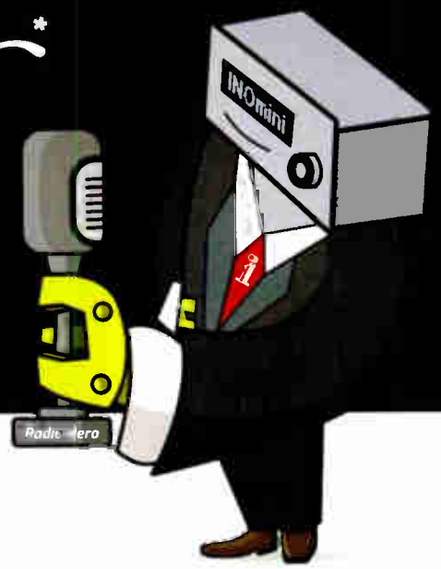

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MODEL 703

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MODEL 402

RDS Sign Driver

MODEL 610

Internet Radio Monitor

NEW **NOVIA FAMILY OF AUDIO PROCESSORS**
For AM (236), Stereo (262), and FM (272)

WORKBENCH

(continued from page 12)

Fig. 4 shows a SESCOM model XLRJ45 used by Larry Holtz and Phil Biehl at All Classical Portland. This is a compact adaptor used to convert an XLR to an RJ-45 connector.

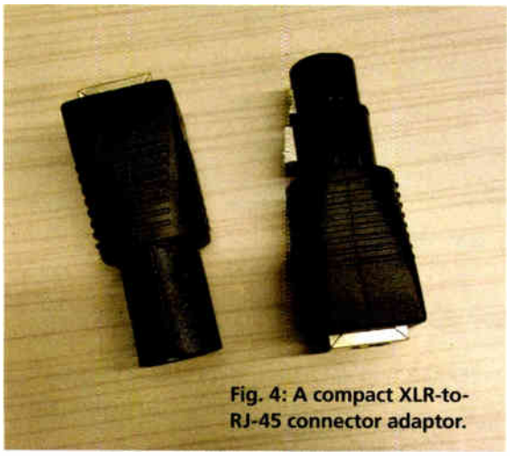


Fig. 4: A compact XLR-to-RJ-45 connector adaptor.

Fig. 5: The small adaptor works well when space is at a premium.

You can also see in Fig. 5 how compact it is. The adaptor makes it possible to use Ethernet cable and is available in four versions: a three-pin male or female XLR or a five-pin male or female XLR.

The adaptors are sold by Markertek (*www.markertek.com*). Search "SESCOM DMX-3XM" or "DMX-3XF" in the Markertek search block for more information.

WETA(TV) engineer Bill Seabrook comments on the measurement of capacitor electrical series resistance, as discussed in the May 24 column.

From the online Digi-Key Techzone articles, equivalent series resistance describes losses associated with moving charge through a capacitor. The resistance of the electrode and lead materials is a contributing factor, and losses occurring within the dielectric material itself also occur and are often dominant.

The relevance of ESR to capacitor selection is twofold: 1) It influences the AC response of the capacitor, and 2) it imposes limits on the amount of AC current that can be permitted to flow through the capacitor due to thermal limitations. Current flow through a capacitor's ESR results in I^2R losses just like any other resistor, causing a temperature increase within the capacitor that contributes to diminished device longevity."

Bill recommends the EDS-88A CapAnalyzer, for measuring ESR. This instrument has saved him hours of time in finding defective capacitors, without having to remove them from the circuit boards.

Like many of the capacitor analyzers on the market, the EDS-88A permits analysis of a board consisting of dozens of components in just a few minutes. Search "ESR capacitor analyzer" for a variety of offerings.

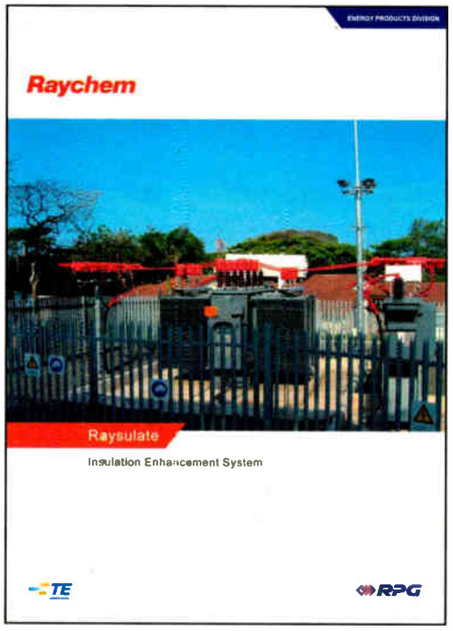


Fig. 6: The cover of an offering from Raychem.

For higher-voltage protection, follow this link to a PDF from Raychem.

Chuk Gleason's wife used to work for Raychem as a quality control engineer. Chuk hails from Cary, N.C., and Raychem's insulation enhancement system is an interesting solution to squirrels or other climbing animals shorting out high-voltage transformers and lines. Find out more at *http://raychemrpg.com/epd/pdf/insulation_enhancement_system.pdf.*

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.*

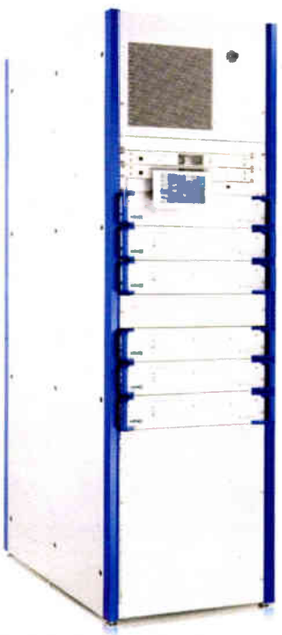
Author John Bisset has spent 46 years in the broadcasting industry and is still learning. He handles West Coast sales for the Telos Alliance. He is SBE certified and is a past recipient of the SBE's Educator of the Year Award.

WHO'SBUYINGWHAT

Email announcements to radioworld@nbmedia.com

When replacing an older air-cooled tube transmitter Blue Ridge Broadcasting Corp.'s **WMIT(FM)** in Asheville, N.C., chose to go with a **Rohde-Schwarz** liquid-cooled solid-state THR9 transmitter. The station immediately noted that its air conditioning requirements plummeted from 15 tons to four tons. The THR9's form-factor also reduced the TX footprint.

A bonus turned out to be the quiet cooling system. Chief Engineer Joshua Pierce said, "When walking in the room, the only noise comes from the auxiliary equipment, and the transmitter delivers 76 percent efficiency right out of the box." He added, "After installing the R&S THR9 liquid-cooled transmitter, I'm done with air-cooled." ...



Rohde-Schwarz THR9

This spring, **Varick Media** expanded its partnership with **Triton Digital**. The digital marketing company will utilize Triton's programmatic online audio marketplace a2x in Canada. a2x enables advertisers and agencies to buy digital audio advertising programmatically in real time, and scale their campaigns across and international publishers through a single marketplace. ...

CBS Radio has signed an agreement to use **TrafficLand's** video management technology. The TrafficLand VMC service provides integrated access to real-time video from over 20,000 state and local U.S. Department of Transportation traffic cameras through an interface that was built by TrafficLand for traffic reporters and first responders.

The VMC service gives CBS Radio regional news operation centers and radio stations 24-hour access and the ability to monitor rush hour, traffic bottlenecks and how incidents affect traffic conditions. The VMC service also lets users set up multi-camera displays in logical groupings that can be stored for repeat use and viewed as needed for quick reference updates. ...

British Columbia-based **Jim Pattison Broadcast Group** has chosen **SoCast** to centralize digital operations for its 43 radio stations, many of which had been acquired over the years and thus had different content management systems. Through SoCast's CMS, JPBG redesigned each station's website and all brands can now be controlled from a single platform.

The SoCast tools enabled Pattison to create a better listener experience, improved employee workflow and still enabled the stations to individually customize their digital presence through unified management of web, mobile apps, social content and player all in one dashboard, according to JPBG President Rod Schween.

SoCast
Digital Solutions for Broadcast

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Introducing VOLT, the hotrod new processor from Omnia that gives you more processing power and sonic performance in one rack unit than others give you in three. Sharing technological lineage with top-of-the-line Omnia products like the Omnia.11, VOLT drives you faster, with exciting sound that will take you from zero to *100* in seconds! In the race for electrifying, competitive, market-leading sound, VOLT puts the competition squarely in the rearview.

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2017 BEST of SHOW RADIOWORLD

Congratulations to winners of the Radio World Best of Show Awards at the 2017 NAB Show. Participating companies nominated new products and paid an entry fee for consideration; winners were chosen by a panel of radio broadcast engineers. To learn about all the nominated products, visit the Resource Center at *radioworld.com* and click on the Awards tab to view the Best of Show Program Guide.

All Photos by Jim Peck except where noted.

DEVA Broadcast DB4402 Monitoring Receiver & Radio Streamer

The DB4402 is a dual-channel FM monitor with onboard features including stereo decoder; stereo presence detector; RDS/RBDS decoder with BER meter; MPX, pilot and RDS deviation meters; RF spectrum analyzer; oscilloscope; and embedded web server. Alarms can be set for RF, MPX, pilot and RDS and relayed via email, SMS or SNMP. DEVA also cites its "Restore Factory Defaults" feature. With its basically blank front panel, the DB4402 is designed for remote and PC operation. Pictured is Todor Ivanov with RW's Paul McLane.

DJB Software iBroadcaster for iTunes PRO

For the iTunes generation comes the iBroadcaster for iTunes, bringing the iTunes interface and look to broadcast automation. It might look like a simple interface but it has powerful professional features such as touchscreen operation, 10-event playstack, hot keys, daily logs, genre tabs, grid scheduler, etc. It supports MP3, M4a and WAV files. As a bonus it is compatible with VST plug-ins and has an onboard eight-band EQ. Pictured is the DJB Software team: Ron Taylor, Joe Myers, Ron Paley, Robert Parsons, Steven Bell and Ginny Crowe.

NextRadio Dial Report

Dial Report measures broadcast radio, fed from the NextRadio app, and delivers the insights found in digital advertising channels. The company calls it the point of access to the largest source of processed data on FM radio consumption and behavior. It can provide listener analytics, content intelligence and ad campaign analytics. Shown are Paul Brenner, Ben Husmann, Liz Smith, Stephanie Young-Helou, Libby Hiple, Mary Burney and Raul Antillon.

Wheatstone AirAura X4 Digital Spectral Processor

The X4 contains tweaked popular features of previous AirAura models such as improved multipath mitigation, redesigned composite processing with selectable lookahead limiting/clipping, baseband192 composite AES connectivity along with a full set of analysis displays. It adds a redesigned bass processor, enhanced controls in the iAGC, RDS capabilities and includes Wheatstone's HD/FM audio alignment plus pairing its 31-band limiter with its clipper. Shown giving the four-sign are members of Wheatstone's processing team Mike Erickson, Jeff Keith and Steve Dove.

Sound4 Big Voice² Three-Band Voice Processor

Offering analog and digital AES67 I/O, the Sound4 Big Voice² is powered an HQ-Sound 192 kHz processing engine. Onboard tools include DeEsser, three-band noise gate, pre-EQ four-band parametric, three-band dynamic processor, post-EQ four-band parametric and brick wall limiter plus other goodies such as reverb and "Dominate-It" for highlighting a lead voice in a crowd. Exulting are Vincent Defretin, Mike Oberg and Camille Gonnet.

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outdoor unit

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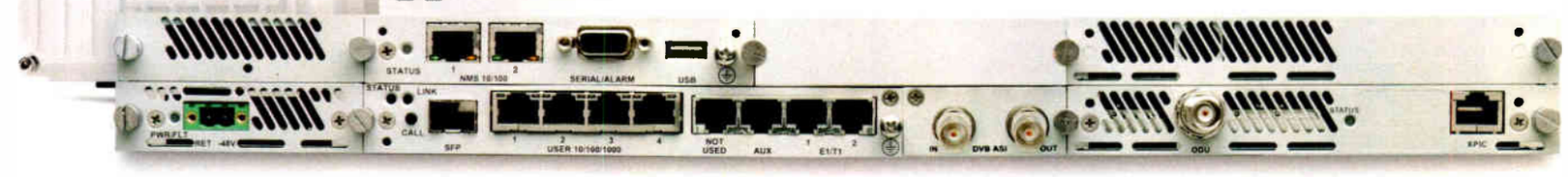
EVENT systems are fully bi-directional including a Software Defined Indoor Unit (SDIDU) and Outdoor Unit (ODU), eliminating the need for costly waveguide hardware. The ODU is available in the license free 5.8 GHz band, or licensed 11, 18, or 23 GHz bands. Appropriate external antennas are selected based on path length.

indoor unit



INTELLIGENT SYSTEM DESIGN

Spectrum-scalable digital radios with user-selectable data rates enable broadcasters to have greater flexibility in STL planning and future growth. The integrated T1/E1 and Ethernet interfaces allow for a combination of T1/E1 and IP packet data.

IP APPLIANCES AND APPLICATIONS

Offer IP transmitter control, surveillance security, and site monitoring to reduce downtime, and protect valuable station assets while saving travel time to the site.

REMOTE MIRRORED SERVERS

From the transmitter site, offers backup of business records and programming content to get you back on the air quickly in the event of a studio outage.

EMAIL AND INTERNET ACCESS FROM THE TRANSMITTER SITE

Saves engineers time accessing manuals or technical support from manufacturers during maintenance sessions.

SIMPLE NETWORK MANAGEMENT PROTOCOL (SNMP)

Full SNMP package with GUI provides easy monitoring and configuration changes.

Contact The Moseley Sales Team to Custom Configure Your EVENT STL/TSL Today!

moseleysb.com

All Photos by Jim Peck except where noted.

Telos Alliance Omnia Volt Audio Processor

Using core technology with lineage from top-of-the-line company products like the Omnia.11, the Volt features six separate AGC sections; five time-aligned limiter sections; deep bass, warmth and stereo enhancers for broadcast format versatility and quick, easy tuning. The Volt offers QuickTweak, a simple set of controls that can turn anyone into an expert. Pictured are Dave Collins, Geoff Steadman, Mary Ann Seidler, Frank Foti, Derek Pilkington and Cornelius Gould.

Nautel HD MultiCast+ Importer/Exporter

Nautel says that the HD MultiCast+ is the simplest and most affordable system to get a radio station into HD Radio. In a 2RU package are multichannel audio card, GPS receiver and Nautel Reliable HD Transport for quality efficient data transport. HD MultiCast+ platform can be operated in all-in-one mode or as Importer or Exporter, allowing operators to match it to their specific studio-transmitter site topology. Celebrating are Chuck Kelly and John Whyte.

WorldCast Systems Solar FM Retransmitter

Designed for outdoor operation in areas with limited electrical infrastructure or for temporary installations, the Solar FM Retransmitter can receive audio from a number of sources and rebroadcast it across a 6+-mile area for up to 10 hours per day. That can be extended further with the hybrid AC power system. The turnkey system includes solar panel, NiMH battery, transmitter, DVB-S/S2 satellite receiver, remote controller with remote control software. Enjoying their win are Ken Kearney, Jean Lafont, Eduardo Villanueva Sanz, Gregory Mercier, Nicolas Boulay, Tony Peterle, Christophe Poulain and Kevin Campbell.

Broadcast Bionics Skype TX for Radio

The Broadcast Bionics team calls this "radio's answer to Skype." Developed in coordination with Skype's owner Microsoft, Skype TX for Radio is aimed at bringing high-quality internet-sourced video and audio interviews, remote shows and conferencing into the broadcast studio. The program is designed for simple operation and works with the company's PhoneBOX4 talk show system. It will accept up to 14 calls per Skype account. Pictured are Dan McQuillin and Duncan Smith.

Wheatstone VoxPro7

The company is touting the VoxPro editor/recorder's signal-processing prowess to let talent quickly clean up phone calls for on-air presentation. This dynamics and EQ toolset includes parametric EQ, de-esser, compressor, expander, limiter and noise gate for processing call-in and talent tracks independently or jointly. VoxPro7 is available immediately as an upgrade to existing VoxPro versions in the field. Accepting from Paul McLane, center, are Wheatstone's Jay Tyler and Rick Bidlack.

Need more from your audio logger?

- Long form and compressed file formats
- Talent air checks
- "Best of" show recording
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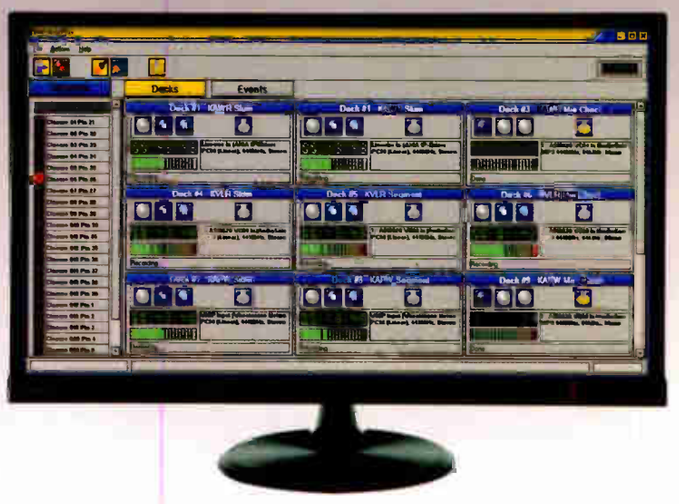
- Continuous program skimming
- Remote file verification through a web interface



Call (888) 274-8721

(888) BSI-USA-1

or email us at sales@bsiusa.com

Paravel Systems
WallTime NTP Clock & Notification System
The WallTime NTP clock and notification system is the first to combine several essential services into a streamlined product. In one source are an analog clock display with widgets such as station logo, segment time counter and a notification status and alert monitor — all can be displayed on a high-definition (1080p) monitor. Shown is Fred Gleason with Paul McLane.

All Photos by Jim Peck except where noted.

Inovonics AARON 655 FM/HD Rebroadcast Translator
The AARON 655 introduces digital HD Radio to Inovonics' line of rebroadcast/translator receivers. It can select among multiple program sources: off-air analog FM, HD Radio channels HD1–8, IP-streamed programming and analog and digital line inputs. An onboard RDS/RBDS encoder can regenerate and customize incoming data or convert HD Radio PAD or streamed metadata to the RDS display format while an onboard processor offers 10 factory and 10 user presets. Advanced off-air metering tools include an FM/HD BandScanner for a spectral display of the entire band at the receiver location. Shown are Josh McAtee, Mukesh Chaudhary, Jim Wood, Gary Luhrman, Zach Calden and Ben Barber.

IQOYA *CLOUD

Digigram IQOYA *Cloud SaaS
Built on Digigram's secure SIP broadcast infrastructure, the IQOYA *CLOUD SaaS provides simple real-time control of all registered ACIP codecs across a network. Because all codec brands appear the same way within the browser interface, management is as straightforward as clicking a mouse. Additional IP codecs from new sites and correspondents can securely be added to the fleet in order to enhance coverage. As a cloud-based software IQOYA *CLOUD has more flexibility than a hardware-based system and lessens the need for no-site IT personnel.

Photo by Wheatstone

Wheatstone
PR&E DMX Console
Following the company's acquisition of PR&E in February, there's a new PR&E DMX console line. Suitable for the two/three-studio facility, the console is standalone studio system with console surface and 1 GB Ethernet networking. Available in eight- or 16-fader mainframes, the DMX has four program busses with bus-minus on every fader. The console has talkback and cue functions, EQ/dynamics, control room, studio and headphone monitors, LED metering, built-in timer, and four event recall. Shown are Darrin Paley, Kelly Parker, Jay Tyler and Phil Owens.

Read the full Best of Show Program Guide at *radioworld.com*. Go to Resource Center, then Awards.

BROADCAST BIONICS

Skype TX for Radio

Radio's Answer to Skype

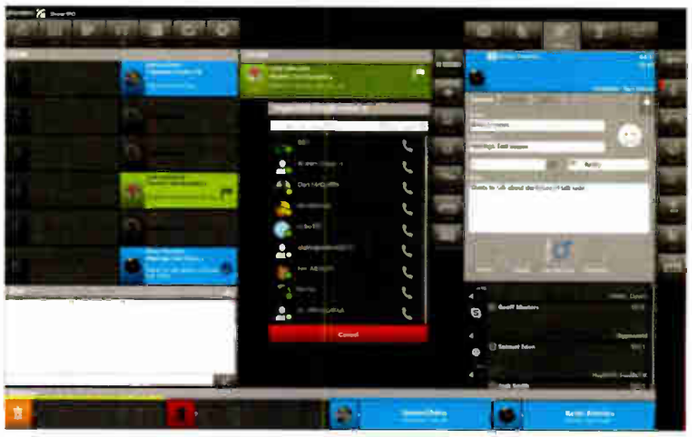
Broadcast Bionics has been working in partnership with Microsoft to develop a solution fitting Skype calls into the demanding workflow of radio broadcasters. The result is Skype TX for Radio, a real game-changer in audio quality, cost and simplicity of operation for talk radio, remote hosts, guests and reporters in the field. Transforming the way broadcasters make and receive Skype calls in the studio and integrating Skype seamlessly alongside traditional phone calls, SMS and social media.

For the first time, radio stations can deliver full multiline talkshow and contest formats using Skype. With multiple, codec-quality calls, all from a single PC. In fact, Skype TX for Radio delivers up to 16 lines from a single Skype TX for Radio server (or virtual machine), making the system highly affordable and hugely scalable.

Stations have access to millions of global Skype users who can all make codec quality contributions directly from their mobile phone, desktop or web browser. Skype TX for Radio opens new interactive possibilities for developing countries, enables a single point of contact for global broadcasters and allows interaction with podcast/streaming stations without access to traditional phone lines.

Skype TX for Radio can even accept traditional phone calls without a phone line for Skype accounts with a Skype number. Skype TX for Radio is seamlessly integrated alongside existing radio workflows through the PhoneBOX4 user interface. PhoneBOX4 combines Skype calls with traditional phone lines as well as SMS and social media.

Skype TX for Radio integrates access to the full Skype directory and search functionality into PhoneBOX4 as well as adding PhoneBOX4's caller history, analytics, visual talkback and recording functionality to Skype calls. Call details and even the Skype avatars can all be displayed on



Virtual Director, so streaming video and content shared on Facebook and Twitter becomes even more compelling.

Using Skype TX for Radio, reporters can contribute immediately to update rapidly changing situations, sports commentary or results, without the need for taking specialist broadcast hardware into the field. Skype TX for Radio has the capacity to allow Skype to be included in the call for action in talkshows and contests. Accepting up to 14 calls per Skype account and supporting multiple Skype accounts, lines and devices. Offering a high-quality way to accept, answer and screen high volumes of calls.

For high-quality audio, from anywhere in the world, Skype TX for Radio is the answer.

2017 BEST of SHOW RADIOWORLD

www.bionics.co.uk

Is Your Station Ready for Radio Influencers?

This strategy is social influencer marketing for radio stations, 2.0

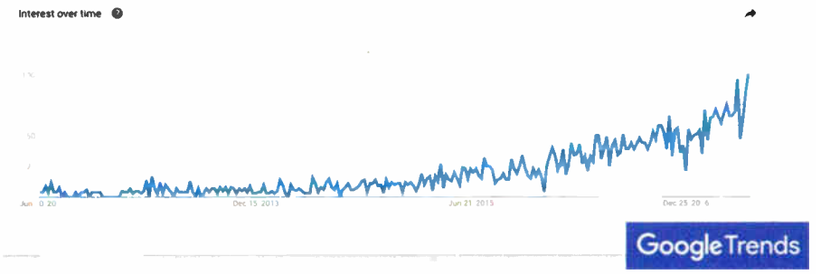
Disruption in the advertising industry can be a good thing. It offers a new avenue for messaging successfully and for growing revenues beyond the norm.

This positivity works for the radio industry only when we recognize that a massive change has occurred in advertising.

The current disruption to which I am referring is "influencer marketing."

In March 2015, I penned a piece called "Use Influencer Marketing to Your Advantage." I advised radio stations to delve into the burgeoning field of social media influencers and to use station-operated social platforms most effectively. While I contend that this should remain a priority in your own marketing initiatives, I'd like now to propose that radio enter the influencer game and compete directly for advertising revenue in this red-hot disruptive approach.

For the uninitiated, influencer marketing utilizes social media personalities/content creators to feature products and services through authentic storytelling, primarily on their Facebook, Instagram, YouTube and Snapchat platforms. The influencer is hired by an advertiser to go into interesting detail about his or her experience of their product or service through photos, video and text. Typically, influencers are compensated based on their reach, engagement and then quantity of their posts.



This Google Trends chart illustrates how mindshare and awareness of influencer marketing has increased dramatically over the past five years.

IMPORTANT TERMS

Let's take a moment to define these terms.

I've seen people use the term "reach" rather loosely — sometimes referring to the total number of followers, sometimes to the actual number of people reached organically with one post. These numbers are quite different. It's possible for an influencer to have a huge number of followers but for just a fraction of their followers to see their messaging; fortunately, platforms provide these key performance statistics.

Engagement indicates audience interaction with the posted content — view, like, share. It's important to understand this, if you're going to devise new metrics to what I'm proposing as "radio influencers."

The kneejerk, old-school reaction to radio influencers might conclude that they are merely radio personalities endorsing products, much as they've been doing since the beginning of the medium. This is not at all what I'm proposing.

This new approach requires authentic, extemporaneous storytelling using commercial airtime over multiple minutes — perhaps even an entire stop-set — with repeated frequency of these segments.

As a bonus, the messaging would be supplemented with written content, video and/or images and pushed out through every available social channel used by the station and the personality. I recommend that the station also allocate funds to "amplify" the social part of the plan so that it's seen by more than just the organic following.

PROMO POWER

Mark Lapidus

WHO COULD FILL THIS ROLE?

Who is capable of a being a "radio influencer?" Personalities with great ratings/sizeable audiences, who have the talent to weave products or services into real storytelling. Be certain to have a great producer on board who can spice up the story with just the right sound — actualities, music, sound effects, etc.

These select stars must be enthusiastic partners in this venture and should be well-compensated. Both station and personality do have to agree that the advertiser is the right fit and will not damage the reputation or brand of either party. Advertisers who already use social influencer marketing know that the bigger the star, the less control they may have over every aspect of the message, so it is really important to set expectations about how these segments will be created, reviewed and then approved.

Wait a second ... don't we have to disclose that an influencer campaign is paid advertising? According the FTC, yes, you do! How you do that is between you and your legal counsel, but this is not an insurmountable hurdle. If done with care, it will not affect results.

Could this really generate incremental revenue? Influencer marketing agency MediaKix claims that the influencer category will grow to be as much as a $10 billion market by 2020. Wouldn't the radio industry like a share?

Be among the first to step up and take advantage of the influencer game.

The author is president of Lapidus Media. Email him at marklapidus1@gmail.com. *Find past articles at radioworld.com, keyword Lapidus, or click on Promo Power under Columns & Views.*

INOVONICS INC.

AARON 655 FM/HD Rebroadcast Translator

Unparalleled Sensitivity of FM & HD1-8 Program Sources for Rebroadcast

AARON 655 introduces digital HD Radio to Inovonics' line of high performance rebroadcast/translator receivers. The AARON series excels in even the most challenging reception conditions, combining premium features with unparalleled performance.

AARON 655 can select among multiple program sources: off-air analog FM, HD Radio channels HD1-8, IP-streamed programming and analog and digital line inputs. The included RDS/RBDS encoder can regenerate and customize incoming data or convert HD Radio PAD or streamed metadata to the RDS display format. The composite/MPX output is complemented by configurable analog and digital line outputs

More than just a receiver, AARON 655 includes comprehensive audio processing with 10 factory and 10 user presets. This makes it easy to craft a custom "sonic signature" from any selected program source.

In addition to quick and easy front-panel setup, an IP interface allows two-way program streaming, plus total remote addressing and control with any PC or mobile device, including remote listening and full SNMP support.

Reception alarms may be programmed to switch programming to backup sources. Alarms trigger local tally closures and instantly dispatch SMS/email notifications to selected personnel. Alarms are also logged for later analysis.

AARON rebroadcast receivers feature a "responsive" Web Interface, allowing complete setup, listening, logging and control of the unit from your PC, or mobile device. Reliable two-way connectivity is ensured with a built-in Dynamic DNS utility. Advanced off-air metering tools include an FM/HD BandScanner™ for a spectral display of the entire band at the receiver location. Analog-FM auto-blending and other receiver parameters are controlled via manual or automatic reception processing.

FEATURE HIGHLIGHTS

- Uncompromising DSP-based (SDR) receiver performance
- A built-in BandScanner™ for local RF spectrum analysis
- Accepts program audio from analog FM, digital HD1 through HD8 programs, streaming sources and analog or AES-digital line inputs, all with assignable failover audio backup

- Audio processing with AGC, parametric EQ, bass "punch" enhancement, multiband compression, independent broadband / HF peak control and composite clipping
- A regenerated and peak-controlled composite/MPX output, plus balanced analog and AES-digital program line outputs for exciters with built-in stereo generators
- An internal RDS/RBDS encoder that can customize incoming off-air RDS data, convert HD Radio PAD to RDS, convert streamed metadata to RDS, or receive IP Telnet data
- An intuitive remote-control Web Interface with remote audio monitoring; self-logging reception alarms give instant email and text notifications
- SNMP remote monitoring and control of all AARON 655 functions

2017 BEST of SHOW RADIOWORLD

www.inovonicsbroadcast.com/model/655

Shoot Video for Radio Like a Pro

Tips from a professional on how to get the best out of a local shoot

VISUALRADIO

BY TRAVIS GILMOUR

Although we're primarily documentary and corporate video producers, my Video Dads partner and I have worked in public media a long time, so occasionally a public radio station will ask us to help out on a video shoot. Music performance videos are becoming a huge part of radio station content, so we're always thinking, how do we bridge the audio quality expectations of a radio production with the real-world demands of video production?

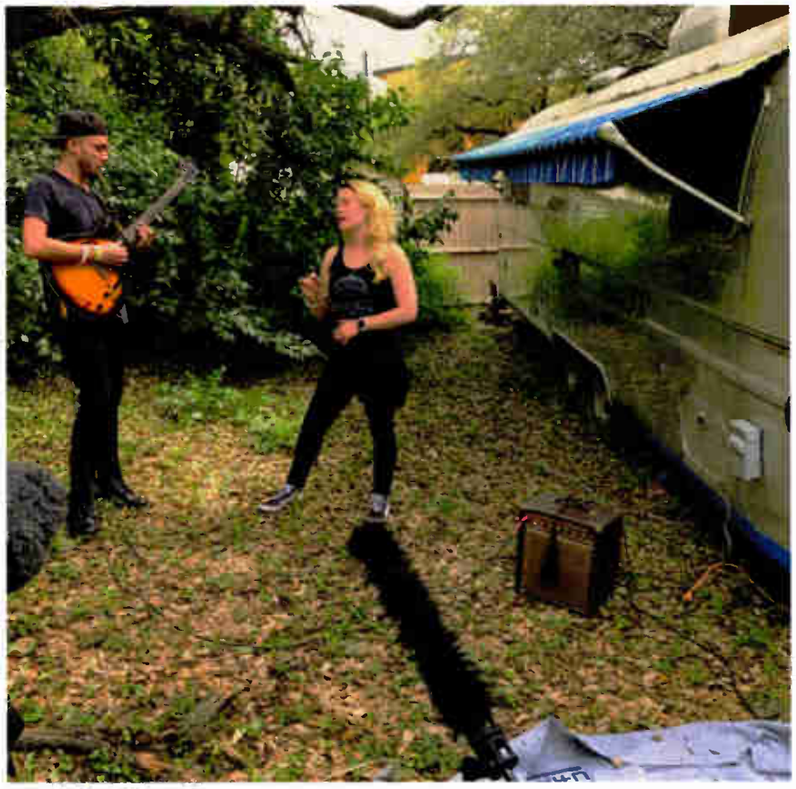
Recently, we were hired by KXT(FM), a public radio station in Dallas, to shoot live music performances at SXSW in Austin. This was our second year producing these videos, so we had a better idea of what we were in for, and where we could experiment.

As always, the right gear is an integral part of what enables a shoot to carry out smoothly.

KEEP IT SIMPLE

These performances, even though they are live music, don't have a dedicated audio person. We are typically three camera operators shooting outside in public places like parks, businesses or even right on the city sidewalks. Keeping it simple and light is a must — but, equally critical is audio quality — which means we go for variety of sources for audio redundancy. And, to add another level of challenge to the productions, we try to keep mics and stands completely out of the shot.

The challenge of shooting musical performances in noisy public places, while keeping mics completely hidden and maintaining a high level of audio acquisition, is a task all on its own. But more importantly, we also want the performer and the audience to feel like the production is not even there. In this case, to guarantee that we come away with a good recording without getting in the way of the performance, redundancy is key, so we record up to five audio sources, even for a solo performer.



A small space outside our hotel became a remote shoot location. Sound was captured with a lavalier taped to Lolo's shirt strap and a shotgun picking up guitarist Josh Hoisington.

We run two channels to our A Camera — a Canon C300 Mark II: a small instrument mic, and a Sennheiser MKE 2 lavalier in a Rode Invisilav housing, gaff-taped to either the guitar strap or underneath the performers clothing to capture vocals. This is the quickest, simplest way to hide a lav while avoiding rubbing noise. We run this lav wirelessly through a Rode RodeLINK Filmmaker kit.

We run two one or two more audio inputs to our B Camera — a Canon C100 Mark I — such as a specialized microphone like the Rode NTG8 long shotgun, or a small diaphragm hypercardioid condenser mic if we're shooting indoors.

Both of those camera rigs generally stay on tripods, with comparatively long lenses like a Canon EF 70–200mm, sometimes with a 1.4X extender. We typically record two takes of one song, so the tight shots provide cutaways recorded from different parts of a song.

Sennheiser MKE 2 lavalier fits easily inside a Rode Invisilav.

Plus, using long lenses means we can keep those cameras farther from the performer, so that they're not feeling the pressure of production.

Our C camera, another Canon C100, stays on a small gimbal as an ultrawide, steady shot a few feet from the performer. Here, we'll run a Rode Stereo VideoMic X on a cold shoe attachment on top of the gimbal handle. Because the SVMX microphone is so close to the performer, while staying behind the camera and out of the frame, it has the potential to give us better audio outdoors than all the others combined.

With an ultrawide angle, it's always a challenge to get *all* the gear out of frame. For this reason, we've rarely used any short shotgun style mics on these productions — the suggested distances of 2–4 feet from the performers often end up being too short for the microphone's ideal capture distance. That's where a long shotgun like the Rode NTG8 helps, as it can be placed further away with more directionality.

The Rode NTG8 shotgun is a handy microphone with a quality sound.

Because we are without a dedicated boom mic operator, we opt to put the NTG8 directly onto a portable light stand. This simple, lightweight setup has worked well for us, and could be made even more flexible by attaching the microphone and shockmount to a simple gooseneck or accessory mount. To our ears, the NTG8 does an amazing job of eliminating off-axis sound, like the omnipresent city traffic we run into at every location.

For our performance with the artist Lolo, we ended up shooting in the backyard of our Airbnb base. I know, I know ... that actually sounds like a lame, lazy location move. But, actually it was a pretty great spot, with some cool café lighting, a grove of mesquite trees and even a vintage airstream trailer.

We attached a lav mic under Lolo's shirt strap, we set up the AKG 414 XLII amplifier mic, and then after a quick sound check we were ready to start rolling. Right when the performance started, Lolo's guitarist started to sing backup vocals, which we weren't aware of. So we quickly pointed the Rode NTG8 up toward the guitarist to capture his vocals, and it worked like a charm.

Check out the edited video at *https://youtu.be/wMKzS7HL110...* and be sure to note: no visible mics for the performers in the shot.

ROUND SOUND

At another location inside a spacious bar, we found ourselves with another challenge.

With the small, high-quality cameras that are now available (for purchase or rent), shooting locations are limited only by the imagination. Here, Rayland Baxter is recorded by Slavik Boyechko.

The performer wanted to use her electric guitar and amp placed right next to her, so we needed to prioritize her vocal capture with as many redundant audio sources as possible.

We hung a hypercardioid condenser a few feet above the performer along a window pane, we kept the Rode SVMX on a gimbal pointed directly at the performer and away from the amp, and we taped a lav mic with the Rode Invisilav under the performer's shirt collar.

Even though it's the smallest microphone among a sea of microphones, we have found the lavalier to have the best audio quality in these performances where the singer has to battle loud sound coming from nearby. Best of all, we can hide the lavalier in hair, on a guitar strap, under a shirt, taped to the back of an instrument or a chair, or anywhere that a small lav mic and a Rodelink wireless transmitter can remain out of sight. The omnidirectional nature of our Sennheiser MKE 2 lav mics means we only have to consider distance, rather than direction of the mic, as our main concern.

Overall, I think using a lot of different mics for the audio capture has helped us capture a nice, round sound in these videos for KXT. Sometimes only one source of audio is used, sometimes it's a mix of both. Often the edit requires a switch between different mics when there are unexpected noises or pops that hit an unmanned microphone. But the lesson is, whenever you only have one or two takes of a song to work with, having several sources of audio is absolutely essential in any video, but it's especially important when a radio station is producing the video.

The above KXT's "On the Road" videos were produced and shot by Video Dads and KXT's Dane Walters, who also edited the videos.

Travis Gilmour is co-owner of Video Dads, an Emmy award-winning production company specializing in video storytelling for documentary, corporate and public media clients. Video Dads also run the site geardads.com, *which provide video and audio gear reviews for professional media producers.*

BROADCAST EQUIPMENT EXCHANGE

ACOUSTICS

ANTENNAS/ TOWERS/CABLES

CCA FM8000G Trans 107.9, great cond; 4-Bay Jampro antenna w/deicers; 3-bay Shively antenna FM. D Brockman, 606-965-3436.

01A V05B HJ-750 air Dielectric 1-5/8" Andrew transmission cable, 500'; 3-bay Nicom circular polarity antenna, xlnt cond; Kathrein/Scala PR-950 high gain 950 MHz antenna. Ken, 318-728-2370, leave message and will call back.

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.

02B TFN Wanted: real plate reverb. abgrun@gmail.com.

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.

CONSULTANTS

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

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

WANT TO BUY

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

MISCELLANEOUS

WANT TO SELL

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.

RECEIVERS/ TRANSCEIVERS

WANT TO SELL

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

WANT TO BUY

AM Stereo radio. Call 417-881-1846.

RECORDING & PLAYBACK HARDWARE

WANT TO BUY

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

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.

REMOTE & STL

WANT TO BUY

Moseley DSP-6000 4-channel encoder for STL and/or Moseley DSP-6000 4-channel encoder/decoder pair. 865-986-7536 or norman@wlilcountry.com.

STATIONS

WANT TO SELL

(2) LPFM radio stations for sale, located in the NW part of central Florida on the gulf coast, covers the county, get out of the cold weather, come to Florida, call or write for particulars, 352-613-2289 or email boceey@hotmail.com or Bob, PO Box 1121, Crystal River, FL 34423.

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.

TEST EQUIPMENT

DISTRIBUTOR DIRECTORY

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

www.radioworld.com

TRANSMITTERS/ EXCITERS/ TRANSLATORS

EMPLOYMENT

POSITIONS WANTED

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Let's Get Translator Rules Right

Consultant proposes a system based on time limits and contours to help all parties

COMMENTARY

BY SAM BROWN

I've filed a proposal with the FCC about translators and interference. What follows are my ideas and the reasons behind them.

I offer this in the public interest based on my experiences as a former station owner, one-time operations manager of UPI Radio, political observer, broadcast consultant, lifelong devoted listener and close observer of the radio industry.

If you are a regular reader of Radio World, chances are overwhelming that the issue of translators and interference touches you. Whether you own or work at an FM station that could get interference from a translator, or have an AM station that could establish or expand a translator — or you have both situations in your portfolio — this matters.

There are two NPRMs in front of the commission: RM-11786 and RM-11787. In different ways, both propose changes to the present system of complete protection (at any distance or contour) of FM stations from translator interference.

FCC rules for translators are unique. Other licensees are protected within certain coverage areas or signal level contours. Specifics vary with the class of license, but each station has a particular and explicit level of protection it must provide to others. In most cases, if you follow these rules, you cannot be accused of interfering, unless it occurs inside someone's protected contour.

But a translator may be required to change facilities or shut down if a station can show that a translator adversely affects any listening. If you live on a hill and have an antenna to pull in a station 100 miles away, you have no legal complaint if a new, closer station is built and makes such reception impossible; if a translator pops up, your complaint could force it off the air.

These rules are not without problems. Because a translator may be displaced so easily, it is possible to establish and license a translator in a place where it, ultimately, will not be allowed to operate. Additionally, abuses are possible when distant stations quash translators entirely outside areas they are attempting to serve. This also leaves a lot of room for expensive legal battles and adversarial hearings.

It makes sense to provide more certainty of operation for translators. It is also important not to cause stations coverage reductions that would disappoint their listeners and hurt their business.

DUELING IDEAS

RM-11786, the Aztec Media proposal, would entirely remove any protection for FM stations outside of their standard "interference-free" contours. For example, in maps on the popular *radio-locator.com* website, that is the inner contour for most stations. (Class B commercial stations are protected to their 54 dBμ contour and Class B1s to 57 dBμ.) Check some stations you know. If someone put a translator on the same frequency nearby but outside the 60 dBμ, it could obliterate a substantial part of the station's coverage.

This is particularly dangerous.

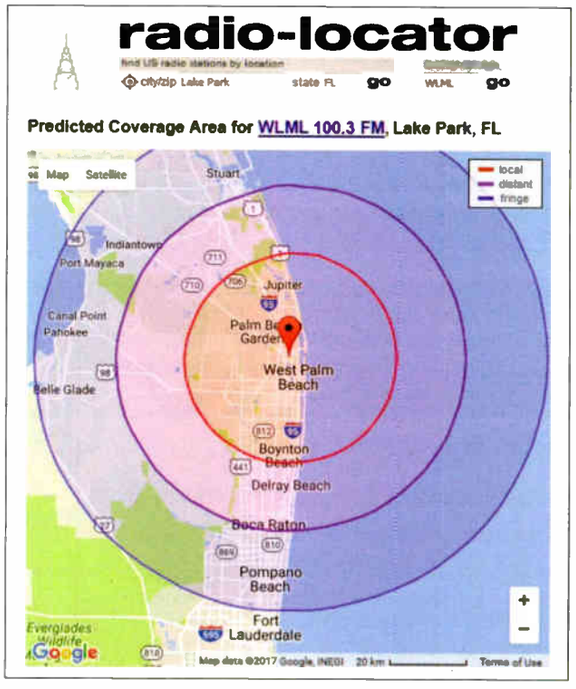
RM-11787, a proposal from the National Association of Broadcasters, is somewhat better. It allows stations to object to translators, but sets a high threshold of proof and level of detailed complaints needed to force remediation.

For large stations with significant consulting and legal resources, it would still be relatively easy to take out an interfering translator or defend their own against such complaints, but either could be very difficult for smaller broadcasters.

Essentially, it makes sense to provide more certainty of operation for translators. It is also important not to cause stations coverage reductions that would disappoint their listeners and hurt their business.

Thus, as often happens, the FCC is faced with a classic dilemma. Frequently misused, the word is a synonym not merely for a *problem* but specifically the type of problem in which there are competing, mutually exclusive, valuable ideas.

Comments on these NPRMs reflect this dichotomy. Most advocate solutions that almost entirely protect the interests of either FM stations or translator operators, depending on the commenter's perspective. But in the best interest of the public and the industry, we should seek to do both.



These are the 60, 50 and 40 dBμ contours of WLML. The most extreme proposals would protect them only inside the red inner circle, even though they are a popular local station in Delray Beach and Boca Raton. Used with permission from *Radio-Locator.com*.

WHERE TO START?

One point of nearly universal agreement is the NAB's proposal that translators be allowed to move to any available frequency as a minor change for the mitigation of interference.

Many observe that frequency changes typically help both parties and thus should be made easier and more flexible. This is true.

Some have suggested that one side or the other helps bring particular value to communities, but this has a couple of problems. The first is that either the FM station or the interfering translator may present content that is unique, more useful to an under-served minority or more local. This will vary widely; often compelling cases can be made on both sides.

In the Philadelphia case brought by Aztec, though the Hispanic community may be underserved, it is also true that WVLT is the only commercial station in the region with any significant music content with large appeal for an age 55+ audience. Both stations are involved in the community and have notable amounts of local programming.

Additionally, the First Amendment precludes most forms of regulation based on programming, yet prioritizing one side over the other for these reasons ultimately is a comparison of content.

One way to provide both translator stability and station-interference protection is to establish a time limit for interference complaints outside of protected contours. This would protect "heritage" stations that have been popular in large areas, while preventing stations that had never found reason to complain from subsequently jeopardizing translators that may have become important to their communities and critical to the ongoing business operations of their parent stations.

Additionally, it would reduce the instances of adversarial proceedings that take up significant FCC resources. At minimum, if nothing else is changed, this should be done.

At first glance, you may wonder why the standard protected contour is not the appropriate limit for protection by translators, as Aztec Media has proposed.

Keep in mind that stations in the commercial FM band are spaced by class

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TRANSLATORS

(continued from page 29)

and distance. These requirements often create *de facto* protection outside of an official interference-free contour. For example, having local second-adjacent stations on each side of one's frequency often precludes most interference.

Uniquely, translators are agile in the sense of where they can be placed. By having power levels as low as a few watts and the ability to license highly directional antennas, they can skirt the protected zone closely without touching it. For these reasons, we can use signal thresholds in translator interference rules, but they cannot be the same ones used for other purposes.

With a translator window opening in July for AM stations, demand for translators will be great. Compounding the situation is the new rule that allows these translators up to 25 miles away.

As former station owner of a suburban AM, I remember hearing a translator and fantasizing 30 years ago: "If I could just have 5 watts on FM downtown, it would be worth more by far than my whole station." This seemed a flight of fancy, but now it's real — and everyone is seeking a spot on the dial. Look at your coverage map and imagine a new signal completely eliminating your station in a population center just outside that inner circle. It could happen if we don't get these rules right.

On the other side of this coin, if you have an AM station and you get an FM translator, or you are deciding whether to pursue such an improvement, vagueness hangs over your FM signal like the sword of Damocles. Any station, no matter how distant or weak in your location, could allege that you are interfering, and you might lose the translator or have it forced to change facilities in a way that would render it useless.

This discourages investment and never quite allows your FM to be truly on a solid footing. Therefore, change is needed.

PROPOSAL

Thus, my proposal combines a time-limit and contour-based system.

- It is reasonable to say that no station has a rational basis for an interference complaint outside its predicted 40 dBμ contour, so we should disallow these as a basis for limiting the service of translators.
- 50 dBμ seems to be the typical threshold of the "scan" function on most car radios and is roughly the minimum strength needed for comfortable in-car listening. For this reason, translator interference complaints outside the 50 dBμ, but inside the 40 dBμ should be considered under the strict standard of scrutiny that the NAB proposes for all such complaints.
- Between the 50 dBμ and the protected contour, the present standard of "no interference" should remain.
- Translator interference complaints outside the protected contour should not be allowed if the translator has been continuously operating for at least 120 days (or within a window when the rule is first made).
- Adopt the NAB proposal to allow frequency moves as minor changes in interference cases.

Such a set of rules, though complex at first glance, ultimately would balance the legitimate interests of public service, FM licensees and translator operators while reducing the number of interference complaints requiring adjudication.

I urge you to read my filing: *www.fcc.gov/ecfs/filing/10526073658922*.

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READER'S FORUM

TOO MUCH COMPETITION?

I read with great interest the article by Randy Stine "Are Broadcasters 'Gaming' the Translator Rules?" (RW May 10), in which John Garziglia was quoted about translators and how duly licensed FM and AM stations are complaining about interference from those translators.

As always, there are two sides to every issue. The side that John failed to address is the audience that suffers when interfering translators take away from listeners, stations they have listened to for 50 years-plus, such as our facilities.

We are not seeking to extend our coverage; it already was there, and people on the fringe have invested in outdoor antennas, towers and fine receivers to hear our stations because they want good content.

So what about their loss when someone puts on a secondary service that destroys their listenership?

We have a perfect example of what some of these translator people are doing. We have 100,000 W at 97.5 700 feet in the air. A competitor who realizes we have a substantial audience in his area about 55 miles away put an AM fill-in FM translator on 97.7, which is tearing the hell out of our signal that has served those listeners for over 50 years.

Another travesty is a recent LPB college station that was put on the air just outside our protection area that radiates interference into our area that had former listeners, and they get out like no low-power I've ever heard, and they are right on 97.5.

I am deeply confused by FM translators being granted to Class Four AMs, who a few years back cried their eyes out and got 1,000 W day and night. That should be good enough.

FM fill-in translators should be reserved for stations like our AM that go directional at night and have a pattern that removes coverage off the back of our array to our listeners only 6 miles away.

A good friend of mine not so long ago got out of the business, citing that there are too many stations. I think he was right on. I stayed and begin to wonder why.

John, quit worrying about the poor translator people and begin worrying about the listeners. After all, they are what radio's all about.

Ed DeLaHunt,
CEO
DeLaHunt Broadcasting
Park Rapids, Mich.

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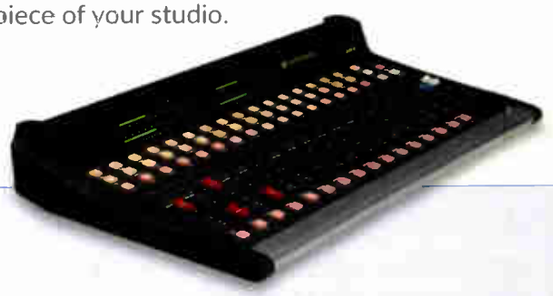

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