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No Soft Edges From Jerry Del Colliano

Newsletter publisher dishes scorn upon the actions of big commercial radio firms

NEWSMAKER

BY RANDY J. STINE

Perhaps nothing spreads through the U.S. commercial radio industry's C-suites faster than some juicy water cooler talk from Jerry Del Colliano.

Clippings from Del Colliano's online newsletter often bash the corporate strategies of iHeartMedia and Entercom. But the publisher of Inside Music Media doesn't see himself as a critic of the leadership at those companies.

"I don't do it to be critical. I do it because I love the radio industry," Del Colliano said.

Nevertheless he has called iHeartMedia a "zombie" company that exists simply to keep up with debt payments. He believes Entercom is on a path toward voluntary reorganization or bankruptcy

in 2022 unless it quickly recovers from the economic chaos of COVID-19. He says Cumulus is living on a "hall pass" from the financial markets due to the pandemic.

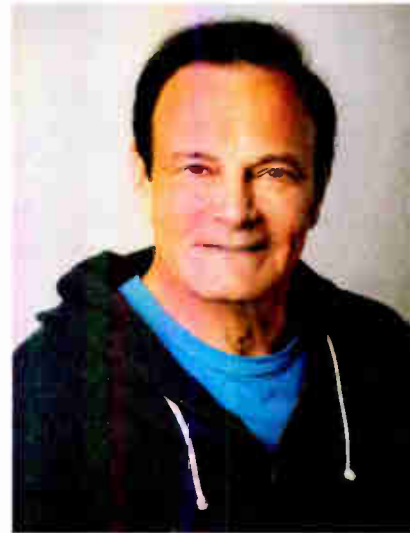
Del Colliano also has been critical of the NAB, calling the group "National Assassination of Broadcasting," and has castigated the Federal Communications Commission for radio deregulation that he feels has allowed major broadcast groups to shed countless jobs.

"Think about this: Radio broadcasters no longer need a local presence in their market of license. What a wonderful thing for radio broadcasters," Del Colliano says sarcastically.

"That's ridiculous."

"MAKING A MESS OF IT"

It's clear to followers that Del Colliano speaks with a passion about an industry he grew up in.



Del Colliano says of his provocative writing style: "I do it because I love the radio industry. ...This is not the radio industry we are capable of being."

He began his broadcast career working on air for the campus radio station while a student at Temple University. He worked in radio and TV programming and management in Philadelphia for years and is the former owner and pub-

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Engineers Explore Next-Gen Architectures

Radio Show tech session discussed Gen4 HD Radio and potential cloud solutions

BY RANDY J. STINE

Emerging technology could simplify facility infrastructure and reduce costs for broadcasters by eliminating reliance on hardware and utilizing the cloud instead.

A two-part session at this fall's virtual NAB Radio Show explored virtualization of traditionally hardware-based systems and the benefits of the fourth generation of HD Radio technology.

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Putting CMAF HLS to Work in Audio
David Bialik on what to know about the container format.
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Beyond Broadcast: Building Multiplatform Radio

How to make the pivot while still focusing on great storytelling

COMMENTARY

BY PAM JOHNSTON

The author is the general manager for news at GBH in Boston.

Like most of our stations east of the Mississippi River, GBH's radio and TV call letters started with a "W." WGBH recently rebranded to GBH to reflect the growing reality of the digital era beyond broadcast.

Today, more than half of GBH's total impressions are digital. As the world moves from the age of broadcast to the era of streaming, we've decided to drop the W from our name to reflect this shift in how we connect with our audiences.

Why should traditional radio broadcasting adapt to this digital era?

SHIFTING HABITS

As we all know, the broadcast audience is changing. Largely due to the pandemic and a marked decrease in commuter listening in the last six months, overall broadcast listeners have shifted habits. At the same time, the streaming audience is growing and the social media audience is exploding.

How can we get radio listeners to know about and consume broadcast content online?

Although many of the things associated with broadcast are evolving, one thing remains constant, and that is high-quality content.

Here are three ways to pivot to multiplatform radio while keeping quality storytelling at the core:

1 **Focus on a long-term tentpole project that involves multimedia components.** For instance, GBH News has created an in-depth series, "COVID and the Classroom." Its content appears on radio and online but it can also easily become a virtual forum, social media posts, a digital story or an email newsletter — all increasingly vital ways to consume radio content.

2 **Double-down on digital content** by posting news stories on your website and investing in photography. Adapt broadcast programs into podcasts such as GBH did with "In It Together," our nightly newscast on how COVID-19 is affecting our community. Livestream your radio shows on Facebook (as we did with "Early Edition" and "Lunch Hour Live"). Create a YouTube channel for your audio stories. People are listening to audio more than ever, just not necessarily on the radio. You need to find audiences where they already are.

3 **Focus on community building** by positioning your station as a community partner. How are you elevating voices in your community on the air, online, through virtual events? Create virtual town halls or news forums on Zoom or other digital platforms. Collaborate with other journalists on digital content.



Pam Johnston

If we want our stations to have meaningful reach and impact, we need to embrace this digital moment, especially if our programming involves news.

(GBH is partnering with our cross-town rival WBUR to produce content for the NPR "Consider This.")

Long gone are the days when we could count on our audience to seek us out on the dial at a specific time.

Now, we must go out there and find them, which is a tricky business. But if we want our stations to have meaningful reach and have an impact, we need to embrace this digital moment, especially if our programming involves news.

It has never been harder to be a journalist in America than it is right now. But the need for incisive, inclusive and high-quality journalism on the issues facing our communities, our nation, and our world has never been greater. As local newspapers and commercial outlets are forced to close, radio programming is often the last local news source.

Broadcast radio will still be around for years but we can maximize its reach with these simple steps and a digital-first mindset.

GBH is the leading producer of content for PBS and a partner to NPR (via GBH 89.7 FM in Boston) and PRX.

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

RW Is Future's B2B Publication of the Year

In challenging times, we aim to innovate — just like our readers

I'm proud and humbled to note that our parent Future plc, the global platform for specialist media, named Radio World as recipient of its 2020 "B2B Publication of the Year."

We take seriously our mission to serve radio broadcast industry professionals in the United States and globally with content about technology trends, regulation, new products and radio technical careers, so it's an honor for us to be selected.

Future wrote in the announcement: "In a challenging year marked by tremendous disruption in the media and trade show industries, plus the impact of COVID on all businesses, Radio World, a 44-year-old brand, continues to reinvent itself and thrive, consolidating its position as the radio industry's No. 1 technology brand."

Future made note of our business-to-business innovation with new

digital content formats, our growth in digital audience and our content exploring diversity issues in radio.

Radio professionals have become multimedia, multiplatform specialists, and we've sought to keep up with them. As most readers know, RW now is a multiplatform brand that comprises print and digital editions, e-newsletters, social platforms, ebooks and webcasts.

Radio World, a 44-year-old brand, continues to reinvent itself and thrive, consolidating its position as the radio industry's No. 1 technology brand.

— *From the award announcement*

Among successes in the recently concluded fiscal year:

- The webcast "Inside WTOP: A Specialty Facility Tour Webinar" took Radio World's video camera into the gleaming new studios of America's top-earning radio station near the nation's capital.
- Our special report "Blacks Are Few in U.S. Radio Engineering" was part of a special series of stories featur-



FROM THE EDITOR

Paul McLane



ing career reflections of African-American engineers with their views on their roles and opportunities.

- "Broadcasting From Home" was a four-part series of one-hour produced webcasts featuring interviews with media company technologists about how they responded to the challenge of the pandemic in their workflows.
- Radio World's online video efforts included a webcast about one of radio's big technical questions, "Digital Sunrise for AM," a spring product-based webcast "15 Things You Can't Miss" and two autumn product webcasts "Fall Product Peeks I & II."
- And Radio World expanded on the success of our ebooks, having now published more than 75 of them. This year, topics have included trends in codecs and STLs, artificial intelligence, virtualization and the cloud.

(continued on page 5)

Let's make 2020 hindsight.

There's no question it has been a tough year... the pandemic, wildfires, floods, and hurricanes. In tough times broadcast is more important than ever and broadcasters really came through with much needed information, guidance and comfort.

We're glad to put 2020 in the rearview mirror but there are still challenges ahead. Whatever the new year brings, let Burk help you stay on the air. Our ARC Plus, AutoPilot® and Arcadia systems reduce downtime and save trips to the transmitter. Ask us about our new Manager's Dashboard.

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College Station Spotlight: WMSC(FM)

Montclair State University station is nimble in face of pandemic

BY TERRY SCUTT

Students at Montclair State University station WMSC(FM) 90.3 MHz have proven that limitations created by the pandemic will not keep them from getting back to the business of radio.

Anabella Poland is the station general manager.

Radio World: *Is the station on the air? With what tools?*

Anabella Poland: Yes, the station is on air and has been on air since March 23. During the stay-at-home orders, we used VPN to remote into the station for live shows without needing a board op in-studio, and we used Zoom to connect with students at home to take them to air.

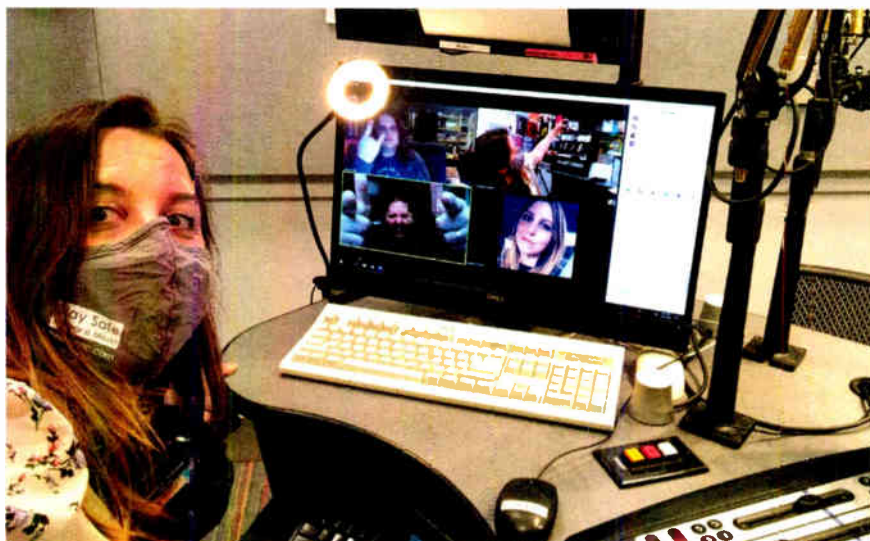
Once the fall semester began, we transitioned to live, in-studio board ops for live shows to free up resources that took us to air for the previous five-plus months, but also because students were eager to be back in-studio.

For live shows we use Zoom. For recorded shows, students use Cleanfeed, Discord and Zoom. For podcasting, we use Zoom and Cleanfeed, but students can also reserve the production studio for which they must follow COVID-19 protocol and guidelines. Students working remotely use a variety of USB microphones such as the Blue Snowball and Yeti microphones and a variety of gaming headphones.

We had five-plus hours on Election Night, which was also live on the station's YouTube page. The two hosts were in-studio and the contributors and guests joined over Zoom.

The broadcast included prerecorded and live interviews with experts in the field of politics, education, communication and economics.

The show also featured reports from student reporters at sister stations located in battleground states:



Anabella Poland is shown in-studio on College Radio Day with colleagues on Zoom including host Tara Cicchetti and radio personality and wrestler Brimstone.



Office Manager/Business Director Kaya Maciak is co-host of "The Morning Buzz."

Pennsylvania (Neumann University), Wisconsin (University of Wisconsin-Madison), Michigan (Michigan State University) as well as a student reporter from our sister station in Sweden (K103 Goteborgs) and a student from our

sister station in Texas (University of Texas Arlington).

Radio World: *Describe your media operations and physical plant.*

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FUTURE B2B

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This is also an amazing time to be part of Future plc, which we joined in 2018 when it acquired NewBay Media. The company's content reaches over 1 in 3 adults online in both the United States and the United Kingdom.

Future's corporate culture and its support for innovation really are remarkable. If you have a business

interest in how content companies are reinventing themselves, go online and dig into news coverage of the company and its dynamic leader Zillah Byng-Thorne. She and the company leadership team have been big parts of helping us not only keep Radio World relevant but to grow it in new directions.

We're proud of what we've accomplished through smart initiatives, judicious investment and a roll-up-the-sleeves attitude during a difficult eco-

nomie environment. But I love Radio World's stability and endurance, too, and I am grateful that you've rewarded us with your trust.

So, thank you — for allowing us to be a consistent presence in your professional or personal life for 44 years and counting. We want to continue to do better and ask ourselves how to be of the most help to you in your career. Let me know how we can serve you better. I'm at paul.mclane@futurenet.com.

NEXT-GEN

(continued from page 1)

Moderator Roz Clark, senior director of radio engineering for Cox Media Group, framed the conversation as a look at the next generation of radio architecture, which will involve fewer hardware boxes in facilities as broadcasters move toward more service-based systems.

"We know broadcast equipment is specialized, expensive and wears out. It requires maintenance and cooling. And all of these things are magnified by the number of stations you own, so evolving things forward and making it a more cost-effective and useful part of our business is a goal we all have," Clark said during his introduction.

He noted that the NAB Radio Technology Committee is working with equipment manufacturers to create common platforms to develop technology solutions.

"We are trying to simplify things, make it interoperable and adopt best practices, to develop technology to fit within the existing infrastructure — and the modern infrastructure as it evolves," Clark said during his introduction.

PPM AND EAS

The first panel included Jason Ornellas, regional director of engineering for Bonneville International Corp.; Alan Jurison, senior broadcast engineer at iHeartMedia; and Lakeya Jefferson, director of audio content engineering at Nielsen Media.

A goal of the NAB Radio Technology Committee, Clark said, is to make it easier and more cost-effective to implement HD Radio as the industry transforms into a digital transport delivery mechanism.

One part of that effort involves the software to insert Nielsen Audio PPM codes. Another is the implementation of Emergency Alert System content into an HD sub-channel stream.

Jefferson said Nielsen has taken its enhanced Critical Band Encoding Technology, or CBET, which is used in its PPM hardware encoders, and made it available in a software-based version to be integrated into third-party devices and products that may exist in broadcast

We are trying to simplify things, make it interoperable and adopt best practices, to develop technology to fit within the existing infrastructure — and the modern infrastructure as it evolves.

— Roz Clark

facilities.

"We are excited to offer a wide variety of options when it comes to encoding. Nielsen is planning a beta release of our audio software encoder to a select group of audio processing vendors, including Orban, Wheatstone and Telos/Omnia, and AM stations with a wider production release later this year," Jefferson said during the online session.

Field evaluation for AM stations began in early October with plans calling for FM and streaming, Jefferson said.

Ornellas, who chairs the PPM Subgroup of the technology committee, said Bonneville successfully beta tested software-based PPM encoding using Orban processing at KHTK(AM) in Sacramento, Calif., and KSL(AM) in Salt Lake City. So did Cox Media at its stations WSB(AM) in Atlanta and KKX(AM) in San Antonio, Texas.

"It was pretty seamless, with no issues for either the terrestrial AM or HD channel," Ornellas said of the Bonneville testing. "We were able to see that the PPM encoding was being present right on the processor as well as the Multichannel Encoding Monitor. Nielsen was happy with the quality assurance they were expecting. This is a huge first step."

iHeartMedia's Jurison has been working for some time on getting the EAS component of the broadcast air chain put into software and virtualized into HD Radio subchannels.

WMSC(FM)

(continued from page 5)

Anabella Poland: There are three studios, as well as performance space and control room. There is also a Foley studio, which students have used to create radio dramas.

The station is located on the second floor of the School of Communication and Media at Montclair State University Montclair, N.J. You can take a quick tour of the facilities on YouTube, search WMSC Radio Tour.

"It's been a challenge for (iHeartMedia) to get EAS onto the HD-2, -3 and -4 subchannels. We expect the next-generation architecture to move a lot of things out of defined-purpose hardware and into the cloud," he said.

"We think some of the low-hanging fruit is the multicast channels. A lot of those stations just play music with few elements. As we migrate audio and radio into the cloud, these seem like good choices for us to virtualize."

iHeartMedia uses a physical audio switcher that is tied to the EAS encoder to get EAS messaging onto the FM subchannels, Jurison said. The industry's challenge, he says, is how to get EAS onto the subchannels without requiring hardware in the local market while remaining FCC-compliant.

He said Gen4 HD Radio technology and an embedded HD Radio importer/exporter will allow broadcasters to "virtualize" this process.

"It's a whole new way of looking at HD Radio. The HD-2, -3 and -4 are perfect for us to begin putting things up in the cloud; but the cloud doesn't have an EAS encoder," Jurison said.

He explained that broadcasters will have the capability, thanks to the Gen4's embedded importer/exporter, to connect the EAS encoder via 2wcom's HDR-CC, an HD Radio capture client appliance, which will encode all audio.

According to 2wcom's website, the HDR-CC "requires a setup that has

EAS audio connected to the capture client as well as a GPI to trigger the alarm. When the alarm is triggered, the three-channel HDR-CC logs into the importer and replaces all supplemental channels (HD2-HD4) with the alarm program. After the GPI is released, the HDR-CC logs out and the importer continues with normal operation."

Jurison says Gen4 HD Radio technology will eliminate complicated audio switching requirements for emergency alerts. iHeartMedia is field testing the new system. The session included an explanation of how audio is delivered from an iHeartMedia data center in Cincinnati through its tech center in San Antonio to WWHT(FM)'s transmitter site in Syracuse, N.Y.

"We are essentially generating audio in the Cincinnati data center that goes through our WAN to the transmitter site in Syracuse with no hardware in between to generate the HD2 channel," Jurison said.

In conclusion, Jurison said by using the Gen4's embedded importer/exporter and 2wcom's HDR-CC, broadcasters have the ability to insert EAS into any multicast channel from any data center anywhere across the country and eliminate physical hardware switching.

HD RADIO GEN4

Part two of the virtual equipment evolution session featured presentations from broadcast equipment manufacturers Nautel, GatesAir and Rohde & Schwarz. The companies are working on Gen4 HD Radio virtualization technology for use in the cloud.

Moderator Roz Clark described an ongoing open collaboration to find radio architecture solutions that includes radio broadcasters, equipment manufacturers and Xperi, the parent of both HD Radio and the hybrid radio platform DTS Connected Radio.

"It's really the three-legged stool approach between all of us. We want



Amanda Marino and Ryan Trick are producers and co-hosts of "The Morning Buzz."

Electro-Voice RE20 microphones; Sony MDR 7506 headphones; VoxPro workstations, Nautel transmitter; Telos Z/IP One; and Telos Zephyr ISDN codecs.

Software includes RCS NexGen automation and music library; Pro Tools, Hindenburg and Audition; VPN access to remote into the station; and StreamGuys streaming services for ACC and MP3 streams.

The studios are equipped with Axia Element boards with 12 POTS line bridge; Comrex Access codecs;

Read the full interview at radioworld.com, search keyword WMSC.

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to simplify the architecture, we want to ease implementation to make it cheaper, better and faster. And also to leverage the technology that surrounds the broadcast business in general," he said.

Philipp Schmid, chief technology officer for Nautel, said since a lot of the radio air chain is based on "purpose-filled boxes," there is the need to look at the transition to a software environment and that HD Radio presents the opportunity to do so.

"However, HD Radio also adds cost and complexity," Schmid said, "due to having to keep audio aligned between the FM and the HD-1."

Nautel, which manufactures transmission equipment, has partnered with Telos Alliance to develop a new Gen4 HD system using Omnia Enterprise 9s audio processing software and the Nautel HD multicast transmitter platform.

"The whole system can be applied in the cloud and can be scaled and is highly reliable," Schmid said.

Nautel's goal is "easy HD Radio conversion, cheaper HD Radio conversion, security and interoperability for third parties and legacy equipment," he said.

A webinar of the Gen4 HD Radio system by Nautel is available on the company's website.

Rohde & Schwarz manufactures the THR9 liquid-cooled FM HD Radio transmitter and its HD component, the HDR900 built on the Gen 4 HD Radio architecture, according to information presented during the virtual conference.

"We suggest creating a functional block for all of the HD encoding. This block can live in the cloud or it can live virtually," said Don Backus, account manager of radio transmitters at Rohde & Schwarz. "It gets us simplicity and it also gets us the ability to provide an abstraction from the hardware layer and that does allow for a virtual implementation or in the cloud."

Backus said standardization on AES67, a technical standard for audio over IP and audio over Ethernet interoperability, and IQ over IP interfaces are key to the overall process.

"We want to define structures that enable less costly solutions with virtualized hardware and cloud computing," Backus said.

To conclude the virtual Radio Show technology session, Kevin Haider, product manager, radio transmission for GatesAir, touched on the latest Intraplex IP link audio codec.

Haider said integrating IP tunneling capabilities within audio codecs provides multiple benefits for HD Radio applications, including maintaining relative delay between FM and HD signals across the network and providing reliable HD Radio E2X data streams across IP networks and limited bandwidth STL networks.

NEWSWATCH

The 2021 NATE UNITE convention has been canceled.

NATE — formerly the National Association of Tower Erectors and recently rebranded as the Communications Infrastructure Contractors Association — announced in November that its trade show planned for Memphis in February is off due to the pandemic. The organization said it is focused on planning the show in Las Vegas in February 2022.



The schedule of 2021 conventions had already been disrupted when NAB made the call to postpone its 2021 NAB Show from April to October.

Another staple of the calendar is the convention of the National Religious Broadcasters. An NRB spokesperson told Radio World before Thanksgiving that it was still planning an in-person gathering in March.

"Comrex ACCESS is keeping us on the air while our anchors broadcast from home. Sounds great, so simple to set up, especially with Switchboard - thanks guys!"

@BrianOliger



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DEL COLLIANO

(continued from page 1)

lisher of trade publication Inside Radio.

Now he is a professor at NYU Steinhardt Department of Music and Performing Arts Professions Music Business Program. He also has taught at the University of Southern California.

The New Jersey native often writes in his newsletter with a particular focus on the actions of major broadcast groups that he believes have doomed the radio business.

"iHeartMedia, Entercom and Cumulus are making a mess of it right now. This is not the radio industry we are capable of being. It's not a radio industry that's going to survive," Del Colliano said.

"It's an industry that has been hijacked by a bunch of carpetbagger private equity people who have gone in and wrecked it."

Sweeping programming changes introduced recently by iHeartMedia and Entercom to use out-of-market voice-tracking to replace local on-air talent in many markets have been a frequent target of his ire.

"It's the assassination of live shows in just about any daypart. These groups claim they are improving the local product by using regional or national syndicated talent and centralizing operations, but being local wins every time," he said.

He says the beginnings of the radio industry's troubles can be traced to the Telecommunications Act of 1996, which allowed for mass radio consolidation.

"I don't think radio has been a business that has done well with consolidation," he said. "Just look at it. Who can say that consolidation has been good for the industry?"

He feels he can point directly to why radio began to fail.

"The thing that made radio bulletproof is the exact thing these big groups have eliminated: being live and local. iHeartMedia and Entercom run up billions of dollars in debt, they cut back, they eliminate talent and they do programmatic selling. It's as if they are looking for ways to destroy themselves."

In fact, Del Colliano isn't afraid to name names when it comes to the management of radio portfolios.

"David Field at Entercom is about as qualified to run a radio group as I am to be in private equity. He botched the CBS Radio merger. I mean everyone wanted CBS Radio. How do you screw that up? And that was before COVID-19 so he can't blame that," he said.

Going around the horn, Del Colliano says of Mary Berner at Cumulus: "She's a very nice person, but she is from a private equity background. She is at Cumulus because she knew how to get



Jerry Del Colliano, rear, with NYU students. "Go to any college campus," he said. "To them Spotify is the new radio."

These groups claim they are improving the local product by using regional or national syndicated talent and centralizing operations, but being local wins every time.

— Jerry Del Colliano

them through bankruptcy, not operate them as a successful radio group."

As for iHeartMedia, Del Colliano says he believes the cost-cutting by Chairman and CEO Bob Pittman only invited John Malone of Liberty Media to come in and position himself to "steal the company for pennies on the dollar. And (Malone) will run it on the cheap like we have never seen before."

Liberty Media Corp, which already controls Sirius XM and Pandora, has a 5 percent stake in iHeartMedia, but in July the U.S. Department of Justice gave its permission for Liberty Media to increase its shares in iHeartMedia up to 50 percent.

"And you know how this is going to go. Do I have to spell this out to you? Liberty Media buys distressed properties. Pandora was distressed. Sirius XM was distressed. They get a few board seats and boom they will have their own

people running iHeartMedia.

"Then he will gut it. It will operate with so few people you can't believe. And he'll use a lot of the programming strategies of satellite radio to program a terrestrial group of stations. No local staff and national formats piped into all the 800 and some radio stations. There will be further homogenization of radio," he said.

(Radio World invited comment from companies mentioned in this article; none chose to comment.)

"IT WAS NEVER PERSONAL"

Del Colliano teaches media, music discovery, streaming and immersive technologies at NYU, mostly via Zoom these days. In his class "Music in the Media Business," he says young students tell him they have no need for radio.

"Go to any college campus. To them Spotify is the new radio. In fact, just

look at people under 30 years old. Look at the next new car when you buy it. People are more worried about getting the Apple CarPlay to work than finding the radio in the dash."

And AM radio has been left to die, Del Colliano said, despite recent "revitalization" actions by the FCC.

"(AM) is not sustainable. You have major broadcast groups now turning off their stations. I don't think all-digital is a way forward when you render all analog radios obsolete."

Del Colliano thinks AM could have become a podcast platform.

"Radio really missed an opportunity. All of these different shows featuring only the spoken voice. It would have been perfect for AM, but instead the big radio groups wanted Premiere's Rush Limbaugh on their AM stations coast to coast. It's exactly that type of programming on AM that caused podcasting.

"And I don't buy the sound quality argument that AM just doesn't sound good enough. Most people listen to podcasts through tiny earbuds."

The internet pool that entertainment platforms are playing in now is so huge and so fragmented, Del Colliano says, Gen Z might not miss radio if it went away entirely.

"Young people would never trade Spotify or Apple Music for radio. They would sooner have playlists and the systems that are in place today. Over-the-air

(continued on page 10)

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An excerpt from our recent roundtable about virtualizing the air chain

A current Radio World ebook explores the idea of “virtualizing the air chain.” The following is an excerpt from a roundtable discussion and interview.

Roz Clark is senior director, radio engineering for Cox Media and chair of the Next Generation Architecture working group of the NAB Radio Technology Committee; he also chaired of the HD Time Alignment Working Group that published the document that the National Radio Systems Committee adopted related to HD/FM time alignment.

Shane Toven is senior broadcast engineer, Educational Media Foundation and a national director of the Society of Broadcast Engineers.

Radio World: Are we ready, as an industry, to pursue this kind of virtualization from a technical standpoint? Should we be planning to build out virtualized segments of the broadcast air chain one piece at a time or is it ready for us to think end-to-end at the moment?

Roz Clark: We are working on another project in the industry, the NAB Radio Tech Committee’s Next Generation Architecture Committee. There’s essentially a three-legged stool approach: broadcasters are one leg, equipment manufacturers such as Telos and Nautel are the second, and Xperi as the third leg.

We all need to coordinate so we have standards that can be built towards, and interoperability is baked into it — even though there are unique solutions being developed by extremely intelligent folks across the industry. We want everyone to collaborate so that we have interoperability and the ability to migrate parts of the system towards that eventual goal.

When you ask “Is the industry ready for this?” the answer from a business case is, absolutely. Cheaper, better, faster. Philipp [Schmid of Nautel] touched upon the skill sets to support broadcast. Where is that going to come from? And who? Who’s going to provide that?

That’s an open question, but along the infrastructure path there are certain things that we feel need to be solved for.

Folks like Telos and Wheatstone and others have proven that we can run audio in a plant over IP, and we can get content from the field over IP, and we can do all these things moving data and audio around over IP. Been there and done that.

The problem is in the infrastructure. If you look at it from a broadcaster’s point of view, even if we have a pure IP plan, we still have to come out of that IP stream and go into things like a PPM encoder, or going into in and out of things like an EAS encoder. They’re just part of the requirements of a broadcast plant.

So we have targeted those essential things. For instance, [recently] we qualified the first case of a test of PPM software living in an audio processor, so that it becomes a software solution versus a hardware dependency. That same network path can flow through a piece of software versus having to come out to an XLR AES jack and back in.

EAS is going to probably be a little bit of a heavier lift for the main channel, but Alan can speak to how there is a software solution for the sub-channels that has been developed.

So we’re chipping away at the stone



Roz Clark



Shane Toven

here, and I think what Nautel showed [recently] with Telos on their webinar, it is super awesome to be able to test the theory of how you can virtualize these things.

We still are hamstrung by some hardware dependencies for some of the signal flow. Some of the content that has to be aggregated and put into that pipe is still a challenge.

The industry is ready, from a business case and from a support case, for just how the future has to evolve. As Greg [Shay of Telos Alliance] said: Adopting a best practices protocol, we’ve always done very well as broadcasters. We’ve stolen the best ideas from telecom, from IT, from networking, everything else. We’re very good at that.

But we need to look at some of these broadcast-centric systems and do the same thing with them. And that’s sometimes easier said than done.

Shane Toven: The technology is certainly there. The technology for virtualization has been there in the IT industry for a number of years.

But we have this really nasty habit as broadcasters of dragging our feet as we go kicking and screaming into these future type technologies, particularly when it comes to some of the small and medium broadcasters: “We’ve always done it this way, why change it?”

But there is a time when technology does need to shift and adapt and adopt,

otherwise you end up dying on the vine, so to speak.

Having the tools from the IT industry to build on, that gives us about 90% of what we need right there. But the big challenge will be those industry specific components, the things that only broadcasters are hamstrung with, like PPM, like EAS and various other things.

For larger broadcasters and broadcast groups, it won’t be so much of a challenge to make this shift, aside from that last mile connectivity issue. For smaller and medium broadcasters, they’re going to find it a little bit more of a challenge to kind of get into this, both from a talent perspective and maybe even just from a financial perspective, depending on how that works out.

This is going to look more like op-ex costs than cap-ex costs as we move forward. It depends on their comfort level of op-ex versus cap-ex, as well.

Overall, from a technology perspective we’re ready and moving forward on all of this. But from an industry perspective, I think we still have a little bit of work to do, especially in the scalability down to the smaller and medium-sized levels.

The roundtable discussion also features Alan Jurison, senior operations engineer, iHeartMedia Centralized Technical Operations and chair of the Metadata Usage Working Group of the National Radio Systems Committee; Philipp Schmid, chief technology officer of Nautel; and Greg Shay, chief technology officer of Telos Alliance. Their conversation was moderated by Michael LeClair, chief engineer of WBUR in Boston.

Read “Virtualizing the Air Chain” at radioworld.com/ebooks.

DEL COLLIANO

(continued from page 8)

radio is still so antiquated,” he said.

Del Colliano says he often receives anonymous tips with information on the dealings of the major radio groups.

“But you might be surprised that I get a lot of the information from the people I write about. CEOs are fascinating people. They like to talk about themselves and each other. I have built a lot of trust with them. They know I will vet the information they give me,” Del Colliano said.

In fact, he calls Cumulus’ Berner “a friend” and even remains friendly with former Cumulus Media CEO Lew Dickey, who was often a target of Del Colliano’s scorn until he left the company five years ago.

“I skewered him bad, but it was never personal. Lew has spoken to my class at NYU. I use his book ‘The New

Modern Media’ in my class. I just disagreed with the way he ran Cumulus.”

Del Colliano predicts radio groups that maintain a local presence will eventually enjoy better ratings and increased revenue compared to those who centralize operations. He mentioned Hubbard, Saga, Beasley and Alpha Media as examples.

“And that’s because those stations will continue to do what radio does best: be live and local. They’ll have programmers in the local markets. They’ll have sales people in the local markets.”

But he insists it will take an industry-wide effort for radio to survive.

“It’s going to be a big lift. It’s going to take more than one person to turn the industry around. It’ll take a number of people who decide the right way to move forward is decentralizing the corporate structure of programming and sales and making radio local again,” Del Colliano said.

He concluded: “Then perhaps the greed of the consolidators might end and help radio save itself from private equity mismanagement.”

RW welcomes comment on this or any story. Email radioworld@futurenet.com with “Letter to the Editor” in the subject field.

“You might be surprised that I get a lot of the information from the people I write about. CEOs ... like to talk about themselves and each other.”

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More on the STL Support Pole

Also, Bondic is an ultra-strong adhesive that cures with UV light

WORKBENCH

by John Bisset

Email Workbench tips to johnpbisset@gmail.com

We've received good feedback and a couple of questions regarding Wayne Eckert's submission on grounding wooden poles used to support STL antennas, described in the Workbench column in the Nov. 25 issue. (Like all recent issues of Radio World, you can access it online at radioworld.com/digital-editions/.)

You'll recall that Wayne is an engineer with the Rural Florida Communications Cooperative, so he's had a bit of experience in bonding and grounding to reduce lightning damage.

He told us last time about an AT&T document "Grounding and Bonding for Network Facilities." It's on the website <https://ebiznet.att.com/sbcnebs/>. The shortcut URL to the document is tinyurl.com/rw-att-grounding. Much of the document is applicable to broadcast sites and studios.

Fig. 1 is Wayne's diagram detailing the bonding of an STL antenna to a down ground. Note that the bond sweeps down from the antenna to the grounding conductor.

In answer to the first question we got, yes, the down ground wire does extend above the pole by about 6 inches to a foot. This "pigtail" conductor then is sticking up from the pole.

The down ground cable is typically #6 hard-drawn copper, solid or stranded. Yes, all pole attachments should be connected to the down ground cable using silver solder and short sections of the same #6 gauge cable.

These short grounding cables, attached to the mounted structures can be connected to the down ground using a C-Tap crimp lug (Fig. 2). If the installer doesn't have crimping tools and dies, the connection can be made with silver solder.

Silver solder should be used for all RF and grounding connections — 60/40 tin/lead solder will melt under the heat of a lightning strike given that

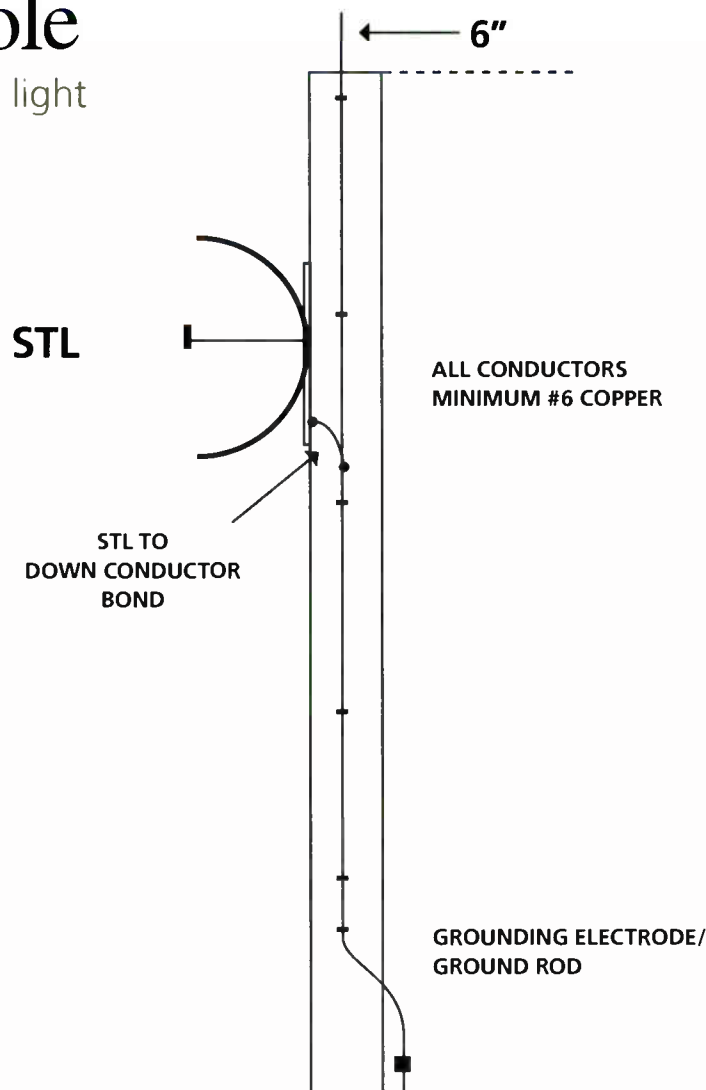


Fig. 1: Wayne's drawing of a properly grounded pole for supporting an STL antenna.



Fig. 2: You can crimp connections to the down conductor using a C-Tap and lug.



Fig. 3: An image from a promotional video for Bondic. The adhesive works on nearly everything and doesn't "stick" until it's cured by UV light.



Fig. 4: A video on YouTube profiles Clarence Kane, a former RCA employee who is still servicing microphones.

its melting point is only 360 degrees Fahrenheit. Silver solder's melting point is above 1,000 degrees.

You may have gone to the dentist and received a filling made of a composite resin, a mixture of plastic and glass or quartz. It's applied in layers, with each layer cured using an ultraviolet light.

A similar liquid plastic adhesive that uses UV light is available for consumer use. Bondic is ultra-strong and unlike super glues is not messy.

Each Bondic kit includes a special dual-purpose pen. One end dispenses the liquid plastic, the other consists of a UV LED used to cure the bonding material. So this is not really a glue but rather a liquid plastic which, when activated by the UV light, welds the pieces together.

The bond is waterproof, and (should you wish to repair a coffee cup handle) it's dishwasher safe. Another plus: Unlike glues that eventually dry out in the tube, Bondic stays wet until it is cured by the UV light.

Bondic can be used not only to bond two items but to fill in chips or cracks in metal, wood, plastic, ceramic or glass. One typical use is to repair broken insulation on a smartphone charging cable.

In addition to the starter kit, refill tubes of the Bondic liquid are available. Search Bondic on Amazon or visit getbondic.io.

Professional Engineer Charles "Buc" Fitch writes that he was quite surprised to find out that Preformed Products, the folks who make all those guy wire grips and associated mounts for towers, also manufactures fiberglass guy wire insulators. Buc says they offer a full line of ceramic insulators as well as fiberglass guy strain insulators. Visit www.preformed.com.

Buc points out the importance of using isolating guy wires with these fiberglass extensions near an FM antenna, as the steel guys can cause FM signal distortion in nearfield positions. Visit the Preformed site, you'll be amazed at their varied products.

Dan Slentz is always finding entertaining or educational subjects on the web and often shares with Workbench readers. His latest submission is both entertaining and educational.

Clarence Kane is the owner of ENAK Microphone Repair (ENAK is Kane spelled backward!). He was born in 1926 and got interested in electronics while in the service. Afterwards he attended the Radio Electronics Institute and went to work at RCA, where he worked for 33 years, mostly repairing microphones.

His company continues that service, and he's the last remaining RCA employee still servicing microphones.

Radio World's James O'Neal wrote about him in Radio World in 2010. A copy of his article is available on the Enak Mic website.

Dan points us to 12-minute mini documentary video about him. Find it on YouTube, just search Man Behind the Mic.

Workbench submissions are encouraged, qualify for SBE Recertification and can be emailed to johnpbisset@gmail.com.



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Book Takes Scholarly Look at Radio

"Radio's Second Century" offers views of historical and contemporary issues

BY DAVID ANTOINE

The recently published book "Radio's Second Century: Past, Present and Future Perspectives" is an academic survey of our industry, a collection of essays, statistics, graphs and antidotes edited by author and professor John Allen Hendricks that features contributions from scholars in media and journalism.

Hendricks is department chair and professor of mass communication at Stephen F. Austin State University in Nacogdoches, Texas, and author or editor of 11 books. This one is a collection that belongs on the shelf labeled "media studies."

Michael Brown writes in the forward that the book "points to a diverse and open field for those who wish to study radio and those who have an interest in learning what we know about the technology, programming, social issues and international use of radio."

ACADEMIC TEXT

To give you a further idea of its content mix, Part I is titled "Contemporary Radio: Social and Digital Media." This section includes discussions about listening "from AM to FM to XM, and beyond"; audience research and web features in radio; the "para-social" nature of podcasting; and social media analytics.

to know how to sell more radio spots or learn about the next technology platform that will change our industry. In general I found that it does not offer much in the way of definitive direction and improvement; a reader is left to conclude what direction radio should take in the next century. The stats and graphs can get repetitive, causing one to want to skim ahead.

However a strength of the book is its exploration of podcasting. It breaks down the success and appeal of the new medium and why it has such dominance with radio listeners.

I enjoyed passages about podcasting as a "converged medium" that brings together audio, the web and portable media devices, as well as a disruptive technology that has forced some in radio to reconsider established practices. I think the book is spot-on in its conclusion that podcasting will continue to dominate and be a strong substitute for listeners seeking news, information and entertainment.

The book is published by Rutgers University Press and retails for \$39.95 in its paperback version.



John Allen Hendricks

Author David Antoine is a project engineer at Lawo North America.

"Radio's Second Century" is a collection of academic essays on a broad range of radio-related topics.

Promotional information for the book notes that as the industry enters its second century, radio continues to be a dominant mass medium even in the face of competition.

"Lasting influences such as on-air personalities, audience behavior, fan relationships and localism are analyzed [in the book], as well as contemporary issues including social and digital media," it states.

"Other essays examine the regulatory concerns that continue to exist for public radio, commercial radio and community radio, and discuss the hindrances and challenges posed by government regulation with an emphasis on both American and international perspectives. Radio's impact on cultural hegemony through creative programming content in the areas of religion, ethnic inclusivity and gender parity is also explored."

Part 2 explores "Programming Matters: Localism, Personalities and Audiences." Chapters focus on "the shrinking electronic town square" and localism in talk radio; the fandom of Howard Stern; lessons from the "War of the Worlds" broadcast; and how to encourage creative programming.

Part 3, "Social Issues," includes chapters on religion in radio, NPR's role in America and "resisting podcasting's sonic whiteness," while Part 4 takes on international perspectives including community/campus radio in Canada, the dominance of public radio in podcasting and the role of women in radio.

Among discussions I found interesting are ones focusing on radio as "theater of the mind"; how NPR aspires to create "driveway moments" through storytelling; how radio and podcast producers use sound to create a feeling of intimacy and connection; and how using headphones changes the listening experience.

The book would be an excellent read for a college student pursuing a degree in communications or journalism and needing insight into the radio industry. It's also suitable for those who like to think hard about the roles that radio and audio play in our culture and how people interact with them.

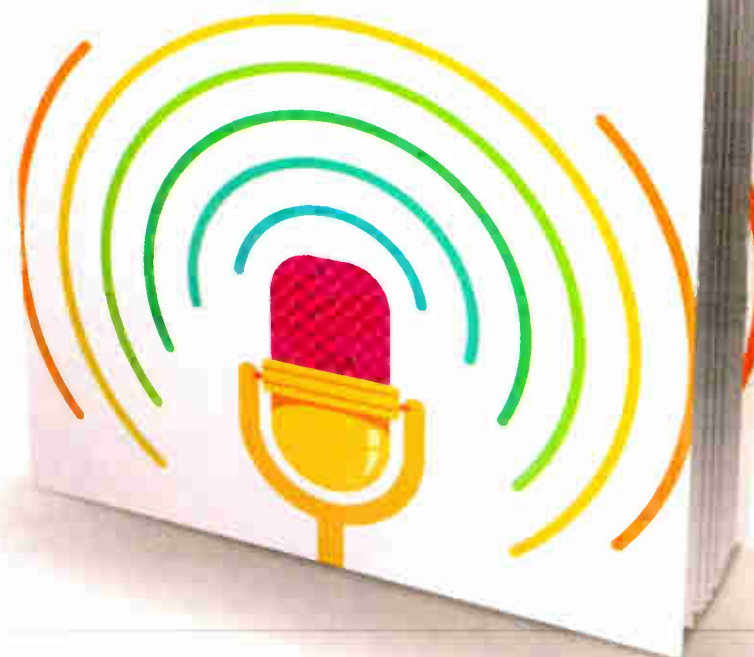
This isn't a book for those who want

edited by John Allen Hendricks

FOREWORD BY MICHAEL BROWN

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DTS Joins the MBUX Multimedia Platform

BY PAUL McLANE

The DTS Connected Radio platform that Xperi has been working on for some time is coming to market and will be part of the sophisticated MBUX multimedia car platform, the company announced.

The Daimler MB User Experience, or "MBUX," is featured in the new Mercedes-Benz S-Class line.

DTS Connected Radio is a hybrid radio system that combines reception of broadcast signals with IP-delivered metadata; the company says it is now available in 48 countries. Hybrid systems provide a transition for a listener from broadcast to internet as a car drives out of range of a station OTA signal.

The company also said its content comes from 48,000 radio stations and millions of tracks, albums and artist bios. DTS believes it has the world's largest database of broadcast metadata.

It stated in the press release: "DTS Connected Radio features big beautiful art, comprehensive artist and album information and imagery, songs, playlists, content recommendations, lyrics, local events, podcasts, and more, enriching broadcasts from thousands of radio stations around the world."

Xperi General Manager of Automotive Jeff Jury described the relationship as "partnering with Daimler to help make what they call the 'Third Place' — a refuge between home and workspace — more delightful."

RADIO AS A "MUST-HAVE"

In a Radio World interview in July, Jury was asked what was notable about the MBUX system.

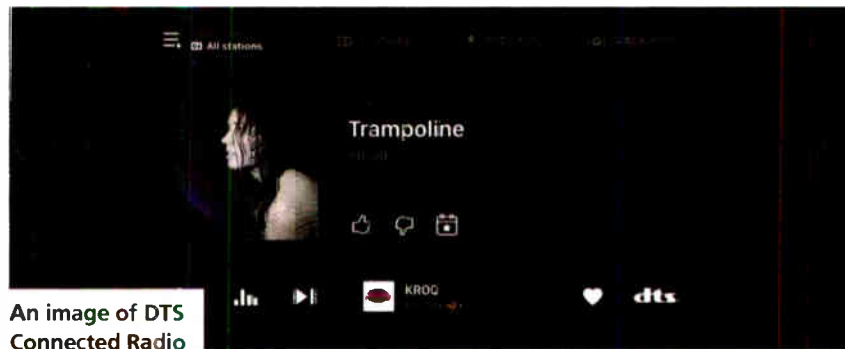
"First, Daimler [the parent of Mercedes] is not just handing over the dash to Apple or Google," he said at the time. "They are innovating for their customers. This is a great outcome for the radio industry because it means not all entertainment needs to be behind a car play or android for auto wall.

"Second, the main screen has radio as a separate icon (and apps as a separate icon). This shows that radio is compelling, and importantly, a standalone infotainment source for Daimler buyers. Again, good for the radio industry because radio is a main option, not one of many apps in the dash."

DTS highlights research that says radio remains a "must have" dashboard feature and reaches more adults 25-54 than other audio sources. Jury said those consumers want radio "to be as rich and engaging as other media platforms and experiences, particularly a mobile experience."

DTS promotes its platform to car-makers as a global one, compatible with analog AM/FM and global digital radio formats including DAB, DAB+ and its own HD Radio technology. It said the platform enables OEMs and Tier 1 suppliers to create better user interfaces without consuming a lot of data and computer resources in the vehicle.

Xperi is also the parent of DTS AutoSense, which monitors drivers and occupants; and HD Radio.



An image of DTS Connected Radio

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Putting CMAF HLS to Work in Audio

What to know about the partnership announced by StreamS and StreamGuys

BY DAVID BIALIK

Streaming is not a static technology. New innovations are constantly being developed.

Many video and “over the top” streamers have discovered the advantage of CMAF, the Common Media Application Format. This format, explained in standards document ISO/IEC 23000-19:2020, offers benefits to the streamer that are finally being recognized for audio-only streaming.

Technology companies StreamS and StreamGuys recently announced joint support for it. StreamS is part of Modulation Index, a company that offers streaming encoders and internet audio products and is headed by Greg Ogonowski, founder of Gregg Laboratories and former VP of product development at Orban.

StreamGuys is a service provider of live and on-demand streaming, podcasting delivery, and software-as-a-service (SaaS) toolsets.

Why does this matter to Radio World readers?

As the companies put it, their goal is to provide “next-generation, high-performance live audio streaming using fully compliant standards-based CMAF HLS for low-latency, adaptive-bitrate HTTP Live Streaming (HLS). Together, both provide a complete end-to-end streaming solution

that is reliable, scales to rapidly growing large audiences and reaches more modern devices with stunning audio quality.”

CONTAINER FORMAT

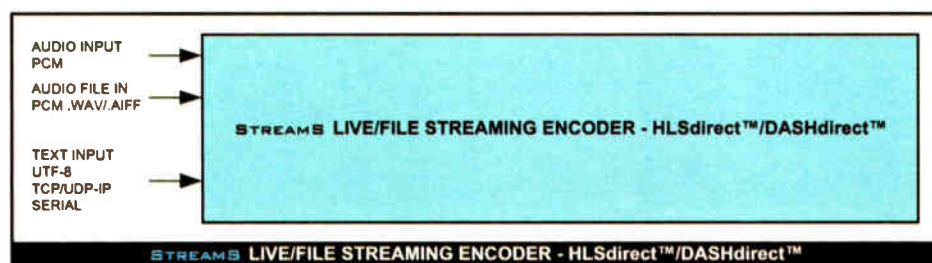
Please note that various companies will offer different flavors of a format, which is a problem with generic formats. Someone once said that the beauty of standards is that there are so many. Unfortunately, there are also a multitude of interpretations.

As a result, many existing streaming protocols have been modified and hacked to the point of becoming proprietary, leading to compatibility issues among streaming servers and player clients and devices. Will the disparity end? Probably not in the foreseeable future.

This particular solution is working hard to stay compatible with Apple Music. StreamS makes the hardware and software solution, and StreamGuys is the content delivery network or CDN.

Many formats are needed for streaming: the encoding format (i.e. xHE-AAC), the transport format (i.e. HLS), and the container format. CMAF is an example of a container format:

- It can contain your audio and video plus all the associated metadata.
- ID3 metadata is supported.
- Commercials can still be injected from multiple networks.



Many video and over-the-top streamers have discovered the advantages of CMAF. This format offers benefits that are finally being recognized for audio-only streaming.

Why is the announcement from StreamS and StreamGuys a good idea?

Consider that the World Wide Web was designed to present static or small files. It was not originally thought of for presenting non-ending streams; streaming was conceived later.

CMAF takes your content and chops it into segments, sending it to the Content Delivery Network. CMAF then instructs the player how to reassemble and present it, thus getting rid of many of the typical issues associated with streaming.

Greg Ogonowski, president of StreamS, notes that a “streaming server” is no longer essential to send the stream out.

What about latency? The delay of the content from encoding to playback has been the sworn enemy of the streamer.

CMAF can reduce (though not eliminate) latency. With a smaller payload, buffering and unwanted stream disconnections are lessened greatly.

To achieve less latency they are using this with HLS, which stands for HTTP Live Streaming, an adaptive bitrate streaming communications protocol developed by Apple Inc. Yes, that Apple. So there is instant compatibility with all of the iPhones out there. Yes, Android supports HLS out of the box, though support depends on the version of Android.

So compatibility is there. With HLS, latency is closely tied to the duration of the media segments that you’re using.

“HLS is getting a whole lot better with CMAF,” said Kiriki Delany, president of StreamGuys, in the press release announcing the partnership. “We are excited to support ultra-low latency and simplify deploying HLS.”

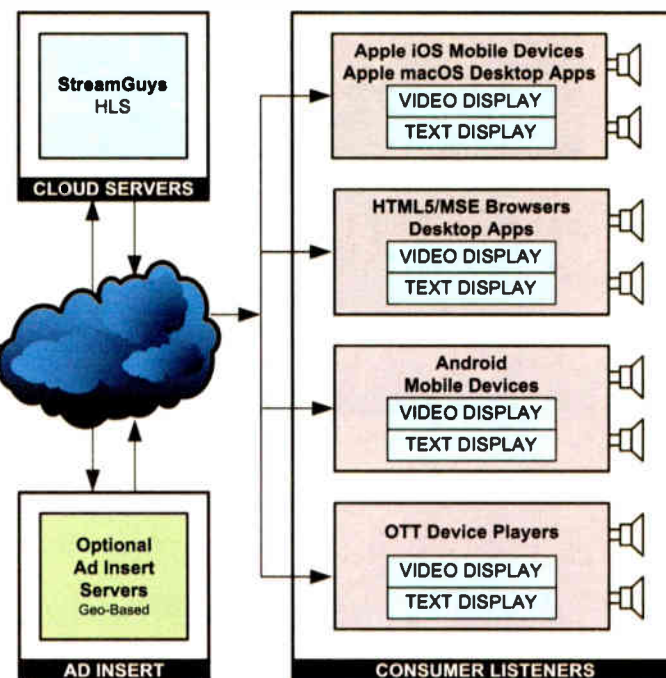
Delany said HLS provided efficient ways to switch networks while maintaining a stream, as well as savings on power consumption for mobile devices; it also introduced much higher latency than traditional true-streaming systems.

“CMAF changes that by allowing encoding to happen much faster, which greatly reduces file-based buffers. Meanwhile, xHE-AAC, once adopted by all major browsers and mobile platforms, will simplify what codecs are needed on the decoder side. It will support very low bitrates, like 12 kbps for speech, to very high bitrates, such as lossless ALAC/FLAC formats. This simplification will mean larger reach, and lower barriers to cross-platform compatibility.”

As a bonus, the higher adoption of lossless formats ALAC/FLAC for “fine arts formats” also invites the audiophile to enjoy streaming.

The introduction of CMAF and HLS is a big step for streaming radio and audio-only services. Hopefully others will get on board.

The author is a broadcast and streaming consultant and co-chair of the Audio Engineering Society’s Technical Committee for Broadcast and Online Delivery.



The above diagram from StreamS/Modulation Index depicts the process.

HTTP Live Streaming completely eliminates the typical streaming server and optional additional streaming specific edge server requirements.

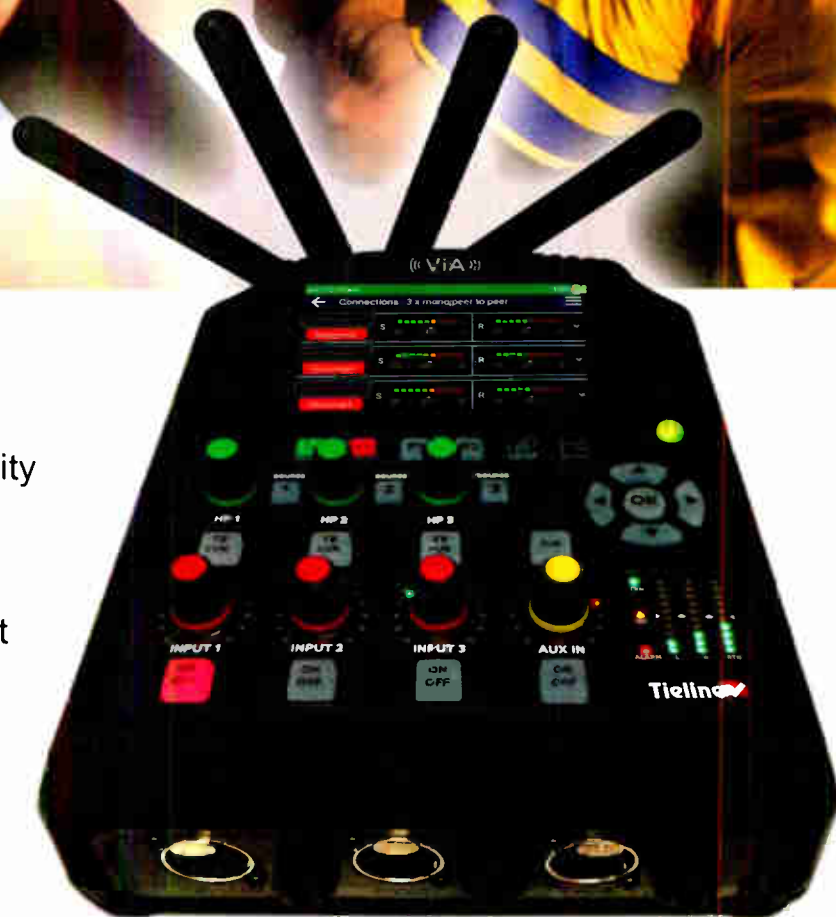
Standard HTTP web infrastructures and servers are used instead. This dramatically increases streaming reliability while reducing deployment and operating costs.

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How We Took on the Pandemic, and Won

A local broadcaster says this very tough year also has been one of learning and opportunity

BY GARY FISHER

The author is president/partner at Equity Communications, a radio ownership group in southern New Jersey.

It was a brisk chilly April 15 morning on the Black Horse Pike in West Atlantic City.

It should have been the start of another bustling summer season at the Jersey shore; but we had just finished chatting with the mailman, who'd left without delivering any checks for the fifth straight day. (He did leave everyone else's mail with Equity, since no other businesses in our five-story office building were open.)

This was exactly one month into what would become the depths of the pandemic.

No emails, no voice mails and 50% of Equity's second quarter bookings had been cancelled in the previous 30 days.

Sales visits and phone calls were out of the question. No salespeople to make them, no clients to accept them. No local businesses planning their start-of-season promotions.

Phillies baseball, usually a \$250,000+ revenue contributor for Equity, had been postponed indefinitely. The WZXL Beer Fest and Music Festival, a \$100,000 event marketing revenue generator, was cancelled.

It was nuclear winter in April.

BIBLICAL

My partner Steve Gormley and I formed Equity Communications in 1996 to hold nine radio stations and, more recently, a digital advertising and streaming business.

We'd been through 9/11, the 2006 financial crisis, Hurricane Sandy, the collapse of the local casino industry and the digital disruption of traditional media. But the pandemic and the plunge it created in revenues were like nothing we had ever seen. We'd spent 24 years building this company; almost

half of it disappeared overnight. Earlier disruptions were rounding errors by comparison.

In March everything suddenly stopped. No cars on the road to listen to radio. No car dealers or casinos open to buy ads. No one at work to write checks for the ads we had already run.

The standstill was downright biblical. And Equity of course was not alone in that.

We had to take stock of everything we'd been doing for 24 years and put it through a COVID lens. Our company was forced to cut expenses, downsize staff, reduce salaries, reduce employee benefits, sell off assets and re-engineer its sales, programming and administrative departments.

Veteran AEs and DJs left, new digital salespeople emerged, hard personnel decisions had to be made. Legacy operations strategies and practices with diminishing effect were scrapped, new ones instituted. We listened harder to our clients and audiences to set our direction.

We were forced to get slimmer and faster. For Equity it was a complete reset.

COMPRESSED CHANGES

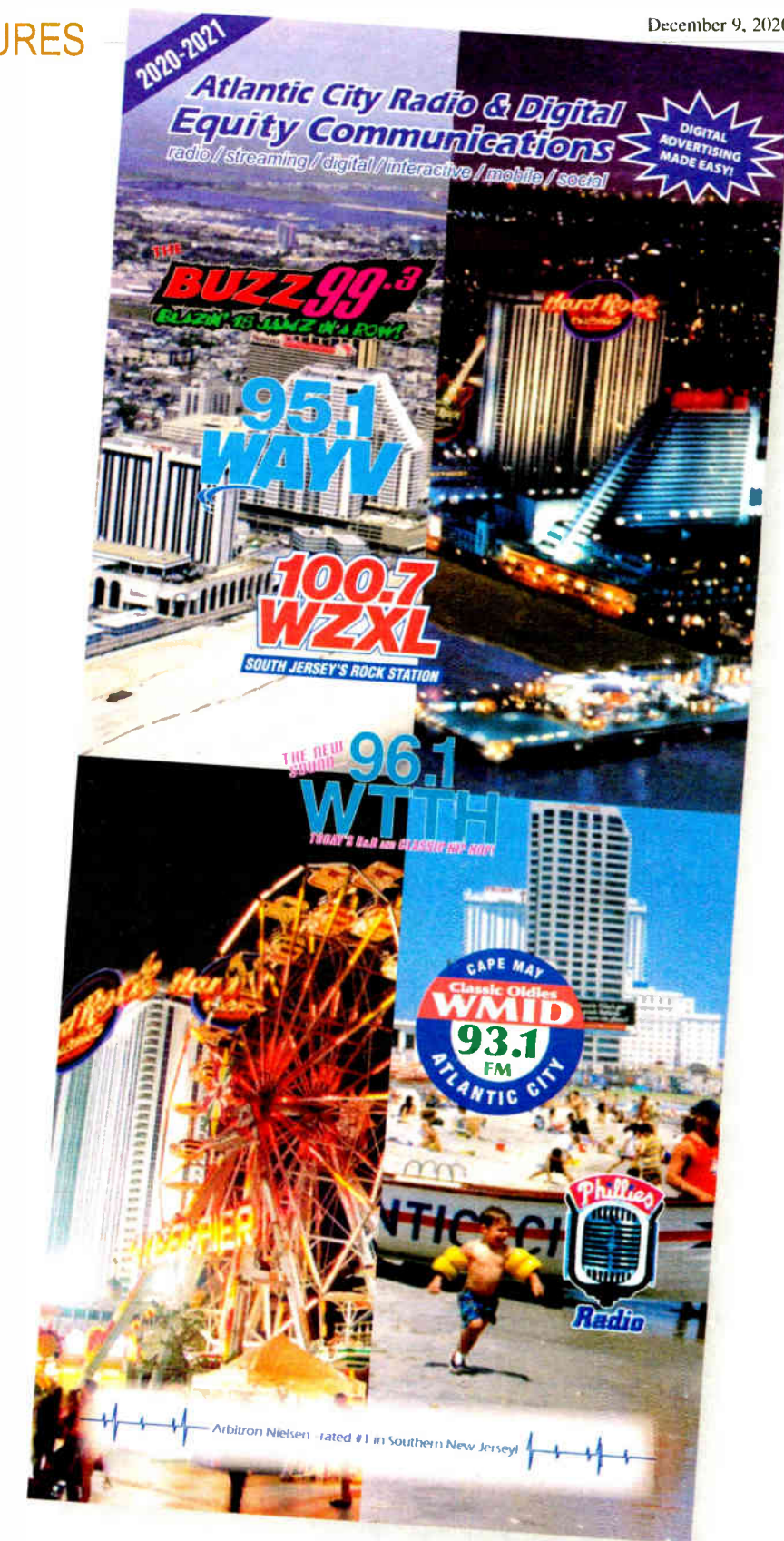
In a weird way we'd been prepared for this new economic reality. Our company had been growing its streaming audiences via websites and mobile apps, and had increased revenues five-fold by staffing up our highly successful in-house digital sales division.

The pandemic accelerated forces that had already been in play in advertising, delivering years of change in just a few short months.

From a sales point of view, everyone was thrust out of their comfort zones. From an expense control viewpoint, we stopped doing stupid, silly and fun stuff. From an operations point of view things, we looked at practices we'd deemed mission-critical and said, "Why in the world are we doing this?" From a content point of view, streaming music and digital programming, once thought of as an existential threat to over-the-air radio media, became our saviors.

We felt we had to reinvent the company or we might not have one left. It was an opportunity to fast-forward modernization.

We took the approach that the pandemic didn't happen to us, it may have happened for us. The worst crisis we had ever seen presented innumerable



An image from the Equity Communications media kit.

opportunities. We became the epitome of a modern media company.

We were at a bit of a disadvantage compared to local competitors like Comcast, Townsquare and the Atlantic City Press; we did not have the backing or liquidity of a larger corporation. On the other hand we had no debt or debt service to worry about.

We were also fortunate that Equity had an amazing core of a dozen or so employees who have showed up every day to keep the doors open. Staggered

hours, skeleton staffing, physical distancing, sanitation, ventilation, mitigation, lots of cleaning and masking kept us going.

These staff members, most of whom have been with us for well over 15 years, are the real architects of our reset — our essential workers.

Along the way Equity learned valuable lessons about dealing with adversity and with COVID. As cases start spiking again, our pivot may offer useful lessons to local businesses that have

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Gary Fisher in front of the Equity stations' lobby.

made it this far but may struggle to get through a tough winter.

COMING BACK

We've been telling our clients: We're still here, we're still big and popular, and now we're more affordable than ever. Staying big, digital, friendly, local and cheap is our way through this.

We're getting to the other side and are now seeing sequential improvement month after month. Our third quarter revenues improved by 66% over our second quarter, mirroring the recovery

seen in other media companies. Actual forward pacing has returned for the fourth quarter as I write.

I'm encouraged that many banks, law firms, health care providers, car dealers, restaurants and casinos are calling staffs back to work. That should be a precursor to advertising and spending eventually coming back.

I'm sure most of the clients we're Zooming with are still in their sweat pants and underwear; but it seems like more and more staffs are drifting back to work each week.

We don't know what the coming quarters hold but we're doing OK and our doors are open. We're still here and we'll be here.

I'm worried about projections that say one out of five small businesses will close this winter. But I hope after all our "eLectile dysfunction" calms down, there will be another round of stimulus for our clients. The real recovery will begin later in 2021 when everyone feels safe and people can eat in restaurants, hang out in bars and shop in stores without a concern.

When the exciting new vaccines and therapeutics are served up, combined with a side order of herd immunity, I think our local radio and digital will really take off. And with our new lean-mean-machine expense structure we should see actual profit and cash flow again.

We're not bulletproof; but I feel we've toughened ourselves against second and third waves and associated shutdowns. Likewise I feel we'll be ready to pounce on any real recovery the minute it starts. We're like that Timex watch from those John Cameron Swayze TV commercials from 50 years ago. We took a licking but we're still ticking.

Comment on this or any article. Email radioworld@futurenet.com.

WORDS OF WISDOM

The past is history, the future a mystery. Stay in the moment.

Less is more.

Find your pleasures and successes where you can.

Move quickly but slow down and don't hurry. Every interaction is now magnified.

Stay focused on the long term because the short term is ... well, short term.

Assume nothing, expect nothing, blame no one. Do something.

Give yourself a break from worrying about your career, no one else cares about it right now

Fight. Grind. Repeat. Fight. Grind. Repeat. Keep failing until you don't.

Tomorrow begins today because you never know when the turnaround will start.

Kill your clients with kindness. One of the few things we're still in complete control of is our client relationships.

— Gary Fisher



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Using Tieline ViA for Play-by-Play

Pandemic-era tech tips for solving sports broadcast challenges

TECHTIPS

BY JACOB DANILUCK

The author is Tieline's U.S. codec expert. This is one in a series of articles about how to get the most out of various popular broadcast products.

Recent months found us busy helping clients prepare for their fall sports broadcasts here in North America. Customers are always looking for ways to help them broadcast live play-by-play and to assist with interviewing players remotely during the pandemic.

When it comes to producing audio for sports broadcasts Tieline is like State Farm Insurance: "We know a thing or two, because we've seen a thing or two." From the local high school Friday night lights to the NFL and everything in between, when it comes to sports broadcasting we have seen it, and prepared solutions to assist.

To assist you with broadcasting live sports from home, I'd like to explore a few of these areas with you.

ONE CODEC, MULTIPLE STUDIOS

The most common need we have seen has been the ability to have a single codec stream to multiple remote studios. This is due to the increased number of sportscasters calling their games from their home studios, with maybe a single person at the game for crowd noises, game sounds and sideline interviews, while still maintaining the final mix at the flagship studio.

With Tieline's remote field equipment, you can transmit multiple streams as they feature multiple encoders and decoders. Each encoder and decoder has the ability to stream unique or similar audio sources going to multiple locations, all running in different formats to conserve bandwidth.

With a little bit of network configuration or the use of Tieline's Traversal Server, TieLink, you can have your on-air host at home be a "remote" studio with the ViA codec. Then your reporter

at the game, with another ViA, can dial into your "remote" studio like a normal connection. See Fig. 1.

Once the on-site ViA and the "remote" studio ViA connect, both ViA units can then establish a secondary link back to the master control center at the flagship. Allowing the studio to have the ability to adjust the final mix before it goes on-air, as well as maintaining the level of content your audience wants.

FEEDING MULTIPLE IP AUDIO STREAMS

Another common solution request that we get, particularly with high

school broadcasts, is the ability to feed audio to both an online video stream as well as a traditional radio remote back to the studio.

Other than video equipment and a PC to upload a live stream to broadcast to the local community, you also need to

The most common need we have seen has been the ability to have a single codec stream to multiple remote studios.

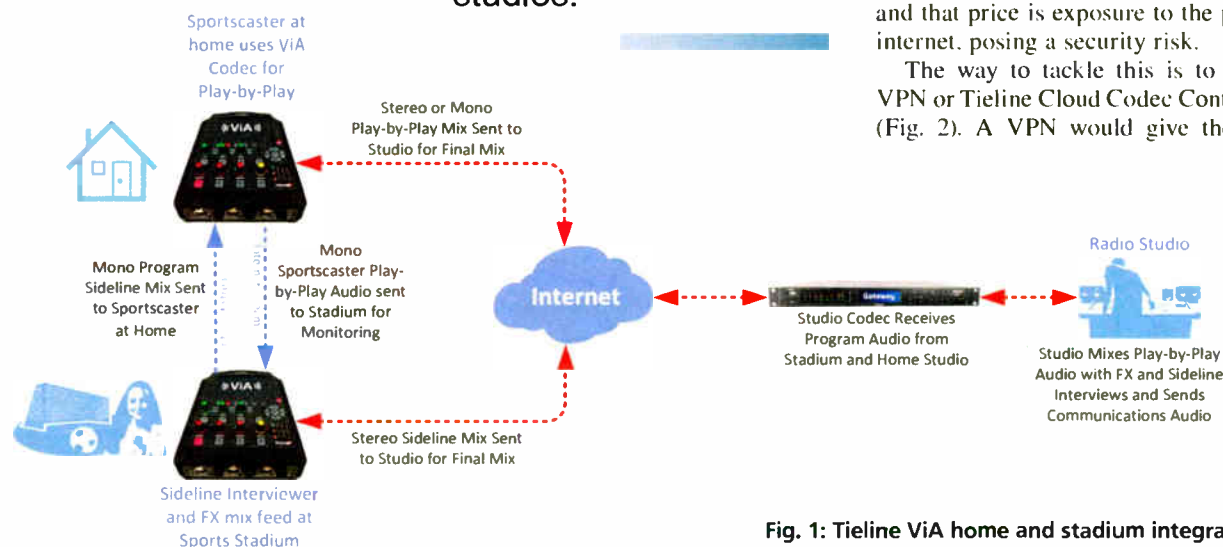


Fig. 1: Tieline ViA home and stadium integration



Fig. 2: Tieline Cloud Codec Controller

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dio and engineer the ability to access the equipment remotely as if they were on the same local area network. Cloud Codec Controller doesn't create a VPN. Instead it creates an SSL Socket between the Tieline hardware and Tieline's Cloud Codec Controller Hub Network.

The network establishes a secure path between the codec and the PC to provide remote control of the equipment. With the Cloud Codec Controller, you can reduce equipment costs for remote access and also give your talent the peace of mind to broadcast without having to worry about technical issues.

When it comes to broadcasting events remotely, regardless of the situation or the requirements in the field, Tieline has a solution prepared for you. Whether you are looking to feed multiple studios, or you just want to split and share the codec's audio to another broadcast team, Tieline is there to help you.

Tieline has also created a range of support videos to support different set-ups and you can view them on our YouTube channel at www.youtube.com/user/TielineSupport.

If you have a suggestion for a product to be featured in this series, email radioworld@futurenet.com.

PEOPLENEWS

Inovonics Salutes "Wolf" Rietz

Manufacturer Inovonics is saluting longtime employee Wolfgang Rietz on his retirement.

Founder Jim Wood called Rietz "the helpful and happy financial wizard of Inovonics."

"Inovonics has been both a short-term and career home to many fine people over our history, but in the almost 50 years we've been in business, this is the first formal retirement we've celebrated," Wood said.

Rietz — known to many as Wolf — has been with the company more than 20 years.

President/CEO Ben Barber said Rietz instituted formal bookkeeping and accounting processes that provided clear indications of the firm's financial direction and tendencies.

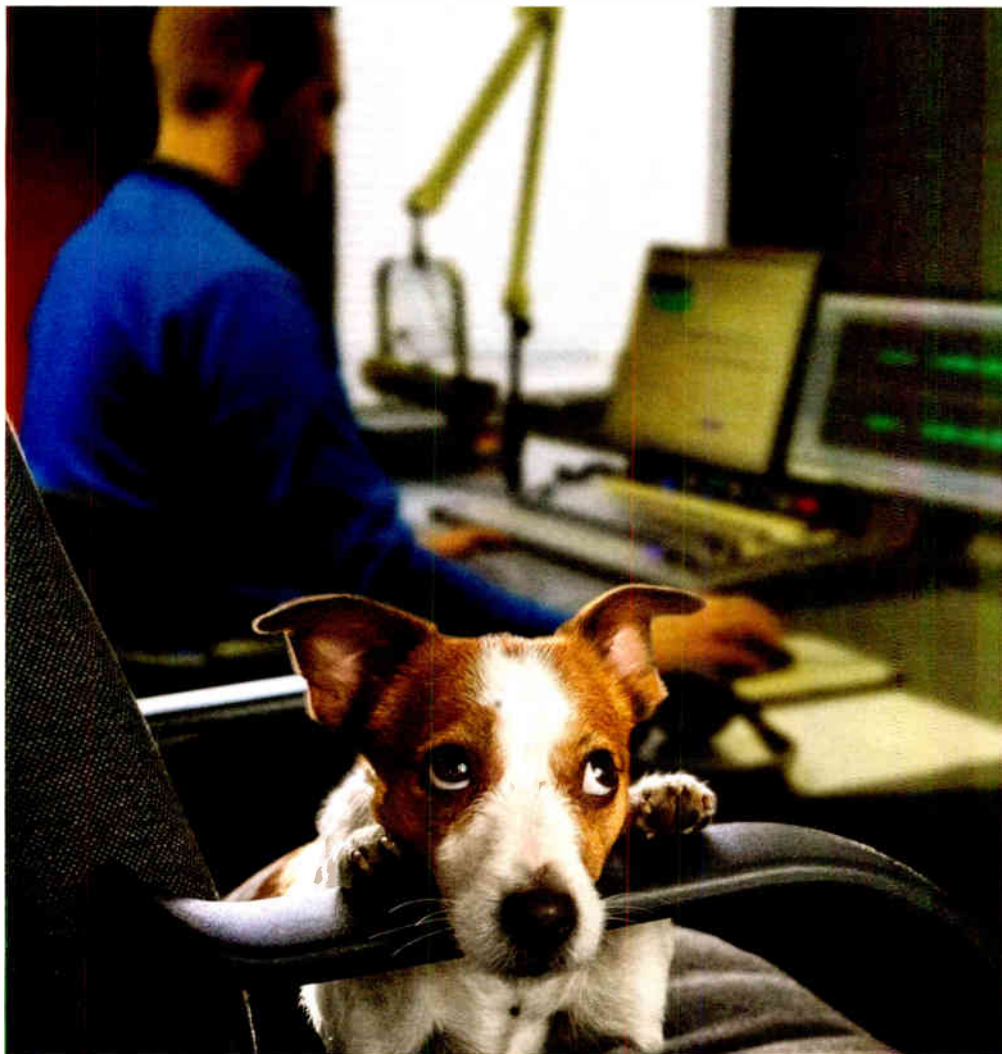
"From the very first day, Wolfgang strove to move Inovonics and its procedures forward. He streamlined processes with the goal of making all aspects of accounting more concise, measurable and controllable,"

Barber said.

The company celebrated his retirement and pending move to Idaho recently with a "socially-distanced" barbecue at its headquarters in California.



Wolfgang Rietz, right, with colleagues at the 2004 NAB Show.



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Community Stations Share COVID Stories

Annual Grassroots Radio Conference bore witness to pandemic's impact across radio

BY JENNIFER WAITS

Flash back to fall 2019 at a community station abuzz with activity. A DJ is in the studio, spinning records, while volunteers socialize, work in production studios and assemble donor gift packages. Training is underway for new recruits and anticipation is high for a co-promoted concert at a nearby venue. Hugs are exchanged along with "hellos" and "goodbyes."

For much of 2020 most of these activities were just a memory, as stations adapted to the COVID-19 pandemic. What does community radio look like when the community isn't necessarily allowed inside the station? How are stations that pride themselves on 24/7 live in-studio DJs doing radio when they must restrict access to their buildings? And how are volunteer-reliant stations adjusting to socially distanced engagement?

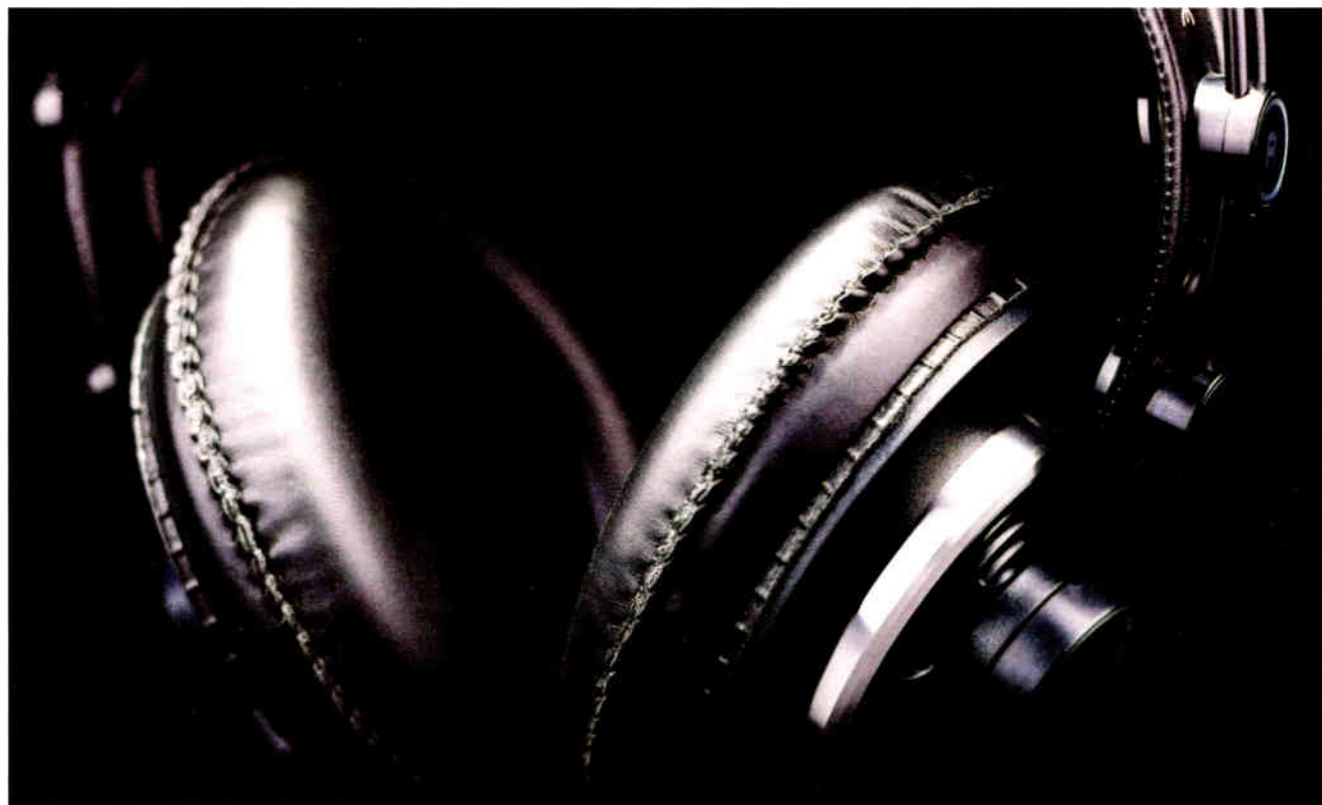
The Grassroots Radio Conference confronted these questions in October. Held virtually, the event was hosted by ARTxFM, otherwise known as WXOX(LP) in Louisville, Ky.

STUDIO SAFETY

Dr. MarkAlain Dery has a unique perspective on studio safety, as an infectious disease physician and epidemiologist as well as founder of community station WHIV(LP) in New Orleans. He spoke as part of the online conference.

For much of this year, only one person at a time has been allowed at WHIV. Masks are required and a clean sock is placed over the studio microphone for each shift.

Importance is placed on handwashing and disinfection of surfaces, and the production booth is closed. Flyers implore, "Spread Love, Not Germs." WHIV supplies washable masks, which



Getty Images/Cavan Images

One vintage record-loving DJ has taken over a dining room table with a turntable setup; another broadcasts from a front porch, with bands playing in the front yard.

show hosts drop into a container marked "dirty" upon exit. Dery emphasizes the aerosolized nature of coronavirus, pointing out that masks and ventilation are both critical.

Because of the challenges in keeping studios clean and safe for volunteers,

many community stations have opted to limit access drastically, with some shutting down in-person activities entirely.

In the early days of the coronavirus, WXOX shifted to a staggered studio schedule so that on-air hosts were not running into each other during program

transitions. The initial plan was to have one volunteer do a show in the studio, followed by a remote broadcast.

Even with that precaution in place, WXOX General Manager Sharon Scott grew increasingly worried about everyone's health.

"Literally, I wasn't sleeping at night," she reflected. When the outbreak worsened, she closed the studio. By that point most hosts were already broadcasting from home.

100 DIFFERENT AT-HOME STUDIOS

While each community station approaches broadcasting amid a pandemic differently, many used archived programs and automation to fill schedules when live DJs cannot be in the studio.

This was the initial approach at WFMU(FM) in East Orange, N.J., near New York City, where only a skeleton crew of staffers is allowed at the station.

Looking back on the early rerun-filled days, Station Manager Ken Freedman said that "It was awful." He described the awkwardness of airing pre-virus shows that felt out of step while listeners in New York and New Jersey were going through the crisis.

Quickly, priorities shifted to setting up home studios for WFMU's sheltering DJs. Freedman described how "sobering" it was to be at an epicenter of the pandemic, knowing people who died and having DJs come down with the virus.

MARKETPLACE

2021 History Calendar Is Out: The 2021 edition of the Radio Historian's Calendar, published by John Schneider, is available. Its 13 photographs have been digitally remastered and colorized "to replicate the original scene as accurately as possible." Schneider includes detailed histories about each photo.

Shown is the March image of a live studio panel discussion on WAMC at the Albany Medical College in Albany, New York, in 1969.

Other photos include the NBC master control console at Radio City, circa 1935; Charles "Doc" Herrold operating his station "San Jose Calling" in California, 1913; and a bevy of bathing beauties participating in a remote broadcast over WBZ in Boston, circa 1933.

The price of \$24.95 includes postage to locations in the United States. For info visit www.theradiohistorian.org.



Although WFMU has been doing remote broadcasts over IP for over 20 years, Freedman said that in some ways it's more difficult today because there are "so many more options." With around 100 different studios in DJ homes, it can be "very challenging" to help orchestrate myriad options and troubleshoot all the permutations of breakdowns in the broadcast chain.

It's a similar situation at WXOX, where live broadcasts are originating from home studios across Louisville.

One vintage record-loving DJ has taken over a dining room table with their turntable setup; another broadcasts from a front porch, with bands playing in his front yard; and some keep it super simple using just a laptop.

To facilitate live remote broadcasting, WXOX created a secondary stream that only the on-air hosts can access. Hosts broadcast live to this stream, which the station picks up to transmit over FM and online. Scott recommends that for this behind-the-scenes stream, stations obtain a plan with the highest bit rate and lowest cap on the number of listeners to save on costs.

Under current circumstances, stations also have been more tolerant of variations in sound quality to allow community radio hosts to work remotely. Even the voice memo app on a smartphone can be used to record audio, from interviews to public service announcements.

A NEW VOCABULARY

At cash-strapped community stations, home setups for DJs can be Spartan; but low-cost or free software platforms help. Minimal requirements are a computer, internet connection, and headphones.

Sharon Scott encourages DJs to connect with an Ethernet cable to help mitigate troublesome WiFi connections. USB microphones are also recommended, although not every DJ has one.

Software used by DJs to stream live at WXOX and WFMU includes AudioHijack, Rocket Broadcaster, RadioCast and BUTT ("broadcast using this tool").

Pacifica Network has posted a discussion of software and strategies for remote broadcasting that includes Zoom, Squadcast, Riverside.fm, Ringr, Zencast, phone interviews, Cleanfeed, split-tracking, Dropbox, Splashtop, VPN, Rocket Broadcaster and Radio Hijack. At pacificanetwork.org, enter "GRC2020" in the search field.

ARTxFM also has a remote tutorial at www.artxfm.com/remotestations/. And additional tips can be found in the archived conference sessions at www.youtube.com/VirtualGRC.

In Ames, Iowa, KHOI(FM) show hosts have been doing live radio and

interviews using Zoom video meetings. Station Manager Ursula Ruedenberg calls it the "simplest solution" for programs with co-hosts and guests, despite some audio sacrifices.

Listeners have been understanding. "It's a COVID-19 sound ... people freezing up or sound getting a little bit wonky just has become part of the way things sound now," she said.

"THERE FOR EACH OTHER"

Beyond technical glitches, the "COVID-19 sound" has unintended benefits.

In Albany, N.Y., Paul Smart of WCAA(LP) has led audio production workshops that eschew "professional gloss." For him, providing access and building community are more important.

Hearing tidbits of extraneous sounds on the airwaves, like background noises from dogs barking and phones ringing, has sparked listener interest in making radio at WCAA. That has led to

The image at right was shared by MarkAlain Dery, who spoke about COVID safety protocols at WHIV(LP) in New Orleans. "We took pictures of a few of our DJs and plastered these all over the station, plus our internal communications," he said. "The DJ is Jenny Yanes and the show is called 'Islam in the Crescent City.'"

WEAR A MASK AT ALL TIMES WHILE INSIDE WHIV



SPREAD LOVE! NOT GERMS!

an uptick in home-produced shows, allowing the station to expand local programming.

Community building is at the core of these efforts. Scott said, "In the midst of political turmoil, civil unrest and a range of local disasters, community broadcasting is more important than ever. Meanwhile, the global coronavirus pandemic makes accessing our studios a formidable danger of its very own. Yet, as FM broadcasters, we have committed

ourselves to being there for our local community in times of emergency. We must also be there for each other."

RADIOPLAYER EXPANDS

Streaming technology platform Radioplayer is launching in France, Sweden and the Netherlands, bringing its country total to 14.

Organizers made note of the importance of France as an automotive market, accounting for 14% of European car sales and more than a quarter of European car production.

Radioplayer started as a collaboration of the BBC and the commercial radio industry in the United Kingdom. "Unlike other radio aggregation models, Radioplayer is nonprofit, and each system is specific to the country in which it is launched," according to a press release.

"There are shared technical standards for the Radioplayer web-player, the radio discovery apps and the backend systems which power them, but

broadcasters retain control over their own branding, streaming, and commercial deals."

The organizers of Radioplayer say the effort is important so that "the international radio sector can speak to all car manufacturers with one voice, to keep radio strong in the dashboards of the future."

The three countries will add metadata (station information, logos, streams, podcasts etc.) to the Radioplayer data feed that supports "hybrid" radio interfaces in a growing number of new cars.

"These smart devices can switch automatically between DAB+, FM and

streaming, to keep listeners locked-in to their favorite radio stations. Almost a million cars are already driving around Europe with radios powered by metadata from Radioplayer stations."

Radioplayer France is supported by broadcasters Radio France, Les Indés Radios, M6/RTL, Lagardère, NRJ, and NextRadioTV. "The new partnership will provide 67 million French people with improved ways to listen to their favorite radio stations in the car, and via apps, smart speaker, and smart TV integrations," according to the announcement.

Radioplayer Netherlands will operate as a partnership between public service broadcaster NPO and Dutch national commercial broadcasters. Radioplayer Sweden is backed by a consortium of major broadcast groups Sveriges Radio, Bauer and Nent.



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What's the Right Tone on COVID-19?

Understanding attitudes is the tricky part of being on-air during the virus

PROMO POWER

Mark Lapidus



Millions of jobs lost. More than 240,000 perished. Over 10 million sick.

You know the facts because you're living them. One thing most of us can agree on is that the science of this COVID-19 thing hasn't changed and it remains highly contagious.

Being isolated for so long, it's human nature that we are all past ready to return to normal activity. What's constantly in play is the public's attitude.

A friend of mine in Florida recently declared that she was "so done with COVID" and took a road trip to Key West with three friends, sharing a hotel room and reveling in the food and atmosphere of their favorite hot spots.

IN TOUCH WITH LISTENERS

Understanding attitudes is the tricky part of being on-air during the virus. It's the one discussion point your local team needs to update constantly so you can properly adjust what you're doing on-air, online and with your social channels.

Nobody knows when this nightmare will end. Even once a vaccine is available, it will be months before all public activity can safely resume in a normal way.

It's super easy to be unintentionally tone-deaf about this tragedy, but doing so can damage your personalities and your brand, perhaps permanently.

In the beginning of the outbreak, from his yacht in the Caribbean, recording industry billionaire David Geffen posted a picture of a beautiful sunset for his 80,000+ Instagram followers. Seemed innocent enough, even with the caption that said "Sunset last night... Isolated in the Grenadines avoiding the virus. I hope everyone is safe."

He got roasted first by his followers and then by the media. This is a guy who's been involved in raising mil-



A sign directs residents to a COVID-19 test site in Aurora, Ill., in November, as cases spiked in the state.

Photo by Scott Olson/Getty Images

Salisbury Business Journal

FEEDING AMERICA EMERGENCY RADIOTHON



Adams Radio Group of Delmarva broadcast the "Radio Cares: Feeding America Emergency Radiothon" fundraising event last spring to benefit the hunger relief organization Feeding America.

lions of dollars for clinics, charities for the homeless, and even has a school of medicine named after him in California. None of that matters to the people who perceive him as a privileged jerk.

They're thinking, Yeah, you're isolated all right ... from the risk and uncertainty the rest of us face every day!

The lesson is that we can't let our guard down as the seasons change and we need to be ultra-aware of what we are saying to our listeners.

COMMUNITY-MINDEDNESS

You've had to be living in a cave not to know that the act of staying home when possible, wearing a mask, and social distancing — and the extent to which any should be mandated or voluntary — has become a political sore spot. Therefore, unless your product is a specifically conservative or liberal talk format, it's risky to take a position.

A transparent way to talk about masks is to have the voices of your listeners express their opinion. Stay calm and have your best tension-easing methods of diplomacy ready to roll.

As the recent election shows, the

country is split on so many issues that your personalities or station will inevitably alienate many listeners if you go all-in on one point of view.

However, because the relentless contagion of this devastating virus hasn't changed, all stations should encourage sick people to stay home, to be careful around the elderly or others of compromised health, and to remember that we are all in this together.

There is one scientifically proven fact that your station staff could highlight: wearing a cloth mask (even a bandanna over nose and mouth) may not do much to protect yourself, but it is enormously helpful in protecting others.

It is a community-minded action, and local radio culture is, or should be, all about community. Imparting this information via PSA or to a genuinely interested caller is an important public service.

That said, if your community is overwhelmingly in favor of full-time masks while in public, you could also give out or sell masks or hand sanitizer with your logo to benefit a charity, as some stations have been doing for months now.

OFFER RESOURCES

Most importantly, every station in America should continue doing their best to generate funds, food and supplies for those in need.

With unprecedented unemployment, we must create more avenues to offer support. This may be more-frequent PSAs urging both monetary and non-perishable donations to food banks; airing announcements about volunteer opportunities; and supporting loans for those in need.

If you haven't done it already, I urge you also to create a resource page on your website with links to such things as local employment search ideas and help in navigating loss of income; food security advice and dollar-smart recipes; articles on coping with disruption of family life and other relationships; and, of course, how to stay safe and healthy in the face of COVID-19.

Enlist a member of your staff who is good at research to compile these resources and review it with your talent so they're in the loop of what's available to their listeners on the website and what's being constantly updated.

During times of crisis, people have long turned to radio personalities as virtual friends. And just as a friend is genuinely warm and approachable, it's more important than ever that talent express a desire to share in their listeners' lives.

Most of this comes in the form of morning shows; many who expanded hours in April continue to stay on for longer, while others have already scaled back. The situation is so fluid that if your area goes into lockdown again, you should take a hard look at your schedule.

There was a piece of optimistic news in a Radio Advertising Bureau article in October from Pierre Bouvard, chief insights officer at Cumulus:

"The growth of workplace commuting combined with the return of children to school has caused time spent in the car to surge. This is good news for both the outdoor advertising and U.S. AM/FM radio industries. From May to October, Nielsen finds daily time spent in the car has grown +81% from 36 minutes in May to 65 minutes in October. Among heavy AM/FM radio listeners, daily time spent in the car has doubled from an hour and six minutes a day to two hours and 11 minutes."

Even if this goes sideways due to renewed school closings and new restrictions, the beautiful part is that we can rest assured that in-car will come roaring back.

Many of us have more questions. At the top of my list: Do you continue to respond to the times in your local community?

Reach the author at marklapidus1@gmail.com.



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The Golden Era of Local Radio News

Memories of reporting and the tools we used to do it

COMMENTARY

BY GORDON GOVIER

Digging through a cabinet one day at my first radio news job at WOSH in Oshkosh, Wis., I discovered a Uher portable reel-to-reel tape recorder. News Director Bud McBain told me the German-made recorder had been standard gear for an earlier generation of radio news reporters.

That exotic Uher stayed in the back of my mind for years. I was curious to know more about how it fit into the history of radio news.

When my radio news career began in the early 1970s reporters were already depending on cassette machines for field reporting. The Sony TC-110 was ideal for broadcast news and used widely.

In those days, just about every commercial radio station had its own news department. At WOSH, and the other stations where I worked for the next decade, we covered the legislature, city council, school board, county board, courts and every local news conference we could get to.

We used alligator clip leads to tap our recorders into telephone handsets for feeding our live and recorded reports from the field to the newsroom. Usually our reports included actualities from newsmakers, sometimes they were ROSRs — radio on-scene reports — that used ambient sound in the background.

Back at the station the news anchor could go live at any time and speak to a reporter or newsmaker anywhere in the world, as long as they were near a telephone.

One day I heard a report on the police scanner that snow had caved in the roof of a local grocery store. With just minutes to my next newscast I consulted the city directory and called the barber shop across the street to record an eyewitness report.

Our tape-recorded audio cuts conveyed a sense of immediacy about news events every time we played them on the air.

Eventually FCC deregulation and radio consolidation removed the incentive for every station to do news, and a large percentage of stations freed themselves from that obligation.

I left my last full-time radio news job a decade and a half ago but I couldn't forget that snazzy Uher recorder in the WOSH news cabinet. How did local radio news become the powerful medium that I discovered when I graduated



The tools of radio newsgathering have evolved constantly. Shown in 1989, British Conservative politician Chris Patten is interviewed for radio in London. Two portable recorders are visible.

Photo by Peter Macdormid/Getty Images

Our tape-recorded audio cuts conveyed a sense of immediacy about news events every time we played them on the air.

from college and became a reporter?

GATHERING STORIES

The stories of how news figured in radio's beginnings in the 1920s, and how radio networks were created so that the world could be informed of the momentous events of the late 1930s and the 1940s, are well told in authoritative sources such as Erik Barnouw's "A History of Broadcasting in the United States" trilogy and Ed Bliss's "Now the News."

But these sources typically shift focus to television when they get to the 1950s. They fail to tell the story of what I would call The Golden Era of *Local Radio News*.

My search for books on the history of radio news after the development of television was fruitless. I had to go to other sources: former supervisors and their colleagues who were all a decade or two older than me and who had lived through this transitional period.

Radio news in the first half of the twentieth century was almost always live, for two basic reasons. The networks had policies against using recorded audio, and the available recording technology was bulky and unreliable. The news of that day was reported

through wire copy and occasional live special event coverage. Wire recorders existed but they were not user-friendly.

The first major innovation that reshaped radio news was the magnetic tape recorder, which made recorded events sound as if they were live. German engineers played an important role in its development, and the technology helped trick the Allies during World War II. Captured models were spirited back to the U.S. right after the war ended. Magnetic reel-to-reel tape recorders began to be used in radio stations in the 1950s.

Wayne Corey was with WBCH in Hastings, Mich., when the station acquired two state-of-the-art, portable Ampex recorders in the early 1960s. They were in two big suitcases and were used primarily in the main control room. They could also be deployed for special events.

"I took one of them out to tape football games and occasionally set one up at a city council meeting," he said. "The things we taped were rebroadcast in long segments."

At about the same time Jim Orr was at KCRG radio in Cedar Rapids, Iowa. He remembered noticing news sound bites, or actualities, starting to appear

in ABC network newscasts in the early 1960s.

"Portable tape recorders were never used by newsmen at that station through 1964, possibly because the equipment wasn't out there to any degree; it just wasn't being done," he said.

It took two more major technical innovations to complete the recorded audio revolution in radio news. The audio tape cartridge was introduced in 1959, and the tape cassette was introduced in 1963.

The tape cartridge used a tape loop of varying standard lengths to record commercials, news actualities, and other programming elements. After each play the cart would loop back to the beginning and stop. To be able to pop a cart in a player and press the start button was a great advancement.

"Even when properly cued on a rack-mounted reel-to-reel machine with remote start/stop switch right next to the mike button, there was always a risk of a wow sound as the reel to reel machine achieved full playback speed," Orr said.

"The cart machine changed all that. Plus, you could have three or four cuts in the same newscast which would have otherwise required cueing and using four different reel-to-reel decks."

Bill Vancii, a veteran programmer of radio stations in Illinois, Iowa and Wisconsin, said stations in the early 1960s typically used small reels (3 to 5 inches in diameter). "They had a wall of pegs with these little tapes that they would quickly play, rewind, and replace just as they used cart machines later."

Putting news stories on the air with actualities using tape cartridges was becoming common in 1966, when Orr arrived at KSTT in Davenport, Iowa, to be a field reporter and news anchor. Cassette recorders were available at this time, but the audio quality was deemed not yet equal to the larger tape format. Orr and other news reporters still preferred using portable reel-to-reel recorders, that by this time had shrunk to the size of a dictionary.

That's when the Uher entered the story. Dick Record, a former news reporter at WISM in Madison, Wis., and then general manager of WIZM in La Crosse, remembers his Uher well.

"It was smaller and easier to carry and operate. It used a 5-inch reel but had several speeds including, I believe, 15/16ths inches per second. That meant I could tape a whole county board or city council meeting and get audio cuts for air use."

MUSIC AND NEWS

The technology of the 1960s allowed for more aggressive radio news cover-

(continued on page 30)

READER'S FORUM

MICHAEL BOLTON AND YOU

As always, Workbench is my "first read" in every RW issue. I learn something new, confirm stuff I already know or get a chuckle.

I still fondly recall John Bisset's presentation at SBE Chapter 22 in Liverpool many years ago. I almost wore out my hand taking notes. My favorite tip involved "black double-knit fabric"!

In reference to his column "How Michael Bolton Can Be 300 Times Worse" in the Sept. 16 issue:

That YouTube demo by "Nickd2011" of MP3 over-compression revealed the standard's shortcomings. The artifacts were horrific!

I used to record my church services in MP3 until I heard a few "sour" organ notes, then switched to 44.1/WAV, which was noticeably better. (Any necessary MP3 conversions from Audacity are done post-editing.)

Also, John's generator maintenance mentoring will yield large dividends for our "newbies" whose only experience with "backup power" is usually a UPS. Good familiarity with "heavy tech" can save time and money; diligent recordkeeping may seem "overkill" but I've learned from years of transmitter work that it may reveal slow trends towards pending failure, and knowing what to tell the service person on the 'phone can often ensure better site reliability or quicker restoration.

Again, thanks, John!



This image from the Sept. 16 Workbench column is from a YouTube video that demonstrates what happens when an MP3 recording of Michael Bolton is compressed hundreds of times.

Michael J. Shovan, CBTE (ret.), WB2KHE

GOLDEN ERA

(continued from page 29)

age at the local level. Record believes it was actually the competitive radio environment that drove the change.

In earlier decades, when network entertainment ruled radio, listeners tuned in to hear their favorite shows rather than a particular radio station. After network entertainment jumped to television, innovative radio programmers seized on the idea of jukebox-style music programming. The Top 40 format arrived to revive radio in the mid-1950s.

When another decade had gone by, there were a lot of Top 40 radio stations. Many were searching for programming distinctions to help them attract larger audiences. They discovered that a station that had reporters on the street, covering local news events, had a promotional advantage. Unlike the early days of radio, newscasts were now heard hourly, even more frequently during rush hour.

Vancil recalled that this was a time when powerhouse Top 40 stations successfully combined fast-paced hourly newscasts with rock and roll music and personality announcers. They promoted news heavily, and in many markets they became a more popular news source than the traditional full-

service stations.

He cited examples such as WISM vs. WIBA in Madison; KSTT vs. WOC in Davenport; KIOA vs. WHO in Des Moines; WLS vs. WGN in Chicago and WMCA vs. WNBC in New York City.

The 1960s and '70s was an exciting time to be a radio news reporter. Society was going through major changes and there was lots of news to report. There were hundreds of radio news jobs across the country, with many stations in each market competing to have the best news coverage.

Since then the technology has evolved in other directions thanks to digital platforms, smartphones and the internet. Today there's still radio news but it's primarily confined to a much smaller number of all-news, news/talk and public radio stations.

However, there are thousands of men and women who share the memories of reporting news on the radio during the highly competitive Golden Era of Local Radio News.

Gordon Govier reported on news in Wisconsin, Ill., and Nebraska during his 30-year radio career. He produces a self-syndicated weekly radio program/podcast called "The Book & The Spade," which covers biblical archaeology and can be heard at radioscribe.com.

CALL TO ACTION FOR AM

After reading "AM Advocates Watch and Worry" in the Sept. 30 issue, I ask myself: "What is an independent and local broadcaster to do?"

An AM station must stay active in order to have access to an FM translator. In our case, the owner of the real estate upon which the tower has been located for over 50 years is selling the property for commercial development. Fortunately, we found less valuable real estate, and a new tower is to be erected.

If the trend noted in the article is correct, the new AM tower will be obsolete before the construction is complete. Having to make this investment is a difficult choice considering the bleak future for AM and perhaps all radio.

It is a vicious cycle. Audio quality deteriorates; then listeners and advertisers find something else. Unfortunately AMs that are doing it right tend to get lumped in with those who are not. Should the AM decide to make the move to all-digital, the cost for upgrading the ground system, tower and transmitter would be substantial and risky.

There needs to be a nationwide effort to upgrade the technical quality of AM stations, perhaps something along the line of public-private partnerships, such as is happening with rural broadband.

Recently an engineer described to me how he did minor repairs to a station's ground radials, retuned the ATU and turned a horrible AM signal into one with very good sound and much improved coverage.

Perhaps AM stations with 500 watts or less on high frequencies could be allowed to go silent if their FM translator reaches a sufficient portion of their audience, to help remove some of the nighttime clutter, even from 35 watts.

As rebuilding of AM produces a much better product, owners and associations then must promote AM. For AM stations with an FM translator, the programming is the same, so the defining difference is audio quality.

Finally, corporate owners should divest themselves of underperforming AMs and provide willing local broadcasters the opportunity to do local radio again. Possibly non-profits could operate those broadcast properties as a commercial enterprise and rid themselves of low-power FM and all its limitations or possibly, with approval, allow the LPFM to become a translator for the AM station.

*Roy Burnette
Five Forty Broadcasting Co.
Sylva, N.C.*

DROP THE THREE-CHANNEL RULE

A serious consideration for AM revitalization is being overlooked. Rather than promoting digital, which is still not ready for prime time, how about making changes in facilities a little more friendly?

One way is to get rid of the three-channel rule, which has outlived its usefulness. Many stations are going dark, but the band is still too crowded for most stations to move within that range. In order to reduce interference and improve coverage (which the FCC claims is of high importance, but doesn't seem to practice), a station may have a frequency available that accomplishes all the above but is outside the range; and waivers are nearly impossible to receive.

At present you have to wait for an AM filing window, which may not happen for years to decades (the last one was over 20 years ago), in order to make a move outside the three channels.

There is no good reason for this, with the number of stations recently going dark, whereby a struggling station could improve their coverage and reduce current interference if such a move were allowed.

Another factor would be to allow more stations into the expanded band. There are only 52 stations across the nation in the entire expanded band, making it an additional resource that is being vastly underutilized.

Keep adequate protections between stations so as not to overcrowd the band, and allow this underpopulated territory to be used for improving the AM band, which was the primary motivation for its creation.

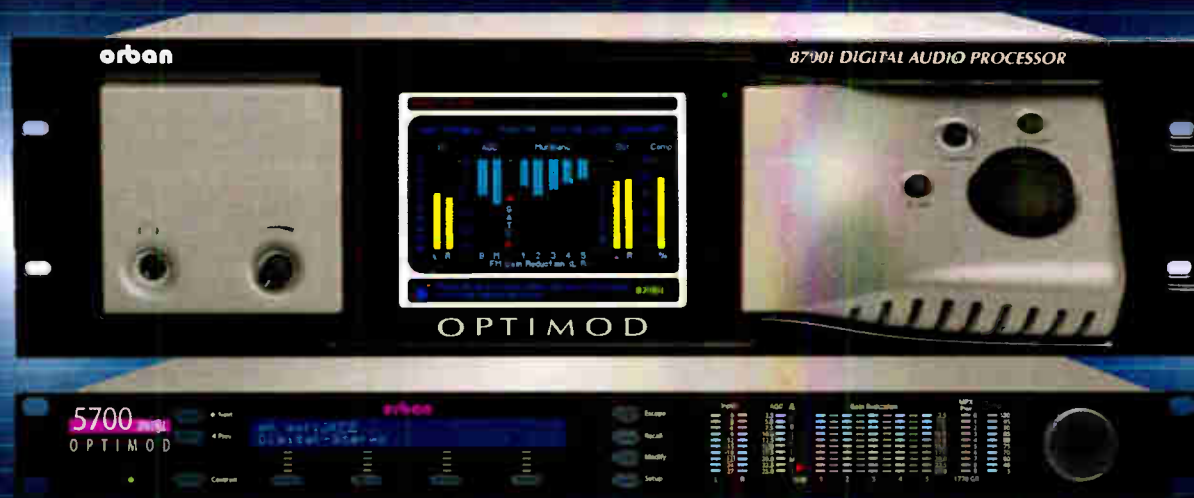
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