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NAB Show in Photos

55,000 people come to talk tech in Las Vegas

Photo by Jim Peck

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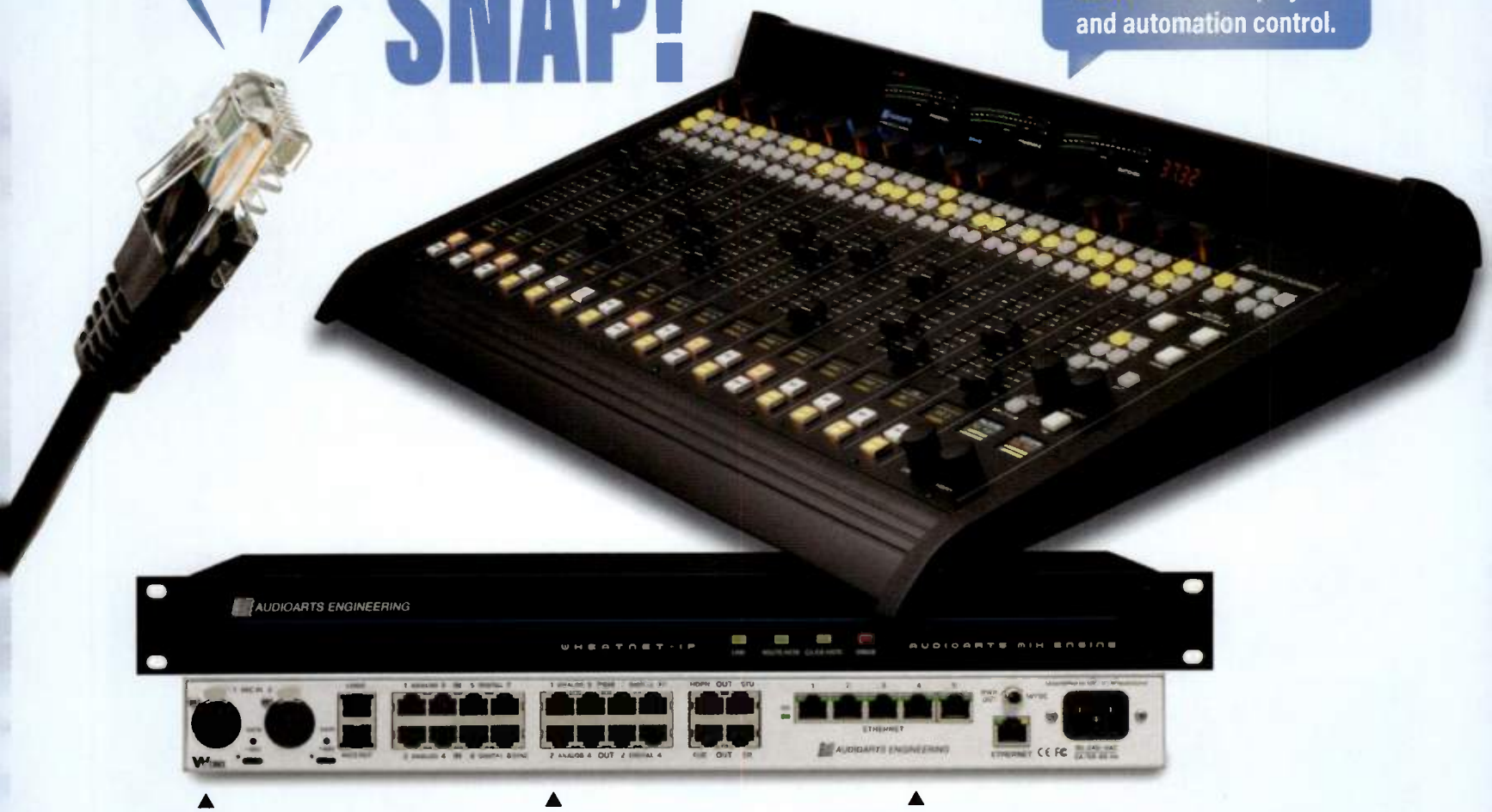

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NAB Show in Photos

Photo by Jim Peck

A big howdy at the Public Radio Engineering Conference.

Photo by Jim Peck

Learning can be fun too! Andrew Jones and Tara Strickwerda of StreamGuys enjoy the PREC conference with Becky Meiers of Thieves Union.

© NAB Show

An attendee takes a selfie. NAB reported attendance of 55,000, with roughly one in four from outside the United States.

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NAB SHOW

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Herb Squire Dies

Courtesy AES

Longtime radio engineer Herb Squire passed away at the age of 80.

His career included work for many stations in New York City. According to a 2015 AES New York profile, his first broadcast role was at WPAC(AM/FM) in Patchogue, N.Y., as a teen. Beginning in the late 1960s, he was an engineer for WOR(AM), then chief at WHN(AM), WQXR(FM) and WQEW(AM).

Later he worked as vice president of engineering and operations for DSI RF Systems and provided consultant-based services for New York Public Radio.

Many engineers will remember his talk at the 1993 NAB Show, where he warned that the combination of two or more data compression schemes in a broadcast audio chain could significantly degrade overall audio quality.

He later would perform tests of various codecs through AM and FM IBOC systems for DSI. With that company, he also assisted with the development of a master antenna atop 4 Times Square following the 2001 terror attacks.

NAB Attendance

About 55,000 people attended this year's NAB Show, according to the association.

The post-COVID high for the event so far has been 65,000 two years ago. Last year's convention drew 61,000.

© NAB Show

Anecdotally, some exhibitors speculated that attendance might have been affected by global business and political uncertainty and the impact of recent wildfires on media and film communities in southern California.

The NAB celebrated the show for "reaching new audiences and connecting storytellers worldwide." It said 26% of its attendees came from outside the United States and that 53% of showgoers were first-time registrants.

There were approximately 1,100 exhibitors, including 125 first-timers. The dates of next year's show are April 18–22 with exhibits again running Sunday to Wednesday.

Mystery surrounds pending U.S. shortwave stations

We try to unpack meaning and their ties to HF traders

Writer

Nick Langan

The author recently profiled high school station WKHS(FM) in Maryland.

Dave Amundsen photo courtesy Steve Hemphill

Above
The Alpine Tower.

The FCC in January granted a license and two CPs in the high-frequency international broadcast band — known to most as the shortwave band — to U.S. operators.

The two CPs for operation in Illinois — to DPA Mac of San Francisco and Parable Broadcasting of Virginia — were partial. The operators received grants for traditional international band broadcasting, under Part 73 of the FCC rules. But the applicants were denied their desire for "datacasting," or nonbroadcast, point-to-point transmissions.

Multiple objections had been filed against the two applications. They questioned whether such data transmissions could be received by the general public, as such licenses are intended.

"We find that a partial grant of the application is in the public interest, as it would enable the general public in foreign countries to directly receive programming," the commission wrote in its CP to Parable Broadcasting.

A group called the High-Frequency Parties had filed an objection regarding Parable. "Persons wishing to conduct commercial HF point-to-point messaging for third parties should do so in a radio service dedicated to that function," they wrote, "and if none exist, they should petition the FCC to create or reinstate such a service."

The commission concurred. "Such encoded data would render the transmitted signal incapable of being received by the general public in other countries and not enjoyable as an international broadcast service," it wrote in granting the two CPs.

Parable filed for a CP in April 2020 for a station from Batavia, Ill., while DPA Mac filed in December of that year for one in Maple Park, Ill. Both communities are within 50 miles west of Chicago.

The third station, granted call sign WIPE and filed by Turms Tech, is based in the New York City area. It has been granted a license.

All three applicants wish to use the Digital Radio Mondiale standard.

Multiple objections were also filed against Turms. The applicant never explicitly requested datacasting but speculation has abounded. It originally mentioned its desire

to "broadcast 'financial, economic news and data through distribution of programs generally prepared on the basis of requests by clients.'"

In issuing the license FCC reminded Turms: "[B]oth audio and data components of all broadcasts by any International Broadcast station must meet the definition of broadcasting. Licenses for International Broadcast stations do not authorize non-broadcast services, such as subscription-based data transmissions."

would transmit Voice of America audio and real-time ticket feeds of stock market information to anyone in Europe and many nations of Asia that has access to a standard, off-the-shelf DRM radio receiver."

But it continued to advocate for a waiver to allow a separate, encrypted feed in its transmission, saying datacasting would allow "greater access to timely data and information about the performance of stocks, bonds, derivatives, foreign exchange and commodities in U.S.

> **"Such encoded data would render the transmitted signal incapable of being received by the general public in other countries and not enjoyable as an international broadcast service."**

The three applicants are left with the opportunity to broadcast on shortwave stations in the year 2025. But what do they plan to use the stations for?

According to the public record, each of the operators met with FCC officials about their plans; but information is sparse.

Here is a chronology based on filings by the operators, their legal representation and the FCC's Office of International Affairs.

DPA Mac

DPA Mac has the CP for an IHF station in Maple Park, Ill. It is operated by entrepreneur Seth Kenvin. The applicant originally stated that its broadcasts, via DRM, "will be a supplemental, fee-for-service datacast optimized for low-latency transmissions."

The FCC wrote in its grant: "Based on the record and the commission's rules and precedent, we find that the proposed 'supplemental datacast' service is not permitted under the International Broadcasting Service rules."

Kenvin's legal representation met with members of the commission's Office of International Affairs in late 2021. In a summary by its legal team, it said it would transmit data via DRM without encryption. It referenced a "supplemental datacast" with "proprietary modulation" to reduce latency. "DPA Mac will use purpose-built equipment to transmit, receive, encode and decode the supplemental datacast for the benefit of fee-for-service customers," its legal counsel wrote.

DPA Mac representatives met again with members of the FCC's Office of International Affairs and the Office of General Counsel almost a year later. A summary by DPA Mac's legal representative stated "the proposed HF station exchanges will serve the public interest."

In its 2020 application, DPA listed Tamir Ostfield of Raft Technologies as its technical consultant. Raft is an Israeli developer of low-latency HF systems for so-called algorithmic trading.

In later meetings DPA said that Raft did not have a controlling interest in the shortwave broadcast license. DPA Mac described itself as having an "arms-length" distance from Raft.

DPA Mac also sought a waiver to broadcast with a lower transmitter output than required by Part 73, seeking a 2 kW output. Minimum power levels start at 50 kW baseline for AM and 10 kW DRM.

It was unable to convince the commission on either account. The FCC said such a data transmission would need to be coordinated among ITU member countries. "As the propagation of the proposed service would cover and affect many other ITU member countries, we find that such multilateral coordination outside the established ITU processes would be unfeasible," the FCC wrote.

Parable Broadcasting

This CP is for Batavia, Ill. Operator Charles Schue spoke on a video conference call with six members from the commission in January 2022; he said the proposed station would broadcast via DRM and comply with existing IHF rules. He referenced discussions with a Catholic radio and TV programmer, an educator and an author who expressed interest in broadcasting audio on his station.

With regard to datacasting, Schue said the station would not be offering a subscription service nor did it have any knowledge that any content provider would provide a subscription service related to the station's content.

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But in the meeting, according to the commission, Parable referenced a datacast provider being able to provide content "that is encoded at times." The operator emphasized that the "encoded" content was "expected to be a negligible portion of the datacast airtime and will not interfere in any way with the simultaneously broadcasted audio content."

In Parable's CP grant, the commission said any encoded portion data transmissions "would not conform to the requirements" of its international broadcast service.

Turms Tech

This applicant now has a license to operate an IHF station from Alpine, N.J., outside of New York City.

Manager Paolo Cugnasca was on a conference call with FCC staff in early 2022. In a summary to the commission, he said the station intended to broadcast in the DRM standard. "Contents will not be encrypted and will be available to the audience under the area of coverage without subscriptions," he wrote.

Turms plans to broadcast from the historic Armstrong Tower. In theory, WIPE can begin broadcasting at any time. But the FCC wrote that the proposed antenna, a SteppIR DB36 yagi, must obtain an antenna code issued by the ITU before the Office of International Affairs can assign the operator international broadcast frequencies. Turms plans to operate on 9.650, 11.850, 13.720 and 15.450 MHz.

Speculation

Cugnasca declined to comment when reached by Radio World regarding this story. Calls and emails to Kenvin and Schue were not returned.

Bennett Kobb has followed the proceedings closely as editor of Experimental Radio News and a member of the High Frequency Parties that filed an objection against the Parable application.

He told Radio World that these applications are highly unusual because the FCC typically receives only renewal applications for the service.

There appear to be 12 active, private shortwave broadcasters in the United States, based on data on the FCC website and Wikipedia. Pennsylvania, Tennessee and Guam each are home to two shortwave licensees, while Alabama, Alaska, Florida and Louisiana each have one. A license for International Fellowship of Churches to operate KIMF in Lander County, Nev., granted in 2017, recently expired.

While a station like WBCQ in Maine — recently profiled in Radio World — stands out, the appeal of broadcasting from the U.S. to foreign audiences has diminished for numerous reasons. Kobb wonders how any of the prospective operators could make a go of conventional shortwave operation playing by the rules as they are constituted.

"Perhaps Turms' WIPE will be the first to sign on, but unless and until that station begins service, all we have is speculation," Kobb said.

High-stakes trading

Another group of petitioners makes no bones about their desired use.

The Shortwave Modernization Coalition filed a petition in 2023 to amend FCC rules to allow long-distance non-voice communications between 2–25 MHz. The firms that comprise the coalition largely "serve as market makers and liquidity providers for exchange-traded financial instruments," according to the introduction in the petition.

The petition goes on to explain how frequencies in the "under-licensed" band are optimal for fixed, long-distance transmission of time-sensitive data.

"The value is so significant that it has driven tremendous engineering efforts and real estate acquisitions to support both experimental HF facilities and more conventional telecom networks," Kobb said.

Several publications have profiled how high-volume stock traders look for every advantage to shave off milliseconds to gain an edge. While data is transmitted between continents via undersea fiber-optic cables, over-the-air radio signals inherently are faster. A Wall Street Journal profile on high-frequency trading cited Deutsche Börse data showing that sending from Chicago to Frankfurt via shortwave is nine milliseconds faster than via undersea cables.

The petition remains pending before the FCC. DPA Mac, Parable Broadcasting and Turms Tech are not named as part of the SMC.

Another avenue that has been pursued by HF traders are experimental radio service licenses.

DPA Mac, under its former name 3DB Communication, also operates experimental HF station WI2XXG.

Experimental HF stations can operate under Part 5 of the rules. The commission states such licenses "are not permitted to provide commercial service, charge fees or receive payments for products or services of operation."

Kobb detailed how traders have made use of such licenses. He indicated they've ultimately reached a dead end there, too, as in the specific case of DPA Mac, the FCC placed wording prohibiting "widely divergent and unrelated experiments" in its ERS license.

Other concerns

Ham operators worry about interference produced by an HF band full of financial traders. The U.S. Coast Guard also registered concerns about interference from a proposed data service.

Much would need to transpire to produce a shortwave "reawakening." But the outcomes of these three grants will have quite a few people watching.

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John Bisset
CPBE
The author is in his 34th year of writing Workbench. He handles western U.S. radio sales for the Telos Alliance and is a past recipient of the SBE's Educator of the Year Award.

Tips Please
Workbench submissions are encouraged and qualify for SBE recertification credit. Email *johnpbisset@gmail.com*.

Top
A truly weatherproof transmitter ID sign.

Right
Although the sign is thin, it is made of a durable ASA filament.

Please, can you give us a sign?

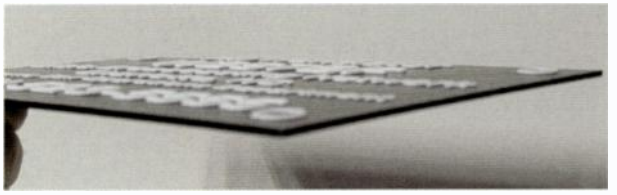
Oh never mind ... we can make our own!

A while ago in these pages, Roy Becker, lead engineer at the Bible Broadcasting Network, shared some creations he'd made with a 3D printer.

It's amazing technology. Now Roy has found another use: making transmitter site identification plaques.

Through experimentation, Roy found that ASA filament resists warping or discoloration due to sun exposure, making it ideal for outdoor ID signage. ASA filament is a thermoplastic polymer, with advantages in terms of resistance to environmental factors including temperature extremes and UV deterioration.

As you can see in the first photo, a benefit of these 3D signs is that the letters are raised so they won't rub off. While the sign is thin, the ASA filament is very durable.



Roy knows that I'm a fan of labeling, so he also sent a picture of BBN's labeling kit, shown on page 12. Everything he needs is in one place.

And contained within is an amazing find: a cartridge of printable heat shrink!

The next photo shows two of the "yellow" cartridges of different diameters of heat shrink. The heat shrink tubing is wrapped flat, spooled in the plastic cartridge.

Adhesive labels eventually may fall off. Hand-written

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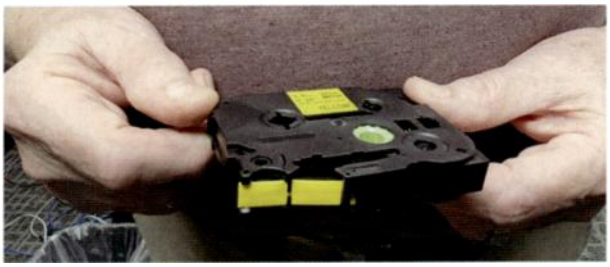

Above
Keep labelers and supplies in one place.

Above **left**
Brother P-Touch printers can now use printable heat shrink cartridges.

Left
The shrink comes in different diameters, helpful for broadcast engineers.

labels become blurred. Try printable heat shrink.

What have *you* made with a 3D printer? Tell us about it.

Grease is the word

If you like to restore old equipment, you've probably come across the problem of dried-out grease. But ask 10 engineers how to deal with it and you're likely to get 12 answers.

San Francisco projects engineer Bill Ruck worked at a hi-fi repair establishment early in his career. He recalls that the standard fix for a sluggish Gerard record changer was to remove it from its base, prop it up on some rags and give it a "WD-40 overhaul," spraying the entire mechanism liberally with the popular brand of lubricant. The product dissolved most of the dried old grease. Afterward, he applied a small dab of fresh grease.

Today Bill is a fan of Marvel Mystery Oil, which he says is a good lubricant and penetrating oil. Kroil is another good brand, thinner in consistency but also useful for getting things working again.

Bill also learned from a General Electric service person to use red synthetic grease. One compound is made by Chevron and available in a 5-gallon tub; Bill was given a little that he keeps in a small, sealed container. A dab is all you need. The advantage of red synthetic grease is its resistance to high temperatures. The color also makes it easy to inspect.

Like Marvel Mystery Oil, you can buy it via online retailers. You will find various brands of red greases sold in tubes and tubs, such as Sta-Lube Sta-Plex Extreme Pressure Premium Red Grease SL3190 in a 14-ounce tube.

Bill avoids 3-in-1 oil, which can get thick with age. The same goes for sewing machine oil.

Explaining engineering emergencies

A recent discussion among several engineers developed into a list of suggestions for you to use the next time you need to explain a problem or failure to non-technical staff:

"The failure was corrected using percussive maintenance."
(Translation: I hit it and it started working.)

"I needed to correct the High-Z Air Gap on the connector."
(I plugged the connector back into the AC outlet.)

"I reset the Main Controller to restore operation."
(I turned it back on.)

"It was an organic grounding issue that caused the delay in the repair."
(I grabbed the wrong wire and got shocked.)

"A connection became thermally reconfigured."
(My bad solder joint didn't hold.)

"The outage was caused by thermal shock."
(Lightning hit it.)

"The outage was caused by kinetic disassembly."
(It blew up.)

Share your own ideas for this list. Email me at *johnpbisset@gmail.com*.

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Radio learns to flex its AI muscles

Panel explores real-world uses in broadcast, from sales to voice

A session at the NAB Show on the latest AI strategies for radio and podcasting featured a panel with Dara Kalvort, corporate VP for digital sales and strategy at Spanish Broadcasting System, and John Parikhal, president of consulting firm John Parikhal + Associates.

Together, they offered a balanced look at the practical applications of AI in radio — insights they've each applied in real-world work with clients.

Kalvort said AI played a role in building out SBS's digital division in 2022. With headquarters in Miami, Spanish translation of advertising copy is essential, yet early online translation tools weren't always reliable. Today, she uses DeepL, an AI-powered translator available in 33 languages; it allows users to hear the translated copy read aloud.

But sometimes, she noted, translation alone isn't enough. For example, in Miami, the Cuban-Spanish dialect is critical. Kalvort shared that she has used OpenAI's ChatGPT to generate content in that dialect with strong accuracy.

She also uses Waymark for AI-generated video content, including AI voiceovers in Cuban-Spanish, to support advertising campaigns. Her efforts have required minimal adjustments to the produced content.

"As we're growing digital on the radio side, sometimes we need to generate video product in a short amount of time," Kalvort said.

She has seen high engagement on social media, particularly Instagram and Facebook, for AI-generated posts created on behalf of clients.

Kalvort encouraged broadcasters to look at areas of inefficiency, where AI can be a useful solution.

Parikhal, who advises media companies on future strategies, echoed that endorsement and added a measured perspective: "If you put low effort into your AI-generated content, you'll get laziness," he said.

Both speakers emphasized the importance of well-engineered prompts when using tools like ChatGPT.

"You need to put effort into them," Parikhal said, adding that your competitors are likely already using similar tactics.

Kalvort shared that she prompted ChatGPT to ask 25 questions about a client's business model. Based on that input, it generated 100 campaign ideas.

The panel also addressed the emergence of AI-generated on-air hosts. Parikhal cited 104.9 WRBF(FM) in Plainville, Ga., which uses Futuri technology to power overnight host "AI Gunner," as a positive case study.

According to Parikhal, Futuri research shows that 90% of consumers believe it's important to disclose when AI-generated voices are used.

"Radio is trusted by more of the population than any other medium," he said. "If we break that for even a minute, we're throwing away our heritage."

What are other potential radio applications?

Kalvort uses Futuri's AI-driven tools to generate spec spots and create on-the-fly audio demos for clients. Parikhal said companies like iHeartMedia and NPR are leveraging AI to produce hyper-targeted metrics by region. NPR, for example, has seen measurable increases in supporter engagement in certain areas as a result.

"All of these are possible use cases," Parikhal said. "But there must be a strategy in place to measure success. You can't skip that step."

They also raised common concerns around hallucinations and data privacy. Both stressed the importance of double-checking AI-generated output — and of not entering sensitive information into publicly available models like ChatGPT.

For broadcasters just getting started with artificial intelligence, Parikhal described how some companies assign specific AI models — like Gemini or Claude — to individual team members so each can evaluate their strengths and limitations.

The panelists agreed: This is a fast-moving space. Technology evolves daily.

Final takeaway?

"Never use AI to do bad and try to use it to do good," Parikhal said. "If you keep that balance, you can keep your creativity intact."

This story appeared in the NAB Show Daily and is ©NAB.

Writer

Nick Langan

The author profiled award-winning engineer Paul Shulins in our previous issue.

Below
From left, moderator Jon Accorino of Ordo Digital, Dara Kalvort of Spanish Broadcasting System and John Parikhal of John Parikhal + Associates.

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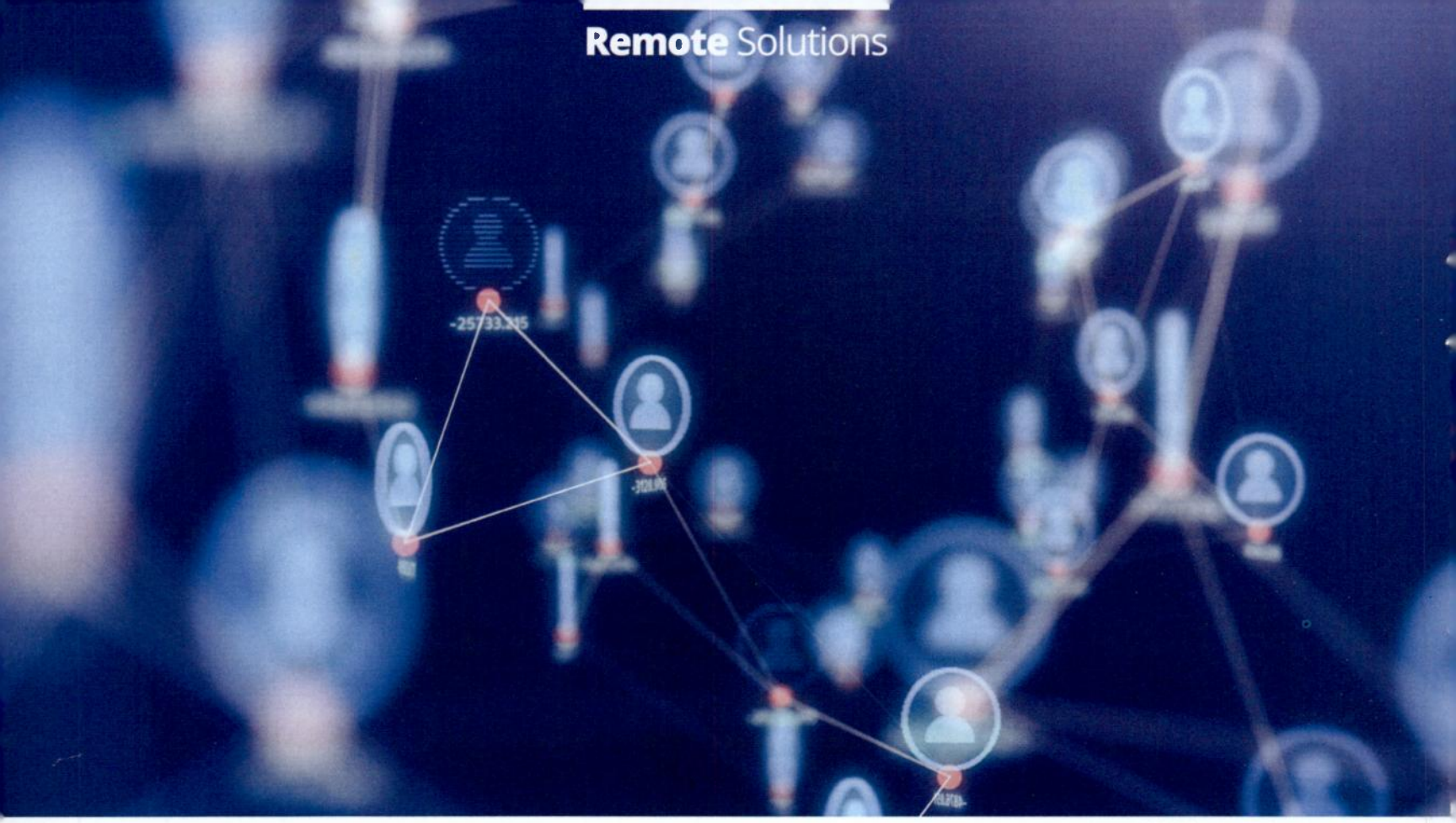


MR.Cole_Photographer/Getty Images

Paul McLane
Editor in Chief

Radio's workflows have 'left the building'

Connectivity and IP infrastructure are revolutionizing remote broadcast and production

The use of remote workflows in radio has been expanding since the onset of voice tracking, but the industry's response to COVID-19 accelerated it significantly.

No longer is it just an occasional co-host who has a small studio setup at home. Radio may soon get to the point where the word "remote" loses its meaning entirely, because technology will allow all facets of its workflow to be done from anywhere.

"No doubt, broadcasting has left the building," said Dee McVicker, marketing director for Wheatstone, an NAB Show exhibitor.

"I was at an equestrian park recently when I struck up a conversation with a woman who was traveling for the winter with her two dogs and two horses, broadcasting her radio show from her living-quarters horse trailer. Radio has become just as mobilized as everything else."

Not just individual shows but entire radio workflows can now be built on the premise of "remote" operation.

"While many radio people doing live shows have returned to the studio, some have not," said Marty Sacks, vice president of sales, marketing and strategy at show exhibitor Telos Alliance.

"Connectivity and IP-based infrastructure are the foundations of remote radio production. Without the ability to access and control gear located in the main studio, it would be pretty hard to implement remote workflows."

That includes not only physical equipment but mixing software running in various computing environments, as well as codecs and phone controllers.

Flexibility and choice

"We, and many of our clients, still love hardware," Sacks said, "but workflows vary greatly, and we believe that our clients should also have choices that include software-

based broadcast solutions that can live in server rooms or on cloud platforms and be accessed remotely any time, from anywhere."

This is true not only for air talent, but for everyone involved in creating the product.

Today a radio production person based in one market can also be the primary support for others, said Jeff McGinley, vice president of engineering for broadcast group SummitMedia.

"Software like VCreative that displays all of that day's work that needs to be done allows the team to work together as if they are all located in one building," he said.

"Many of our production and programming people also have recording setups at home, allowing them the flexibility to continue working when other aspects of life happen and they aren't able to make it into the station — a sick child or car trouble, for example," McGinley said. "An internet connection with a VPN gives them the ability to control the automation system or access anything else that resides on the servers located at the station."

The capabilities provided by high-speed connectivity, AoIP technology and cloud-based platforms are causing broadcast companies to rethink their overall approaches to building infrastructure.

Greg Davis, broadcast systems specialist for Cumulus Media, said: "Of course, cost savings is top of mind for everyone these days. As trends change in the industry, sometimes we must do more with less.

"Larger studios in the most prestigious part of town might not be needed anymore. Smaller, more adaptable consoles and audio equipment make it easier for equipment to be installed in a smaller area, or even portable in some situations. Real estate needs are not what they used to be. Studio are moving away from expensive high-profile areas.

"Technology can allow us to relocate these studios with lower costs and quicker and easier installation," Davis said.

How far will this trend take us?

Marty Sacks said radio will see continued adoption of remote production over time, in terms of both the amount of content generated and the ease of remote production through continued development of the tech.

"Consider producing a talk show where both host and producer are fully remote. Talent can be located practically anywhere," he said.

"Forward-looking broadcasters are doing this today, and at Telos we believe that with our continuous commitment to improving the tools and technology that enable it, the number of broadcasters adopting remote production models will increase."

Dee McVicker expects remote production will become much more seamlessly integrated into the studio.

She noted that Wheatstone now offers fixed consoles that are navigated like an iPhone, as well as software for the laptop that look like a physical mixing console. "We'll adapt inside the studio and outside the studio, all of which is built on IP audio."

The future, said Greg Davis, will include AI-powered audio processing, cloud audio production and improvements in cloud-based playout systems to allow remote control of station operations.

"Automation does not have to be cloud-based either. Advancement in reverse proxy, secure tunnels and encryption can enable software to control the studio from anywhere securely."

On the move

As studios become smaller, they will also be more portable, Davis said. "Progress in browser engines and web services makes remote audio easier to accomplish."

Jeff McGinley expects that all aspects of radio broadcasting will accelerate to working remotely in the next few years.

"With cloud-based automation and webRTC taking off, all aspects of programming, production and on-air could be done at home and sent to a hosted service to play out directly to the transmitter site," he said. "A number of companies are already working towards the end goal of having no physical studio location whatsoever."

This story appeared in the NAB Show Daily and is ©NAB.

Industry Experts Say ...

Marty Sacks, *Telos Alliance*
"Over the past months, we have seen radio play a vital role in serving communities during emergencies. When disaster strikes, remote workflows provide great flexibility in covering these traumatic events."

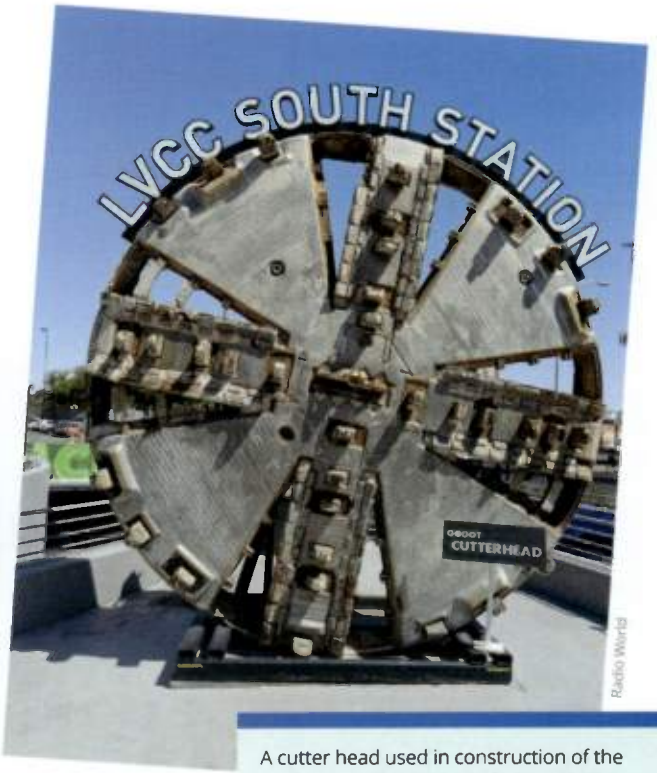
Greg Davis, *Cumulus Media*
"Changes in audio technology can help broadcasters reduce costs while creating content easier and from different resources than ever before. Also, technology is not always for the super technical staff. A laptop with the right software can handle more situations than ever before."

Jeff McGinley, *Summitmedia*
"The majority of broadcasters are doing everything they can to demise space in their studio facilities. We'll start seeing companies really shed square footage as more and more aspects of this business are done remotely."

Dee McVicker, *Wheatstone*
"High-speed connectivity puts you anywhere on the map. And touchscreens and software make all those tools of the trade — mixing, routing, dynamics, etc. — so much more accessible from a laptop or phone."

April Carty-Sipp of the NAB welcomes attendees to the Small and Medium Market Radio Forum.

© NAB Show



Radio World

A cutter head used in construction of the underground Vegas Loop transportation system, which now has five stations including Resorts World, the Westgate and the Encore at Wynn.

© NAB Show

Amazon Web Services highlighted AI- and cloud-based offerings, which for the first time included radio, podcasting and audio solutions. Partners included Radio.Cloud and Riverside.FM.

Credit: Radio World

Viewed on a large in-room monitor screen, Paul Shulins receives the Radio Engineering Achievement Award from NAB President Curtis LeGeyt, right, and NAB Technology VP Sam Matheny.

Photo by Jim Peck

Comrex previewed FieldLink, a "press box codec" designed to replace expensive wireless mic/IFB solutions and move audio from sideline reporters efficiently to the press box. Tom Hartnett and Chris Crump are shown.

Unlimited, high speed satellite data from the connectivity experts at MaxxKonnect

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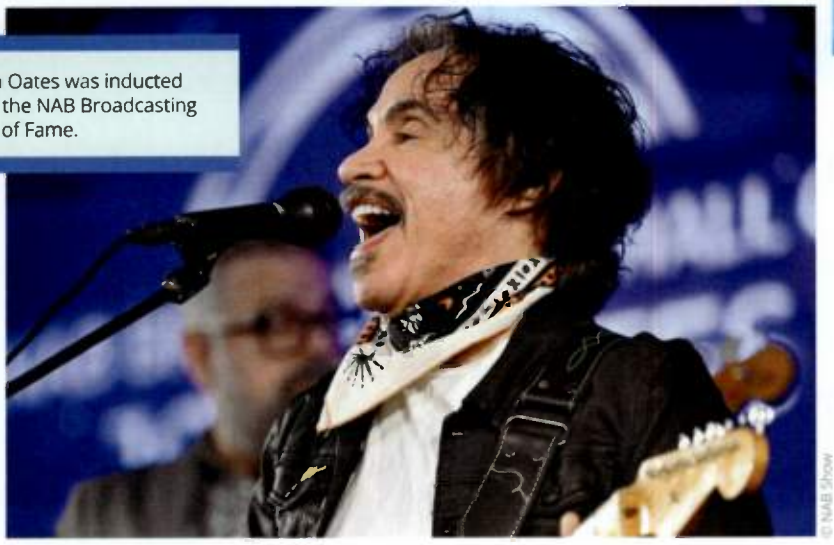
Xperi celebrated 20 years of HD Radio in cars. HD Radio receivers are in approximately 115 million vehicles and rolling out in about 60% of new cars in North America.

Photo by Paul McLane

An end-on, morning view of the High Roller Observation Wheel on the Las Vegas Strip. It takes 30 minutes to complete a revolution.

Photo by Jim Peck

Tony Peterle recently joined Lawo as a radio applications and support engineer.



John Oates was inducted into the NAB Broadcasting Hall of Fame.

Photo by Paul McLane

Bob Orban, shown, released the first Optimod FM processor in 1975. Orban Labs celebrated the 50th anniversary with a display of legacy hardware.

Photo by Jim Peck

Renovations continue at the Las Vegas Convention Center. The central entrance soon will match the look of the newer West Hall across the street.

Roz Clark, at far right, was one of three people elevated by the Society of Broadcast Engineers to the membership rank of Fellow. He's shown with (from left) Keyur Parikh, Merrill Weiss and Alan Jurison.

Photo by Jim Peck

Photo by Jim Peck

Bill Bennett of ENCO updates PREC attendees on the progress of AI-based tools.

Photo by Jim Peck

Mike Downs, left, the new executive director of the Society of Broadcast Engineers, met many members for the first time. He's shown with SBE President Ted Hand.

Photo by John Stalley Photography

"If we are going to get into the policing of DEI practices, I want to see where in the statute we have authority to do so," said FCC Commissioner Anna Gomez. She paid personally to travel to the show after an executive order banned such spending. Commissioner Nathan Simington's appearance was cancelled.

Radio World

David Reaves exhibited the Zen Level Zen 10 audio level controller, which promises "advanced, customizable Automatic Gain Control (AGC) for consistent and sonically pleasing audio levels."

© NAB Show

Mike Raide of Xperi, left, and consulting engineer Alan Jurison accept the NAB Best Paper Award from Lynn Claudy, right. Their paper was "Digital-Only Boosters for HD Radio Single-Frequency Networks," as described in RW's March 12 issue.

Photo by Jim Peck

Nautel's NUG@NAB again drew more then 300 people, including Ben Dawson, Paul Easter and Stephen Lockwood.

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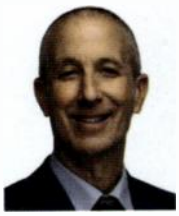
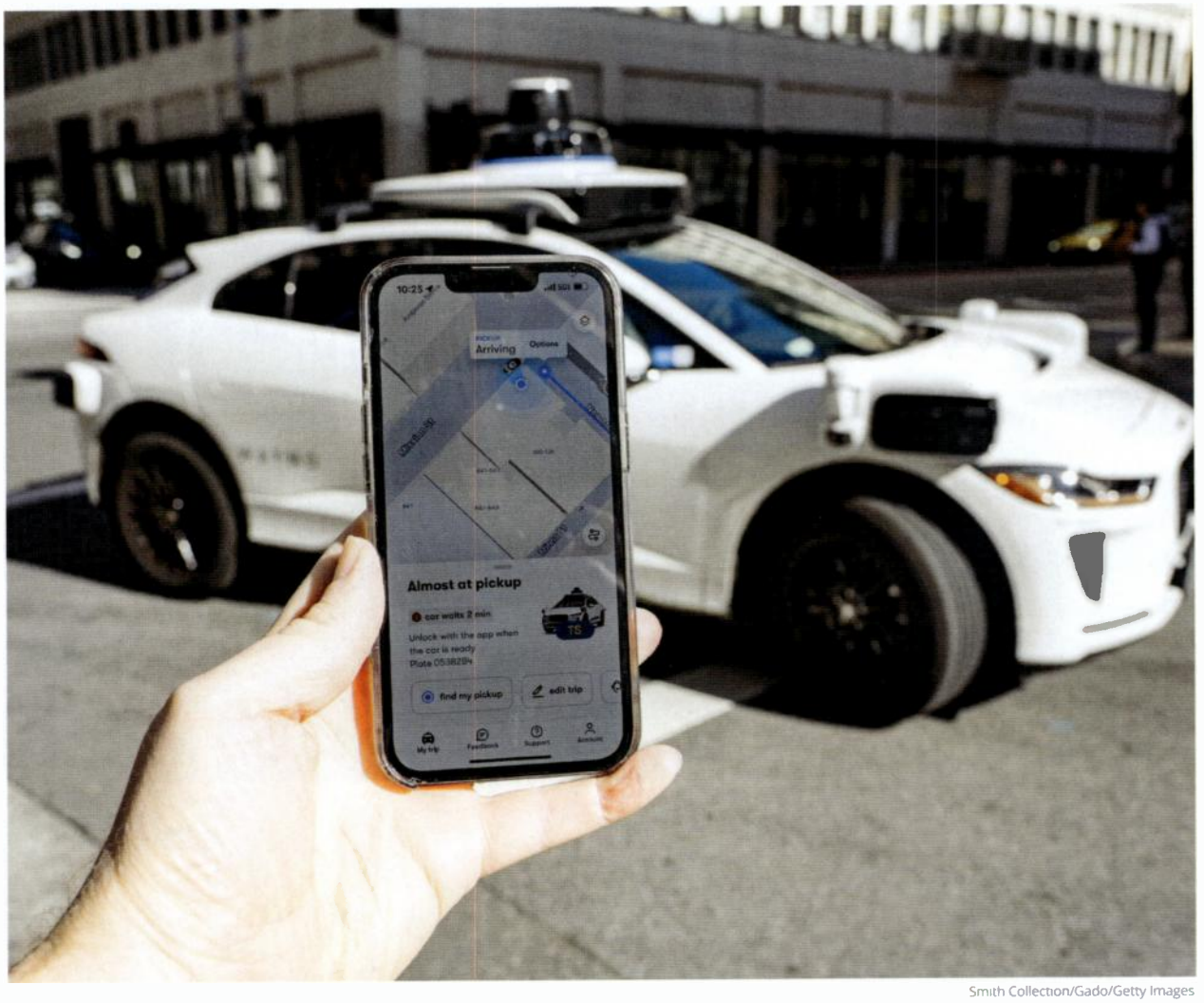


Mark Lapidus
is a veteran multi-platform media and marketing executive.



Smith Collection/Gado/Getty Images

Autonomous: Radio has to drive its own future

AVs will transform how passengers consume media

Above
A person holds an iPhone with the Waymo One app, hailing a Waymo self-driving car in San Francisco in March.

During 2024, passengers took more than 4 million fully autonomous rides in Waymo self-driving cars. If you haven't seen one of these almost sci-fi vehicles, it's probably because you haven't recently been to San Francisco, Los Angeles, Phoenix or Austin. But make no mistake: It's only a matter of time before one shows up on your ride-sharing app or even in your own driveway.

Since about half of all radio listening happens in the car, the implications for the industry are obvious. This is either a golden opportunity to grow share or a chance to watch broadcast radio drive off into the sunset.

Understanding how autonomous vehicles (AVs) will change radio means watching the tech reshape the car itself. You've got wireless access in vehicular environments (WAVE); cellular vehicle-to-everything (C-V2X); vehicular ad hoc networks (VANETs); and new in-car entertainment platforms. Even regulations could determine which audio services stay in the game.

Think about it: AVs will transform how passengers consume media. Freed from driving, occupants will demand personalized, immersive in-car entertainment — far beyond metadata. Audio could be enhanced with

visuals, live audience engagement, transcriptions, voice-controlled song requests, interactive maps, chat groups, news, traffic updates and more. Not to mention location-based advertising, a huge opportunity for broadcasters.

Fortunately, some major players aren't sitting on the sidelines. iHeart led the way in 2023 with in-car integrations, though some of those early ventures have already run their course.

Meanwhile, Xperi is making major moves with DTS AutoStage, now in 10 million vehicles in 146 countries, including millions in North America. They've partnered with companies like Cumulus, Cox and Beasley to bring terrestrial radio into the connected dashboard.

TomTom's Digital Cockpit also lets drivers access terrestrial radio, streaming, podcasts and audiobooks directly from the car's system.

But they're not the only ones eyeing the dashboard. Google's Android Automotive OS already lives in a growing number of vehicles, while Apple's next-gen CarPlay is set to take over dashboards soon. This is shaping up to be a model-to-model battle of the cars, which will drive innovation but could also make development costly and fragmented. And the recently published "2025 In-Vehicle Visuals Report" from Quu reinforces the importance to radio of all these trends (find it at *https://myquu.net/2025-report/*).

> **Freed from driving, occupants will demand personalized, immersive in-car entertainment — far beyond metadata.**

Of course, in theory, legislation could level the playing field by requiring not just AM but also FM and HD in all new vehicles. But whether even AM reception will be mandated by Congress remains uncertain.

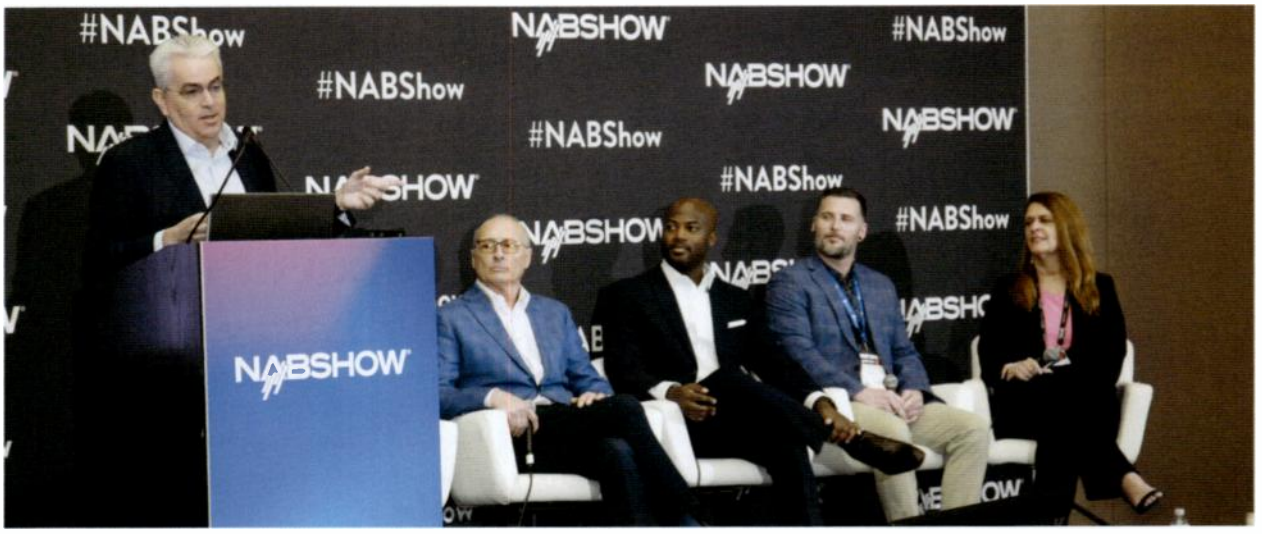
One thing is clear: The job of every radio station in America is to stay relevant to local listeners. Without that, broadcast radio won't even be in the backseat and will too easily be left at the curb.

Read more recent columns by Mark Lapidus on topics such as intellectual property, QR codes, WhatsApp and how the "purchasing funnel" relates to audio. Find them at radioworld.com/promo-power.

Writer

Elle Kehres

The author recently profiled engineer Michele Grove of Bonneville Denver for *radioworld.com*.



It's time for radio to embrace digital advertising

Medium's digital revenue jumped 10% to reach $2.1 billion in '24

A Sunday NAB Show session titled "The Local Advertising Buying Landscape" brought a flurry of attendees to West Hall. As part of the Broadcast Management Track, the session dove into the results of Borrell Associates and RAB's 13th annual digital benchmarking report on radio digital sales.

Released earlier this year, the report analyzed online ad revenue from 3,743 radio stations — also surveying 388 local radio advertisers and 221 radio managers — to reveal that radio's digital revenue grew 10% to reach $2.1 billion in 2024.

Expanding on those findings, a group of panelists came together to discuss what clients are buying and how radio sellers are succeeding, or missing out, on that revenue.

To kick off the session, Gordon Borrell, CEO at Borrell Associates, spoke about local business owners' and advertisers' digital sales habits. Borrell said radio has a very large stock of advertisers, and, according to the report, these advertisers are six times more likely to buy digital/streaming video ads than traditional over-the-air.

"That's a really important finding and a really important key to the transition of radio stations," he said. "They now are able to compete with their broadcast TV brethren, becoming more video-centered and selling digital advertising around it."

Borrell said 28% of radio advertisers are buying digital and that demand is only growing. He said stations must embrace digital because advertisers are not buying radio at the clip that they did just five years ago.

One of the standout findings of the Borrell/RAB study is that more than a third of advertisers say radio has the most marketing experience, with radio reps being the most trusted resource in the local market.

Moderating the session was Mike Hulvey, president and CEO of RAB. He shared insights into digital revenue opportunities and what stations need to hone their own sales skills.

Hulvey said the key to a successful advertising campaign is simpler than one might think. When creating a sales strategy for your local clients, ask: "Can it sell a hamburger?"

At the most basic level, Hulvey said, advertisers are looking to accomplish tangible goals core to their mission — whether that's selling more sandwiches at their restaurant or buying more trucks for their pest control business.

Greg Davis Jr., vice president and market manager at Davis Broadcasting, echoed Hulvey's comments, saying most advertisers won't bother with looking at graphs or examining click-through rates for digital ads.

"If we boil it all down, it's all about solutions-based selling," said Davis. "Stop trying to sell tactics. Stop trying to become the expert."

Other speakers at the session included Dustin Wilson, senior director of digital strategy at Marketron, and Linnae Young, executive vice president of operations and revenue development at Salem Media Group.

This story appeared in the NAB Show Daily and is ©NAB.

Above
From left: Mike Hulvey, RAB; Gordon Borrell, Borrell Associates; Greg Davis Jr., Davis Broadcasting; Dustin Wilson, Marketron; and Linnae Young, Salem Media Group.

Try this with your AI

Al Peterson has some thoughts on creative deployments for radio

Writer
Alan Peterson
The author is the former tech editor of Radio World.

Ask the internet, "What does Abraham Lincoln going over Niagara Falls in a barrel look like?" A moment later, your computer will happily reply with a series of weirdly drawn images with weirdly drawn fingers.

This is the initial experience most people have with artificial intelligence or, colloquially, AI.

While widespread rollout of AI is still fairly new to the general public, radio has been working with AI tools for some time now, developing ways to get more creative, more efficient and more relatable to our audience.

Let me present four ways that AI could better be used in radio ... *or not*.

Lookin' good

Listeners have a mental picture — often erroneous — of what they want their favorite air personality to look like, based on the sound of their voice.

AI can come to the rescue by analyzing the tonality, timbre and regional dialect of a particular jock or talk host and create an idealized web image of what they *should* look like.

While this will not work for everyone, it will finally give me the chiseled 6'7", wavy-haired, perpetually 35-year-old appearance I have been aching for my entire career.

Now this message

AI already writes, voices and mixes radio ads, often with somewhat underwhelming results. The next generation of AI can make commercials honest.

In the case of a local pizza restaurant, we can forcibly cram an entire pizza into the DVD drive of a client computer and let the software go to town on it. Scouring social sites across the entire webscape, AI can create an ad from the harvested information.

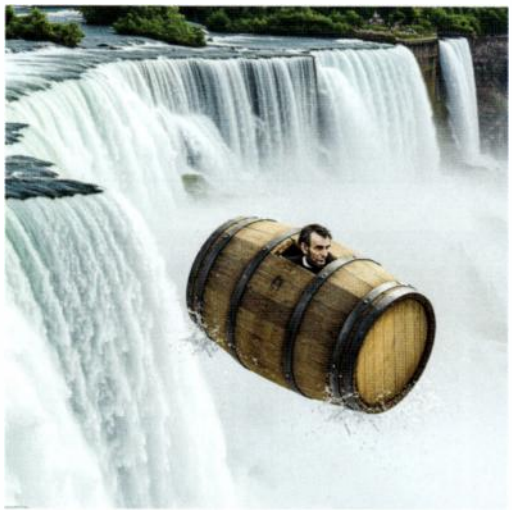
Which means your station can soon be running an ad that will inadvertently say, "Downtown Pizza — home of the one-star pizza that 'OldHippy1955' called 'school fingerpaint on a piece of sheet rock.'"

I can fix it

Contract engineering has essentially done away with the fulltime First-Class-ticket in-house engineer employed by the station owner. But that also meant eliminating the person who normally fixes toilet leaks, keeps the gutters clear, anticipates when something keeping the station on the air is on the verge of failing ... essentially, the person who keeps the place glued together.

AI can scrape information on metallurgy, local water purity and mineral conditions, previous billed plumber visits and frequency of common issues within your Zip Code. Armed with that information, it will predict the exact day and time that leaky copper elbow under the sink in the ladies' room will corrode to the point of requiring replacement.

Only THEN will it send a text to the unemployed former engineer to come in and solder in a new one. Just as they would have done anyway.



AI image via Shutterstock

Call now to win

Put AI completely in charge of promotions. Looking way ahead on the calendar, it will see that there is, say, a solar eclipse coming. It will generate a T-shirt design with a stylized station logo, automatically order (and pay for) 500 shirts, rent a stadium for a Watch Party and schedule on-air giveaway promos.

While it's doing that, it will also analyze historical regional weather records, factor in climate change, extrapolate future trends in the weather and determine it is going to be a cloudy day. And will cancel the promotion before it happens.

But not before management tries like mad to cancel the rental check on that stadium and takes delivery on $1,800 worth of now-useless T-shirts. With a design that actually infringes on another station's prior artwork.

The Beatles said it best in 1967: "It's getting better all the time, can't get no worse." We're still in the stone ax stage of AI for radio, so we really should see where this ride takes us and not just fall for the pretty shiny things.

Got your own ideas about how to use AI around your station? Email radioworld@futurenet.com.

BROADCAST EQUIPMENT EXCHANGE

Sports personality Stephen A. Smith, left, told moderator Mike McVay that he was leaving the door open to run for president of the United States.

© NAB Show

The Broadcast Engineering and IT Conference featured a 4K UHD conversation with NASA astronauts aboard the International Space Station, showcasing new live UHD switching and routing capability at the agency's Johnson Space Center in Houston.

Photo by Jim Peck

© NAB Show

Drone-based broadcast tower inspection system using eGPS, on display in the Korea Pavilion.

Photo by Jim Peck

David Maxson, right, talked about the design and performance of the High-Efficiency Broadband Antenna, or HEBA, for AM radio. He's with Grady Moates, left, and John Garrett.

Photo by Jim Peck

Nate Mumford extols the virtues of ZettaCloud in the RCS booth.

© NAB Show

Syndicated personality Delilah received the Insight Award from the Library of American Broadcasting Foundation.

Photo by Jim Peck

Al Salci of Sierra Automated Systems makes a point about troubleshooting during the SBE Ennes Workshop track on "Media over IP."

Photo by Jim Peck

Drew Kirkman wears his mission statement, or perhaps his ambition, on his chest at Nautel's NUG@NAB event.

© Radio World

Sarah Mercado in the Future booth provides a sneak peek at this year's Best of Show Award hardware.

Photo by Jim Peck

Sara Zanotta of Comtech Italia holds a "puppy" composed of some of the company's components. Not of practical use, but cute!

Photo by Jim Peck

David Kerstin of BGS has a little fun behind the back of David Antoine as they visit the MaxxKonnect display in the Triple Helix booth.

That sound. Those features. That price.

We know, it's a lot to process.

Remember when radio was fun? When beating the competition wasn't just a numbers game—it was a sound game. When tweaking your processing chain felt like tuning a race car. When you'd lean back, listen, and feel that rush—knowing your station sounded bigger, cleaner, louder than anyone else on the dial.

We remember, and we're here to bring that feeling back. StereoToolBox isn't just another processor—it's the one you've been waiting for. The one that makes radio exciting again. The one that crushes those $10K+ processors—for less than half the price. The one that puts the power back in your hands. No upcharges. No missing features. No shenanigans.

Put it on your station, and you won't just be in the race—you'll own the dial. Or, sure... blow $10K on their best and still get beat. Go budget and enjoy the sweet sound of compromise. Or get StereoToolBox and have it all. Your call.

Perfect Declipper: Reverses that awful mastering smash.

RuleBreaker Clipper: The battle between loud and clean is over. You won.

Adaptive Compressor: Innovative architecture. Perfectly natural.

FM and HD Outputs: Both at the same time. Really.

Built-in ratings watermarking: No external boxes required.

Remote Control: Modern HTML5. No apps, no java, no flash.

RDS: Included. Bet you're starting to see the pattern.

Connections: Analog, AES/EBU digital, Livewire. Connect everything.

Diversity Delay: Synchronizes FM and HD1. Pure harmony.

microMPX Encoder: One. Two. Ten. A hundred. No extra charge.

Immersive Bass: Big, bold bass. Even on tiny speakers.

Composite Outputs: Analog MPX, Digital (AES192) MPX. The whole shebang.

Dual Ethernet Ports: RDS, control, Livewire. Two ports, no limits.

Optional Backup Power: Sleep easy, you're still on the air.

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Control it all, automagically.

One-touch event recall, smart soft controls, fader mirroring between LXE console surface and LXE under glass, and a powerful mix engine under the hood that handles hundreds of details for you, automagically.

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Audioarts Value. WheatNet IP Flexibility.

Now WheatNet IP compatible: Audioarts DMX console system including mix engine with local I/O, five-port Ethernet switch and automation plug-in for a fully self-contained AoIP system in one. Ideal for smaller facilities or for budget studios that serve as backup to a main.

STUDIO PROJECT PLANNING GUIDE

Smart Studio Planning eBook

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