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Lack of funding combined with the pandemic has hampered enforcement. — Page 3



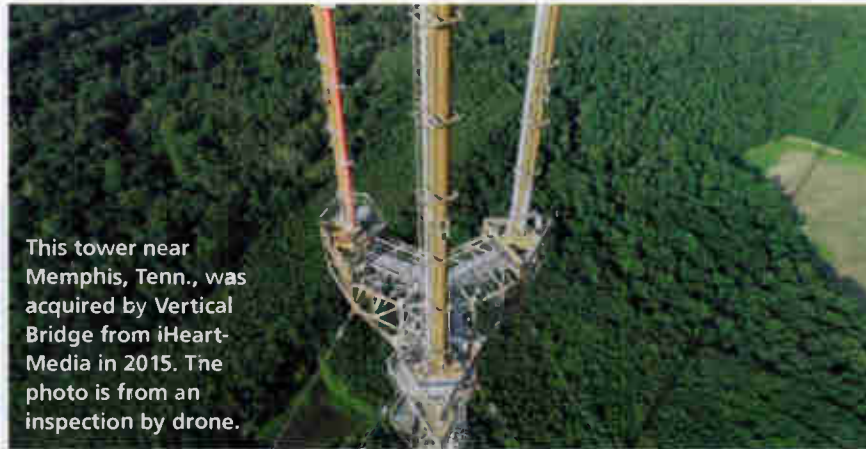
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Tips to help your station engage with listeners stuck at home. — Page 23



This tower near Memphis, Tenn., was acquired by Vertical Bridge from iHeartMedia in 2015. The photo is from an inspection by drone.

Vertical Bridge Remains in Acquisition Mode

Tower consolidator eyes more deals with radio broadcasters as demand for space remains strong

BY RANDY J. STINE

High demand for tower space from wireless, broadband and data providers continues to drive up the value of communication towers across the United States.

Vertical Bridge, an acquisitive company formed by the former management team at wireless infrastructure company Global Tower Partners, continues to scoop up tower properties. Its purchase of Cumulus Media's tower portfolio in the second half of 2020 aligned the telecommunication infrastructure company even more closely with broadcast radio.

Vertical Bridge has previously made headlines for its broadcast tower pursuits. iHeartMedia sold more than 400 of its broadcast towers to Vertical Bridge for \$400 million in 2014. In recent years the tower consolidator has also announced notable broadcast structure

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In Appreciation of the EV 635A

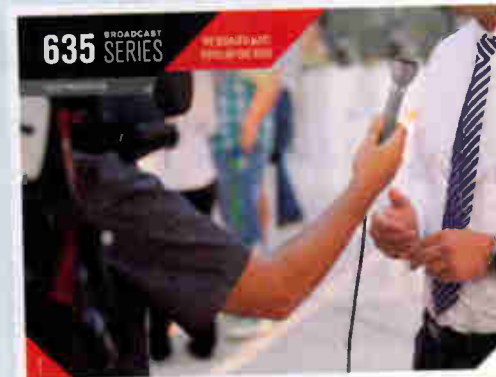
The more things change ... but the microphone stays the same

BY KEVIN CURRAN

No TV station today would send a crew to a news conference with a 16 mm film camera. Today's radio reporter would think you were crazy if issued a reel-to-reel recorder before heading out on a story.

Audio and video have seen multiple generations of improvements leading to today's digital gear. But for many radio and TV crews, one basic item has turned 55 years old and does not appear to be getting replaced.

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A 2020 promo image for the EV 635A.

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Lack of Funding Hampers PIRATE Enforcement

Bureau chief also cites pandemic in first report to Congress

BY PAUL McLANE

The head of enforcement for the Federal Communications Commission says efforts to implement the new PIRATE Act against illegal radio stations have been hampered by the pandemic as well as a lack of funding from Congress.

In January Rosemary C. Harold, the chief of the FCC Enforcement Bureau, submitted the commission's first annual report to Congress about its pirate radio work, as required in the act that became law a year ago.

That law raised the amount of fines the FCC can issue, up to \$100,000 per day and \$2 million total, and it expanded the definition of who can be fined to include people who "willfully and knowingly" help pirate radio operations.

The commission did report some enforcement activity for the year, but Harold identified two issues that have limited its work.

OBSTACLES

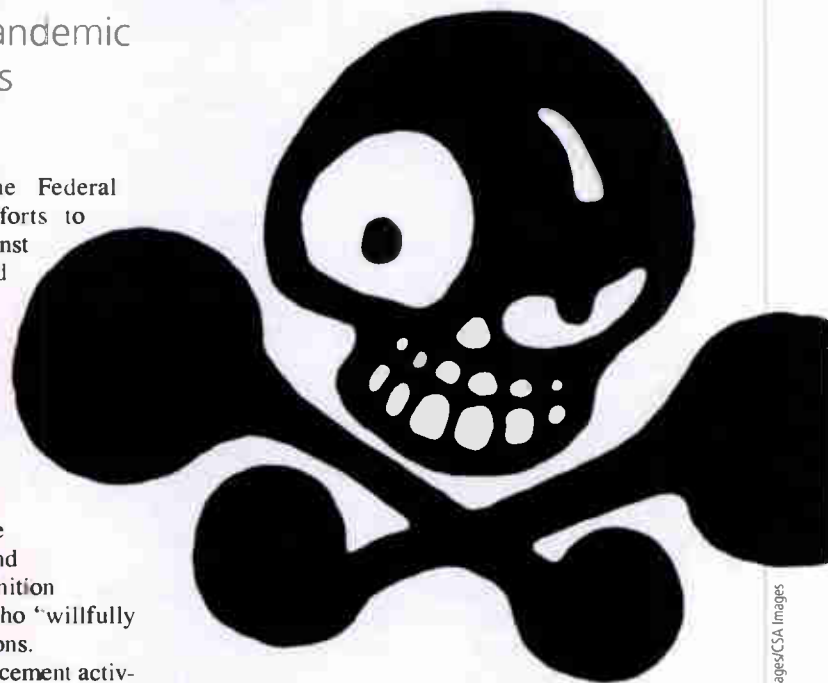
First, the FCC in March implemented a mandatory telework policy. That complicated the work of pirate enforcement, which requires agents "to engage in significant, in-person activities to gather evidence, including witness statements and technical measurements of a pirate station's operations."

Second, the commission has received no funding to implement the PIRATE Act, she wrote.

"The Congressional Budget Office and the commission both estimated that it would cost \$11 million for the commission to implement the Act," she said.

"And yet, the PIRATE Act itself contained no appropriation or other funding source to cover its implementation costs. And because the commission's FY 2021 budget ceiling level was established by the Office of Management and Budget on December 3, 2019, before Congress adopted the PIRATE Act, the commission did not have an opportunity to incorporate costs related to the implementation of the PIRATE Act during the president's fiscal year (FY) 2021 budget process."

The commission is supposed to conduct "sweeps" at least once a year in five markets that have the most pirate radio activity. Lack of funding and the pandemic have prevented that from happening.



Getty Images/CSA Images

The FCC also is supposed to conduct "sweeps" at least once a year in five markets that have the most pirate radio activity. It began studying this but the lack of funding and the pandemic-related restrictions prevented any sweeps.

Harold said the bureau's ability to fully conduct the sweeps "will remain subject to obtaining new funding through the appropriations process" as well as the end of the pandemic.

And the FCC was supposed to develop a public database by April 2020 that listed all licensed AM and FM stations, as well as all entities that have received a notice of unlicensed operation, notice of apparent liability or forfeiture order.

But that too didn't happen because of lack of appropriated funds.

ACTIVITIES

Nevertheless, the Enforcement Bureau was not idle in 2020.

Harold cited new efforts to inform property owners and property managers of apparent pirate broadcasts from their properties and to describe the potential consequences to the property owner or manager. The first notices were issued in New York in late 2020.

"Although these ongoing proceedings are in their early stages, initial discussions with the property owners have been promising," Harold told Congress. The FCC is also doing more general outreach to educate commercial and residential property owners and managers.

The law also encourages the commission to skip the usual step of issuing a notice of unauthorized operation and proceed instead directly to a notice of apparent liability for forfeiture. The Enforcement Bureau implemented that in December.

And on the enforcement side, Harold listed several actions including the settlement of two long-running investigations. Acerome Jean Charles and Gerlens Cesar separately agreed to monetary settlements including "significant suspended" penalties that would be triggered if they resumed operations.

All-Digital AM Is Here; Now What?

Our new ebook includes an interview with the owner of all-digital WMGG(AM)

BY PAUL McLANE

Now that the FCC allows AM stations in the United States to air all-digital signals if they wish, what happens next?

I've heard from plenty of folks who think the boat has left the dock not only for digital on AM but for the entire AM band. Business and technical challenges facing America's AM broadcasters have been well documented here and elsewhere. You certainly won't hear CEOs of big broadcast companies proclaiming their excitement around AM radio strategies unless it's to count the cash they got from selling tower sites.

Yet when you talk with the handful of people who have real experience with the MA3 mode of HD Radio, their enthusiasm is notable. They say the signal sounds great, that coverage is strong and that they love how station metadata displays on modern dashboard displays.

Our latest Radio World ebook explores the question of what's next. One of the people I interviewed is Neal Ardman, who activated the MA3 mode on WMGG in Florida in January, the first station to take the step since the commission approved the option.

"The MA3 is the great equalizer in terms of audio quality," Ardman told me. "When we flipped the switch, the sound is incredible. The station sounds like an FM."

He pointed out that about 30% of cars in his area have HD Radio receivers, then echoed a comment we've heard from Dave Kolesar of

Hubbard's WWFD: "Our thinking is, would we rather be in a third of the cars sounding phenomenal, or in all of the cars sounding sketchy and marginal? We chose to be in the cars sounding great," Ardman said.

It's worth noting that some AM owners are watching these developments to see if *multicasting* on the digital AM signal is viable and, if so, whether that might eventually give them another path to obtaining more analog FM translators — similar to how current FM hybrid



WMGG is the 1470 in this banner promoting Tampa Bay Buccaneers Spanish-language radio coverage.



FROM THE EDITOR



Paul McLane

digital stations can use an HD2 to feed an analog FM.

I'm sure we'll hear plenty about that possibility. Note, though, that while existing digital AM receivers can receive MA3, they are not set up to receive multicasting, so this isn't likely to happen anytime soon.

Urban One tried unsuccessfully last year to obtain experimental authority to feed an FM translator from a digital AM multicast. For now the FCC has said, "Because the record does not establish that an audio stream on an HD-2 subchannel is currently technically feasible, we will evaluate requests to rebroadcast multicast channels on an FM translator on a case-by-case basis until a more fully developed record is available on this subject."

I hope you'll read the free ebook and let me know what you think. It's at radioworld.com/ebooks.



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Photo by Linus Røpke on Unsplash

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NEWS



Photo by Alejandro Alvarez of WTOP shows people on scaffolding intended for the upcoming inauguration. One sign reads, "We the people will bring DC to its knees. We have the power."

How WTOP Covered the Capitol Attack

Reporters used smartphones, WhatsApp and video tweets to bring the story home

BY JAMES CARELESS

Even before pro-Trump protestors gathered at Washington's Ellipse on Jan. 6, 2021, journalists at WTOP, Hubbard Radio's highly rated all-news radio station, were aware that it would be no ordinary political rally.

"We knew that there were going to be a lot of people in attendance," said Director of News and Programming Julia Ziegler. "We knew which groups had permits to be there — there were many of them — and we knew that the president would be speaking. So you had all the makings of a very large event."

Still, it was shocking when the election protest and rally turned into violent attacks in and around the Capitol building. When it did, the three WTOP reporters on site and the entire WTOP news team kept Washington informed.

There were signs that the rally would be emotionally charged. The president had spent two months fanning political division with unfounded assertions about a rigged election. Even the name of the event, the "Save America Rally," was designed to stoke fury as the joint houses of Congress were ratifying Joe Biden's Electoral College victory down the street.

Still, there have been emotionally-charged political rallies in Washington over the last year. WTOP field reporters Alejandro Alvarez and Ken Duffy knew to keep a low profile by using their consumer smartphones to file reports and capture/file photos, audio and video back to the station.

"In these kind of tense situations, you always have to think about what makes you a target as a reporter," said Ziegler.

"So if you're a journalist out there

recording on your phone, you can mix into the crowd where everyone else is using their phones."

Given the subsequent events — with protestors painting "Murder the Media" and smashing an Associated Press camera position, and with subsequent videos emerging of crowd confrontations with other journalists — their caution seems prudent.

"We always tell our reporters to pull back as need to stay safe," she added. "At certain points during that day, they had to."

GETTING NEWS TO THE STATION

The downside of using smartphones at public events is that wireless networks are prone to slowing down due to traffic.

WTOP's reporters relied on WhatsApp to get their audio and text messages back to the station. They have found WhatsApp to be pretty reliable even when cell service starts to fail. They also use Skype and Slack as well. For video, WTOP uses Slack or pulls videos from Twitter.

"The fact that WhatsApp sends out content as soon as you record it really helps," said Ziegler. "You don't have to

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CAPITOL

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upload or download it after recording: It just goes.”

Those incoming feeds turned up on a common channel that is shared among the WTOP newsroom staff so that everyone can see what’s coming in as it arrives.

Capitol Hill Correspondent Mitchell Miller was at his broadcast booth at the House of Representatives, keeping an eye on the joint session.

Equipped as it is with a suite of links back to WTOP, Miller was in place when doors and windows were smashed and people started breaking into the Capitol building. He provided a steady stream of reports about the invasion no matter what was going on.

“Mitch is fabulous. He’s been with WTOP for a very long time, and he’s just one of those reporters who gets it and understands what the audience needs to hear in that moment,” said Ziegler.

“Whether during the lockdown or afterwards when he was being evacuated along with the Capitol Hill staff, Mitch kept us fully informed with multiple reports per hour as the situation evolved.”



Photo: Alejandro Alvarez



The crowd overruns and adapts barriers at the U.S. Capitol in this photo by WTOP’s Alejandro Alvarez.

Miller wrote after the event: “When guns were drawn and furniture was moved to block an invasion of rioters from the U.S. House chamber, the danger here at the Capitol was very clear. My broadcast booth is located across the hall from the House chamber, and as the Capitol went into lockdown, the doors of the area where I work with other Capitol Hill reporters were locked for safety.

“Every door that shut loudly, along with the dull roar of people inside and outside of the Capitol, ratcheted up the tension.”

He continued: “When we found out that a woman had been shot inside the Capitol, concern for everyone’s safety continued to rise. I later learned that the shooting happened just a floor below us, in an area known as the Speaker’s Lobby, which is outside the House chamber. I was also alarmed when I saw all the protesters gathered on the steps of the east side of the Capitol. That never happens.”

Despite the danger around him, “I continued to report on the events in real time, all the while trying to remain fully

You know the risks but can’t help but wonder if your next assignment is the one you won’t get to walk away from safe and sound.

— Alejandro Alvarez

aware of my surroundings, which were troubling, to say the least,” he wrote.

“Late Wednesday afternoon, we were told by the staff in the House Radio and TV Gallery that everyone in our area needed to evacuate ... We quickly gathered up our broadcasting equipment and started moving through the maze of underground tunnels that connect the Capitol to the House and Senate buildings. We were able to still report on what was happening as we essentially sheltered in place, as lawmakers and staff members were doing.”

WTOP field reporter Alejandro Alvarez was outside watching the angry crowd as the president’s incitements spurred the crowd to violence.

“There was one precise moment I can point to when I realized that something immeasurably terrible was underway,” wrote Alvarez afterwards.

“It was in the middle of President Donald Trump’s speech, shortly after

he had urged his supporters to head for the Capitol ... ‘Move forward, patriots, we’re taking the Capitol,’ was one of the first things I heard on arrival at the West Lawn, where the air stung from lingering mace ... ‘We’ve been nice for too long,’ I heard someone yell. And another: ‘Where are the gallows?’”

Later in the day, Ziegler said, “There was one point where Ken Duffy was live when the police were repelling the protesters. He’s describing what’s happening to him in the moment and saying things like, ‘Stay with me, Shawn [WTOP anchor Shawn Anderson], give me just a second. I’m getting pushed back. I need to move over here.’ When you hear that, it’s just so captivating, and we had so many of those moments.”

IN THE NEWSROOM

As the afternoon’s chaotic events unfolded, news staff at the station’s broadcast facilities just across the District border in Chevy Chase, Md., worked to get the news to air.

The hub of the action took place in WTOP's open newsroom, whose numbers had been depleted due to people working at home thanks to COVID-19.

"Normally we have everyone together in the same room — our broadcast, on-air, and web staff — so that there's constant one-to-one yelling of information back-and-forth," said Ziegler.

"To include at-home workers in this during the pandemic, we set up an open conference line and speakerphones so that everyone on shift can talk to and hear each other, whether they are in the newsroom or not."

This open line of communications made it easy to share news from Capitol Hill as it came in. Meanwhile, whenever someone got swamped by the rush of information, other staff members stepped into help.

"It may sound corny, but we really work as a team," said Ziegler. "It's how we're able to do what we do."

During its wall-to-wall coverage of the insurrection, WTOP dropped commercial breaks from mid-afternoon Jan. 6 going into the next morning. "But we kept the other breaks built into the clock such as traffic and weather every 10 minutes, sports at :15 and :45, and business at :25 and :55," Ziegler said.

"Maintaining the traffic reports was incredibly important, because the impact of the riot on traffic was a big part of the story. This said, the rest of the broadcast just flowed organically, as usually happens during a breaking news event."

A couple of days after the assault, with additional images of Jan. 6 violence against both law enforcement and journalists emerging on social media, Alvarez wrote in a tweet, "I have plenty of colleagues on this beat who've been attacked or arrested. You know the risks but can't help but wonder if your next assignment is the one you won't get to walk away from safe and sound. It's always at the back of my mind."

PRIDE IN THE TEAM

Not long after the assault had ended and a curfew implemented, the building was protected by a seven-foot metal fence and the National Guard. Joe Biden had been confirmed as winner of the presidential election, and his inauguration proceeded on Jan. 20 — without President Trump in attendance.

The WTOP news team was pressing on to cover the aftermath, as the nation wondered how Trump's last days in office would unfold, and reports surfaced of further threats against public officials and public buildings between now and the inauguration.

Ziegler expressed pride in WTOP's team and how they have endured a year of crisis.

"We have gone through COVID, all

the protests all throughout the summer/fall of 2020, and then the election. So we've been running a marathon and with the inauguration still to come, it's still not over.

"Journalists are mission-driven people," she said. "Our purpose is to help people, and our mission at WTOP News is to make sure that we are providing our community with everything they need to know about the biggest stories of the day. [Jan. 6] was huge from many different perspectives, but it's not the only huge story we'll be covering this year."

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VB*(continued from page 1)*

deals to buy or manage tower properties for Townsquare Media, Cherry Creek Radio, Univision and Alpha Media.

Radio broadcasters continue to unlock value in their towers by selling off the assets and generating large amounts of cash. In most cases radio broadcasters lease back antenna space on the towers they sell, according to those familiar with the arrangements.

Selling off towers also means radio broadcasters are left without the worry of tower maintenance and the associated operational expenses. And in the case of Cumulus, the move brings in a large influx of needed cash.

The tower industry is booming with the fast spread of 5G and further TV repack work. Vertical Bridge has been quickly expanding its footprint. It already is the largest private owner and manager of communication tower infrastructure in the United States.

The company, founded in 2014, has approximately 2,000 broadcast towers in its portfolio. In total it says it has more than 290,000 owned and managed sites in the United States, which includes wireless and broadcast towers, rooftops and land parcels. It recently completed a merger with another tower company, Eco-Site, that brought in approximately 600 towers.

The Cumulus purchase was valued at \$213 million and included 250 sites in 32 states, according to Cumulus filings with the U.S. Securities and Exchange Commission. The purchase has closed except for a few pending obtaining consent from landlords, according to Vertical Bridge. The remaining assignments are expected to be finalized in the first quarter of 2021.

Cumulus President/CEO Mary Berner said in a press release about the transaction last year that it was a way to “further add to our liquidity and contribute to significant incremental debt pay down.”

**Bernard Borghei**

The leaseback period between Cumulus and Vertical Bridge is for 10 years, followed by five option periods of five years each, according to government filings by Cumulus.

“The annual lease payment obligation for the assets leased back in the initial closing is approximately \$13.2 million, sub-

ject to customary escalators,” according to a Cumulus investor note in October.

URBAN SPREAD

Those properties were attractive for one very specific reason, said Bernard Borghei, co-founder and EVP of operations for Vertical Bridge — the same reason most tall broadcast sticks interest the company.

“These tower properties were built 40, 50 and 60 years ago. These properties now exist in core urban areas. With the restrictions you have on zoning and permitting towers, these towers exist in locations where no one else can zone to build a tower,” Borghei said.

“These are assets we refer to as zoning protected. Meaning our competition cannot come in and try to build a new tower.”

Some of the former Cumulus tower sites are in the middle of urban areas in Chicago, Philadelphia and Los Angeles, he said, and are attractive to non-broadcast tenants as well.

“And as a real estate company we love the great locations,” Borghei said.

Vertical Bridge, headquartered in Boca Raton, Fla., leases tower space to radio and TV broadcasters, telecommunication carriers and other users of wireless technology.

Borghei believes the terrestrial radio broadcast industry is strong enough to support Vertical Bridge’s long-term growth.

“Certainly we intersect closely with radio. We think the broadcast industry is, on its own, healthy. We could see that iHeart, once they restructured, would come out healthy and strong. We have that same feeling about Cumulus. We believe in that market sector and secured what is now the largest broadcast towers portfolio in the country.”

Vertical Bridge is owned by private equity groups including Digital Colony, The Jordan Company and Stonepeak Infrastructure Partners, along with private investment groups like the California State Teachers’ Retirement System. It has lease agreements with many regional radio broadcasters, Borghei said.

“The leaseback agreements help us maintain occupancy, of course. The lease terms are in line with what the tower industry is experiencing on the broadband side as well.”

Borghei said there are obvious advantages for radio broadcasters who sell their tower sites to Vertical Bridge.

“Some of the broadcast companies needed to raise capital. And didn’t want the ongoing maintenance cost of looking after these really tall towers,” Borghei

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We think the broadcast industry is, on its own, healthy. ... We believe in that market sector and secured what is now the largest broadcast towers portfolio in the country.

— *Bernard Borghei*

NIGHT VISION ISSUE COMES TO LIGHT

Here’s a note for broadcasters who do own their own towers:

The Federal Aviation Administration has known for more than a decade that certain high-intensity red LED-based obstruction lights on communication towers are visible to the naked eye but invisible to those wearing night vision goggles (NVG) in most cases.

The FAA previously issued advisories addressing non-NVG compatible LED lighting systems, but in November 2020 it levied final orders to require manufacturers meet a new specification for certified red LED-based obstruction lights that include Infrared (IR) emitters to make lighting systems more visible to pilots using NVG.

Several light manufacturers have already standardized on the new IR LED lighting, according to experts familiar with the issue.

The use of NVGs and Night Vision Imaging Systems (NVIS) is increasing in civilian aviation



An L-810 LED red obstruction light from Flight Light Inc. is compatible with night vision equipment.

to conduct search-and-rescue, emergency medical transport and other flight operations, according to the FAA.

It says certain legacy LED lighting systems fall outside the combined visible and near-infrared spectrum of NVGs, and thus are not visible to some flight crews. LED-based lighting has largely replaced incandescent technology for red (and some white) obstruction lighting because of its reduced maintenance requirements and extended service life.

Existing non-IR LED tower beacons are grandfathered in, but going forward all certified LED Aviation Obstruction Lighting installed for newly constructed towers or FAA circular updates must be NVG-friendly, according to the FAA.

Broadcasters who own tall towers will need to upgrade to the new certified red LED-based beacons in the normal course of replacing their tower lighting systems, according to the FAA. However, since the new specification ensures the light is visible to pilots operating with night vision goggles, there is risk of a pilot misinterpreting the tower height if a legacy intermediate-level light is replaced with one that meets the new specification unless the top light meets

the new specification as well.

“Therefore, if a legacy specification intermediate-level LED-based light is replaced with a light that meets the new specifications, then the top-level light(s) on the obstruction must also meet the new specification to ensure the entire obstruction is visible during the use of night vision goggles,” according to the FAA Advisory Circular issued in November.

Tower consolidator Vertical Bridge recommends broadcasters call their lighting manufacturer and provide them with serial numbers of their red color LED obstruction markers to determine if the pre-existing fixtures on the tower are NVG compatible and are equipped with an IR emitter.

“Knowing that the rule change was coming for several years now, we started upgrading our systems as part of our normal repair and replace program. It’s important that tower owners, including broadcasters, use night vision goggle-friendly lighting going forward,” said Bernard Borghei of Vertical Bridge.

The FAA notes that failure of the IR component merits a NOTAM, a Notice to Airmen, and must be reported even though the LED light may still be flashing.

Any structure that exceeds 200 feet above ground level generally needs to be marked and/or lighted, according to the FAA.

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NEWSWATCH**A Busy January for Enforcement Bureau**

BY PAUL McLANE

Several FCC enforcement actions stood out in recent weeks.

In the first case, Cumulus failed to convince the commission to reduce a \$233,000 fine for violating sponsorship identification rules. The FCC also scolded the company for violating terms of a consent decree.

Broadcasters are required to disclose information about sponsors of paid-for programming. The commission decided last summer that various arms of Cumulus had aired paid programming without sponsorship ID announcements 26 times, and failed to notify the FCC about 13 of them as required by a 2016 consent decree that resolved earlier violations.

Cumulus didn't contest the findings in August but wanted the penalty reduced to the base penalty of \$104,000. It said that the higher fine was excessive and argued that earlier incidents should not be used to justify a higher penalty because Cumulus had subsequently been reorganized, went through a transfer of control and now had a different board.

But in January's order the FCC wrote, among other things: "The respondent's implication that it is a drastically different organization post-transfer is belied by the fact that its core senior management remained unchanged by the transfer of control." And it stated: "The commission expects parties to honor agreements made in consent decrees, and when parties fail to do so, it is a very serious matter."

Cumulus also had argued that its overall record of rule compliance is "as good as or better than any other large broadcaster in the industry," that it has "stellar" reputation, that management has focused on adherence to FCC rules, and that out of approximately 135 million ads during the three-year period covered by the consent decree, there were only two occasions of sponsorship ID noncompliance.

The commission dismissed those arguments too, saying, among other things, that it doesn't take a



iStock/Getty Images Plus/EthAmmos

company's overall size into account as a mitigating factor. "To the contrary, if a corporate entity chooses to acquire many stations, it must ensure that it scales up its compliance efforts accordingly."

Underwriting no-no

In another case, a low power-FM station agreed to a consent decree to settle an investigation into whether it violated underwriting rules.

The decree calls for the Athenian Multicultural Study Club to implement a compliance plan and pay a civil penalty of \$10,000.

The Enforcement Bureau received a complaint alleging that on May 13, 2019, Athenian — licensee of WPLP(LP) in Athens, Ga. — broadcast an advertisement for a for-profit entity, a direct violation of the FCC's underwriting rules.

In April 2020, the bureau issued a letter of inquiry to Athenian, complete with audio samples of the advertisements that were allegedly broadcast that day.

An attorney for the licensee responded soon after and acknowledged that the station had broadcast underwriting announcements on behalf of for-profit entities between May 2019 and April 2020.

In addition, Athenian revealed that in the 12 months before receiving the letter of inquiry from the FCC, Athenian had aired nine announcements with similar promotional references.

The FCC noted that it gives special regulatory consideration to noncommercial educational stations —

including LPFMs — by imposing fewer regulatory requirements and exempting them from annual regulatory fees. This is because non-commercial educational broadcast stations provide a unique service to the public and, via LPFM stations specifically, give the public a radio service that is commercial-free and specifically focused on local communities.

"That flexibility, however, is not unlimited," the bureau wrote, noting that FCC has long prohibited NCE stations from airing commercial advertisements.

In this case, the bureau agreed to the consent decree with Athenian to end the investigation.

A pre-inaugural warning

Also in January, the commission issued an unusual weekend enforcement warning that boiled down to this: Don't use ham radio, CBs, FRS walkie-talkies or other personal radio services to plan crimes.

This came as federal and local government and law enforcement officials around the country reported concerns over possible terrorist attacks from disgruntled Trump supporters enraged by the outcome of the election and stoked by the Jan. 6 attack on the Capitol.

A few days before the inauguration, the Enforcement Bureau said it had "become aware of discussions on social media platforms suggesting that certain radio services regulated by the commission may be an alternative to social media platforms for groups to communicate and coordinate future activities.

"The Bureau recognizes that these services can be used for a wide range of permitted purposes including speech that is protected under the First Amendment of the Constitution," it said. But it continued in bold font: "Amateur and Personal Radio Services, however, may not be used to facilitate crimes."

The warning applies to ham radio operators and users of services like Citizen's Band, Family Radio Service walkie-talkies and General Mobile Radio service.

The inauguration went off smoothly under historically heavy security and a closed National Mall.

VB

(continued from page 8)

said. "Broadcast towers require time and money to maintain. I think many broadcast companies are optimizing their resources and their engineering teams. And they don't have to worry about having cap ex allocations in their budgets to maintain these towers."

The company handles the obstruction lighting, painting, structural inspections and ground maintenance of the towers they own and manage, he said. Vertical Bridge also maintains generators and HVAC systems while keeping abreast of all FAA and FCC regulatory requirements (see sidebar).

Borghei says the company's pipeline

for mergers and acquisitions of broadcast towers remains strong.

"(Vertical Bridge) is keenly interested in further broadcast tower projects to develop. Operating a broadcast tower is quite different than a broadband tower. We understand both. You have to have that understanding to be able to work with different tenants, and especially live broadcast companies."

The integration of 5G remains a primary focus of Vertical Bridge's infrastructure plans, Borghei said, including the plans of Dish Network now that that company has been confirmed as the fourth national 5G network. Dish has said it will begin its 5G network build-out in earnest in the second quarter.

"More 5G and CBRS [Citizens Broadband Radio Service] networks

are beginning to take hold. It'll also be interesting to see who comes out and owns what as a result of the C-band spectrum auction. That's very valuable spectrum, and it looks like Verizon and AT&T are the top two," Borghei said.

Borghei said the COVID-19 pandemic has done little to slow the growth of Vertical Bridge despite some challenges.

"For us 2020 was a heck of a year. From a business perspective it was a tremendous year from the Cumulus acquisition to closing the Eco-Site merger. And our new build program has been extremely successful. We continue to have a lot of new tower builds and we don't expect that to slow down in 2021," he said. "The majority of our new towers are 180 to 250 feet

for 5G and 4G densification upgrading to 5G."

In fact, 5G plays a critical role in Vertical Bridge's pursuit of tall broadcast towers, Borghei said.

"Broadcasters are typically at the top of the towers but then you have the 400 to 500 feet beneath broadcast available for broadband carriers looking to deploy 5G. And again we own towers in locations where no one else can ever zone a new tower," he said.

Other major ownership groups making notable deals to sell off communication towers in recent years include Townsquare Media, who sold 43 towers and property to Vertical Bridge for approximately \$22.8 million in 2016, and Cox Enterprises, which sold all but one of its towers to InSite Wireless Group in 2015.

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Remember a Ground Kit at the Base

Also a whole batch of other simple but useful tips for use around your shop

WORKBENCH

by John Bisset

Email Workbench tips to johnbisset@gmail.com

Jim Schultz primarily does electrical contract work of all types for broadcast stations and telecom and data facilities. Along the way he has been involved in several transmitter installs.

where the coax feedline leaves the pole, and a #6 or larger copper bonding conductor from the grounding electrode to the power/telco/ CATV station ground.

Fig. 1 shows a typical ground kit, available from CommScope.

Mark Jensen is president of MWB Broadcasting, which owns stations in Nebraska and Hawaii. On



Fig 1: CommScope manufactures a variety of ground kits for different size cables.

Jim confesses that radio has always been a first love. For him the relationship started, like many in the biz, with a Knight Kit wireless broadcaster kit when he was 9 years old, six decades ago.

Although he spent a few years on both sides of the mic in medium-market radio, he now has owned his own business as a Connecticut EI Unlimited Electrical Contractor for almost 40 years. Let that be an encouragement to anyone thinking about starting a contract engineering business!

Jim has been following our discussions about bonding and grounding in Workbench and took note of Wayne Eckert's drawing of a properly grounded pole in December.

Jim suggests adding a bonding kit



Fig 2: WER makes this Wireless Water Leak Sensor Alarm with 90 dB buzzer. We saw it on Amazon for less than \$30 for a four-pack.



Fig 3: The Govee WiFi Water Sensor has an adjustable alarm but will also connect to WiFi and send emails, app notifications and alerts to your phone in the presence of a water leak. It's around \$50 for three. Note that it doesn't support 5G WiFi.

a recent Idea Bank conference call, Mark related that an abundance of flies had made working inside his transmitter building unpleasant. Not only that but the flies were getting

sucked into the transmitter, causing expensive damage.

Mark's solution was to install bug zappers inside the buildings. The light attracts and kills the flying insects, keeping them out of electronic equipment. Simple but efficient.

On the same call there was a discussion about keeping weeds down from around your transmitter building or tower.

Terry Barber is with Little Engine Broadcasting, in Montgomery, Ala. He has a billboard company nearby, with scores of old billboards on hand. The sections are of no use to the billboard company, so Terry has placed the old billboard sections on the ground, around his transmitter building, and covered them with gravel.

Since the weeds won't penetrate the boards, any that do grow amidst the gravel can be pulled easily. Another inexpensive, effective, solution.

You probably have a screwdriver set with both straight and Phillips drivers. You go to grab one and have to stop and look at the tip to see if it is the one you want.

Mark Peterson, engineer at WCTS(AM), in Plymouth, Minn., offers a solution: Take a Sharpie brand or similar permanent marker and mark the

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handles of the Phillips drivers. If you store drivers vertically, in slots or loops in the tool case, place a mark on the on the butt end of the driver — an “X” to indicate Phillips or a slash “/” for the straight blade.

Take a minute or two to do this and you’ll never grab the wrong driver again.

We love all these simple, yet useful, reminders.

Alan Peterson is the national production director for the Radio America Network and a longtime member of the Radio World family.

Our recent discussions about cleaning equipment using a hose or carwash reminded Alan of the time in the early 1990s at WLAD(AM)/WDAQ(FM) in Danbury, Conn., when an oil burner in the basement of the studios malfunctioned and filled the building with greasy smoke and soot.

Professional cleaning crews took care of the general office mess while, but the guidance of the late Tom Osenkowsky, Alan and a few other staffers took care of degreasing the electronic gear.

As Alan related the experience in the pages of Radio World, a reader suggested that a suitable way to clean an ITC triple-deck cart machine was to remove all rubber parts like pinch rollers and rubber feet, and run it through the dishwasher!

Alan fortunately hasn’t had a second shot at a station fire to test the idea, and cart decks have gone the way of the Conestoga wagon, so we can’t report any outcome of the proposed experiment. Perhaps Workbench readers can share one.

Jose Luis Bolanos is with Broadcast Services LLC. He attended a Zoom meeting for the Grand Rapids SBE chapter recently on which I spoke.

In the presentation on AoIP, I also mentioned the use of water sensors to protect both studio and transmitter sites from water damage.

Typically, these floods are caused by clogged condensate drains, but roof leaks in seldom-visited sites can be just as costly.

Jose Luis has been using water sensors in facilities as well, but his are battery-powered (Fig. 2).

They will wail/beep when they come in contact with water. You’ll find them described at this Amazon link: <https://amzn.to/37qSwQD>. This set includes four sensors for under \$30. Note that batteries are not included.

Jose Luis places the sensors in strategic corners or near AC condensate drain pipes — he had one of those clog once, and it started to drip water inside the transmitter building.

A reader suggested that a suitable way to clean an ITC triple-deck cart machine was to remove all rubber parts like pinch rollers, and run it through the dishwasher.

When the alarm starts, he can pick up the noise with a security camera that receives audio or an environmental monitor unit. Nowadays, you can

purchase water sensors that are connected through the internet (like everything else). These versions will send alarms to a smart phone/email.

Here is an Amazon link for these IP sensors, shown in Fig. 3, which cost less than \$50 for three and come with batteries: <https://amzn.to/3akUTWY>.

Workbench submissions are encouraged and qualify for SBE Recertification. Email them to johnpbisset@gmail.com.

John Bisset has spent more than 50 years in the broadcasting industry and is in his 31st year writing Workbench. He handles western U.S. radio sales for the Telos Alliance. He holds CPBE certification with the Society of Broadcast Engineers and is a past recipient of the SBE’s Educator of the Year Award.

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ROOTS OF RADIO

(continued from page 1)

In October 1965, Electro-Voice Vice President of Broadcast and Recording Equipment Lou Burroughs proclaimed, "The 635 is dead, long live the 635A!"

In a newsletter to customers, Burroughs wrote, "There is increasing demand for a small, lightweight, high-output microphone for stand and handheld use."

In a Broadcasting magazine full-page ad, Electro-Voice mentioned that the original 635 had been in use since 1947. The 635 was designed to be used on a stand: the cable connector was adjacent to threaded stand mount attached to the microphone through a hinge. It was unwieldy as a stick mic. The ad copy for the 635A included what at the time was a marketing boast, "the new 635A will take over as the new standard."

It turned out to be a prescient line. With so little 1965 technology still in use, the endurance of the 635A is remarkable. Electro-Voice's Guy Low attributes the longevity of "our most iconic product" in part to its utilitarian, workhorse role.

Burroughs noted what is likely the key to the 635A's success. "I have one unit that was purposely dropped on hardwood and concrete floors 27 times during tests without altering its frequency response."

One major market chief photographer referred to the 635A as a "hammer" for its resilience. There are 635As of uncertain vintage lurking in many an audio box, scuffed and perhaps with a dented screen, but still sounding as good as new.

While the 635A does not make as many appearances on entertainment TV as it used to, its presence is a unifying element for news conferences over the last six decades.

In 1967, Stanford University scientists announced a breakthrough in genetic research. At least three 635As were used to capture the sound of the event.

Electro-Voice management has not considered withdrawing the 635A from its catalog, as demand for the original model continues year after year.

"There isn't necessarily a need for any bells and whistles to be added," to the 635A, Low said. The original 635A model came in Electro-Voice's standard fawn beige color and was 6 inches long. Over time, the company added a black color option, the 635L, which is 3.5 inches longer than the original, and the 635N/D-B, which uses Electro-Voice's neodymium element.

Electro-Voice's Low adds the 635A is attracting a new generation of fans,

"We are hearing from kids who are using these mics on stage and studio ... and people like them because they are robust and durable and they kind of harken back to the era when things were built to last."

Electro-Voice aficionados were a bit concerned in 2006, when the company became part of the German conglomerate Bosch. The American name for microphones, speakers and other audio products was now part of an organization that made RTS intercoms but had many interests, including the aviation, automobile, and security sectors.

Low said little has changed as the parent firm, "lets each brand's core competencies remain in place."

EV management has not considered withdrawing the 635A from its catalog, as demand for the original model continues year after year.

This was the E-V Model 635. It started a tradition of excellence in dynamic microphones.

This is the new E-V Model 635A. It's better in every way!

How can a microphone as good as the E-V Model 635 be made obsolete? By making it better! It wasn't easy. After all, professional sound engineers have depended on the 635 since 1947. During this time, the 635 earned a reputation for toughness and dependability that was unrivaled by other omnidirectional dynamics. And internal changes through the years have kept the 635 well in the forefront of microphone design.

But now the time has come for an all new 635: the Electro-Voice Model 635A. It's slimmer, for easier hand-held use. Lighter, too. With a slip-in mount (or accessory snap-on Model 311 mount) for maximum versatility on desk or floor stands. The new, stronger steel case reduces hum pickup, and offers a matte, satin chromium finish perfect for films or TV.

The new 635A is totally new inside, too—and all for the best. A new four-stage filter keeps "pops" and wind noise out of the sound track, while guarding against dirt and moisture in the microphone, completely eliminating any need for external wind protection. Of course you still get high output (—55db) and smooth, crisp response. And you can still depend on the exclusive E-V Acoustically™ diaphragm that is guaranteed against failure for life! (It's that tough!)

We expect to see plenty of the "old" 635's in daily use for years. But more and more, the new 635A will take over as the new standard. It's easy to find out why: just ask your E-V Professional Microphone distributor for a free demonstration in your studio. Or write us today for complete data. We'll be proud to tell you how much better the new Model 635A really is!

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Early ad in Broadcasting magazine.

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418/495-4831

October, 1965

THE 635 IS DEAD, LONG LIVE THE 635A!

By the time you receive this letter, the long popular Model 635 will have been replaced by the all-new Model 635A.

An announcement of the 635A in 1965. The letter included a note that the "user net" price was \$49.20. List price today is \$179, with recent online prices of \$139.

Those same technical developments that have affected broadcasting have led to podcasting and home studios. Low added the company's standard studio microphone, the RE20, is seeing record sales numbers, likely due to demand from podcasters trying to recreate the sound of radio stations, "people imitate what they see."

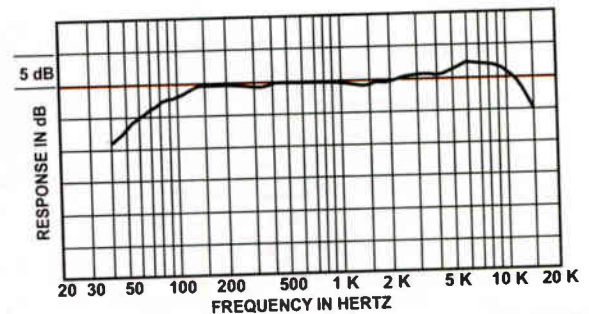
Electro-Voice has no official records of how many 635A microphones have been sold in the unit's 55-year history. But even if Electro-Voice were to discontinue its manufacture, its resiliency and the many thousands likely sold would keep the 635A in use for a long time to come.

Kevin Curran, Ph.D., is a veteran broadcast journalist and member of the journalism faculty at Loyola Marymount University in Los Angeles.

MODEL NUMBERS

- 635A** Classic Handheld Interview Mic
- 635A/B** With black finish
- 635L** With long handle 5.9"
- 635L/B** With long handle, black finish
- 635N/D-B** With N/DYM capsule

Frequency Response:



Frequency response of the omnidirectional dynamic 635A is cited as uniform from 80 Hz to 13 kHz.

PEOPLE NEWS



Jonathan Wyner started his term as president of the **Audio Engineering Society** in January. He is chief engineer at M Works Mastering, education director for iZotope and professor at Berklee College of Music in Boston. ...



Emmis Communications announced it will promote company veteran **Taja Graham** to become president of its important Indianapolis radio market on March 1. She'll succeed **Bob Richards**. ...



Digigram announced three directors to a new management team. The French audio manufacturer named CFO **Florence Marchal** to be director of finance, human resources and legal affairs. **Nancy Diaz Curiel** was appointed director of sales, marketing and communications. **Xavier Allanic**, who has been VP Sales EMEA and Americas since 2018, becomes director of operations. **Jérémie Weber**, CEO since 2017, remains chairman of Digigram Group. ...



The **European Broadcasting Union** has a new executive board, elected at its General Assembly in December. The EBU is an alliance of public service media organizations. Its board will serve for a two-year period starting this month.



The new president is **Delphine Ernotte Cunci** of France Télévisions, the new and vice president is **Petr Dvořák** of Czech TV. **Tony Hall** of the BBC has served as president of the EBU for the past two years. ...

Submit announcements for People News to radioworld@futurenet.com.

REMEMBERING ANDY LUBERDA



A GoFundMe page was created to assist the family of **Andy Luberda**, who died in December from complications of COVID-19.

Luberda, 51, was the operations manager of Skyview Networks, which he had joined in 2012 as a board op.

"In this role, he was responsible for the quality and execution of pro-

fessional sports play-by-play broadcasts, showing leadership, reliability and passion," it stated. "His love of sports combined with his approachable and warm personality made him a valued leader and friend to his colleagues."

Director, Communication & Special Projects **Renee Smith** said Luberda took on additional projects that included managing ABC News Radio overnight broadcasts.

"In 2015, Andy was promoted

to operations manager, where he focused on managing one of the company's largest clients, **Tuneln**. In this role, he monitored and managed over 70 collegiate football and basketball live audio streams and 24/7 news and weather content."

Luberda's son **Kade** also joined the company in 2016 as a board operator.

The benefit page is to raise funds for medical and memorial costs and to provide financial support for his son. To contribute, visit GoFundMe.com and search for **Andy Luberda**.

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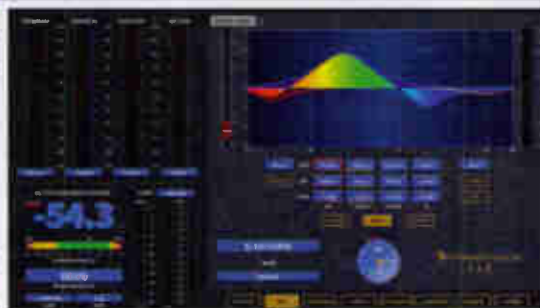


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Listening Has Come Almost Full Circle

Like small 1950s mono speakers, today's smart devices are fueling an audio revolution

AUDIO PROCESSING

Tom Lawler is a contract studio/RF engineer who builds and maintains analog and AoIP radio and home studios for broadcast; his full-time job is in field technical services for RCS. We spoke to him for the Radio World ebook "Trends in Audio Processing for Radio."

Radio World: Tom, what do you see as the most important trend in the design and use of processors?

Tom Lawler: With the development by leaps and bounds in flexibility — between insert patch points for ratings watermarking, multimode boxes, as well as being able to do MPX over AES or AoIP — modern processors have become virtual Swiss Army knives. Not to mention that devices like StreamBlade from Wheatstone or software processors like StereoTool let your online presence have just as much punch as the OTA signal.

It wasn't that many years ago where the only option was to try and adapt an FM box or use a PCI card that couldn't be easily updated.

RW: What should readers know about the differences in processing needs for analog over the air, digital OTA, podcasts and streaming?

Lawler: Every medium requires a different approach, but they all require you to have as clean a source material as possible.

With analog OTA you can get away with clipping/limiting to achieve loudness without introducing fatiguing artifacts — but that approach won't work with digital OTA as artifacts will cause issues with the bit-reduced codec. For podcasting, use a gentle multiband to smooth over transitions between segments/presenters — resist the urge to treat it like FM!

Streaming can be treated like FM, but make sure to use lookahead limiting instead of clipping — also, make sure everything is in-phase for when it's folded down to mono on a smart speaker.

RW: How will the concepts of the cloud, virtualization and software as a service affect the processing marketplace?

Lawler: I hope that it will lead to greater flexibility, redundancy and better quality. Imagine no STL issues to contend with (as long as your ISPs are up), and you now have the ability to make upgrades with the click of a mouse rather than having to physically rack

up gear. This is a great opportunity for users as well as vendors alike — users gain as much flexibility as they are willing to pay for, and vendors can have a reliable subscription income stream. Plus, there is no single point of failure like in a traditional plant.

RW: The pandemic is changing thinking about the need for big buildings and studios to make good radio. What does this mean for processing?

Lawler: I think COVID-19 will accelerate moving to flexible software/cloud solutions for processing — and it will be more important than ever with the myriad of sources and level differences.

Given that more and more talent is working remotely from home rather than at the studio it will be a challenge



Chris Imlay

If this is how your audience consumes the station/stream/podcast, make sure to give them a download or on-demand stream that is easy to listen to no matter the environment. Make the most of the 3-inch speaker without sounding smashed.

to keep everything sounding consistent from source to source. Not every home studio has mic processing, and many automation systems do not handle ducking gracefully.

Adding processing in the cloud will be necessary to keep the audio consistent — more so now than before. This also means less in the racks to power and cool if done right.

RW: How is consumer behavior changing; for instance are younger consum-

ers moving toward greater fidelity?

Lawler: Things have come full circle almost. In the 1950s and '60s you had a 3-inch mono speaker that went hand-in-hand with the explosion of top 40 radio. And now, we have smart speakers that are about the same size fueling another revolution in how audio entertainment is consumed. Apple and their just released new iPod touting greater fidelity, and the ability to pair them and create stereo, similar to other smart speakers.

If this is how your audience con-

sumes the station/stream/podcast, make sure to give them a download or on-demand stream that is easy to listen to no matter the environment. Make the most of the 3-inch speaker without sounding smashed. Do your content creators have access to the tools to process voice without making it sound unnatural? That is the trick with modern listening — making it pleasing while taking into account less than perfect conditions.

RW: In 2014 we did a story asking if processors had become as powerful as they could get. In 2020, where might further dramatic improvements come from?

Lawler: Never underestimate the ability to go further. My grandfather once believed that Cadillac would go no further than a dual points ignition setup — now look at what can be done with engine management!

Tools like the limitless clipper in Wheatstone's X5 or being able to generate a perfect composite FM signal from a 192 kHz PC soundcard with StereoTool. Six years ago everyone was asking what was next after the big three (Orban, Omnia, Wheatstone) took FM to as loud as could be asked — and all went in the direction of how to put the quality back in with such hyper-processed source material from record producers. I can't wait to see what the next six years bring!

RW: What else should we know about processing for radio?

Lawler: Look at your entire audio path — from the quality of the files you are playing (WAV vs MP2/MP3), the STL, the exciter/transmitter, and even the antenna. Any one of those could be the reason you cannot achieve the sound you are looking for. And as the old saying goes "Garbage in, garbage out."

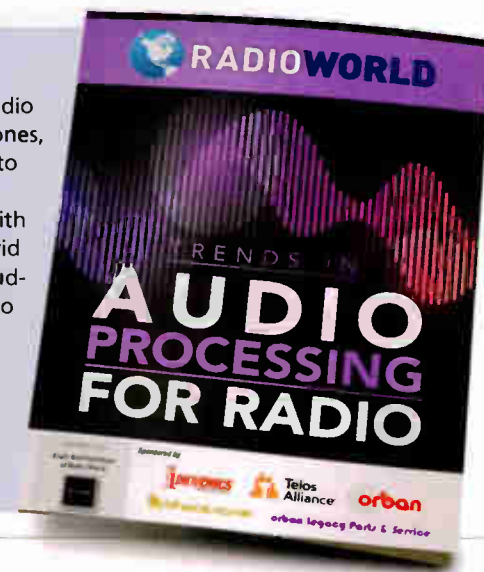
TRENDS IN AUDIO PROCESSING FOR RADIO

Radio World's latest free ebook provides insight into the changing ways in which radio organizations shape the sound of their over-the-air signals and those sent to smartphones, apps and smart speakers. It explores what users, leaders and manufacturers consider to be the most important recent or pending developments, and other timely questions.

Tom Lawler, Matt Levin and Mike Cooney provide engineering user perspectives, with Cooney adding insight from his work with the NAB Radio Technology Committee. David Bialik and John Kean offer opinions about issues around streaming and loudness, including work being done by the Audio Engineering Society on a document for online audio parameters.

Then manufacturers including our ebook sponsors weigh in; we hear from processing gurus at Wheatstone, The Telos Alliance, Orban, Inovonics, Circuit Research Labs and WorldCast Systems. And consultant Gary Kline wraps up our discussion with his trademark list of "things to think about."

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World Radio History

NAB, Critics Duel Over Radio Duplication Rule

“The rule is a perfect example of an unnecessary regulation,” association says

BY PAUL McLANE

The NAB says the FCC did the right thing last summer when it eliminated the radio duplication rule for FM as well as AM stations. It slammed opponents who want to overturn the decision as cynical and retaliatory.

But those opponents say the commission broke its own rules by allowing a last-minute “180 degree switcheroo.”

THE STORY SO FAR

In August, the Federal Communications Commission eliminated the rule that restricted duplication of programming on commonly owned stations that operate in the same service and geographic area. However, it unexpectedly did so for FM stations as well as AM, a late change criticized at the time by Democratic Commissioners Jessica Rosenworcel and Geoffrey Starks.

Subsequently, REC Networks, musicFIRST and Future of Music Coalition formally asked the FCC to overturn the decision in regards to FM stations.

Among other things they basically accused the National Association of Broadcasters of pulling a fast one by seeking to change the terms of the issue at the last minute.

The opponents reminded the FCC that it had proposed and circulated a draft order applying only to AM stations and explicitly retaining the rule for FMs.

They said the elimination of the FM portion of the Radio Duplication Rule would “invite a reduction in diversity of programming, while encouraging corporate radio owners to hoard spectrum.” They believe the economic fallout of the pandemic should not be used as a justification because it is ultimately a temporary situation that could be dealt with through waiver requests, whereas the rule change will have lasting consequences.

And they said the FCC’s “sudden about-face” regarding FM violates federal law on administrative procedures. They said that on the day before the sunshine period, the general counsel of the NAB called senior aides to Republican Commissioners Pai and Carr to argue

that the FM rule should be eliminated.

The effect of the timing, they said, “was to ensure that petitioners would not be able to speak to anyone at the commission about the matter on an ex parte basis prior to the commission’s vote. The timing of these actions is an affront to the stated purpose of the commission’s ex parte rules, namely to ‘ensure the fairness and integrity of its decisionmaking.’”

They laid out legal reasoning why a second round of public comments should have been held instead, saying this change was not just a logical outgrowth of the initial proposal but one that should have seen public debate first.

NAB REPLIES

The NAB replied formally in January, focusing its comments on the business context rather than the administrative processes involved.

It said the critics’ arguments about competition “exhibit a complete misrepresentation of the business fundamentals of the radio industry and the intense competition radio faces, and a total lack of understanding of the market value of AM/FM radio spectrum.”

NAB slammed them as retaliatory:

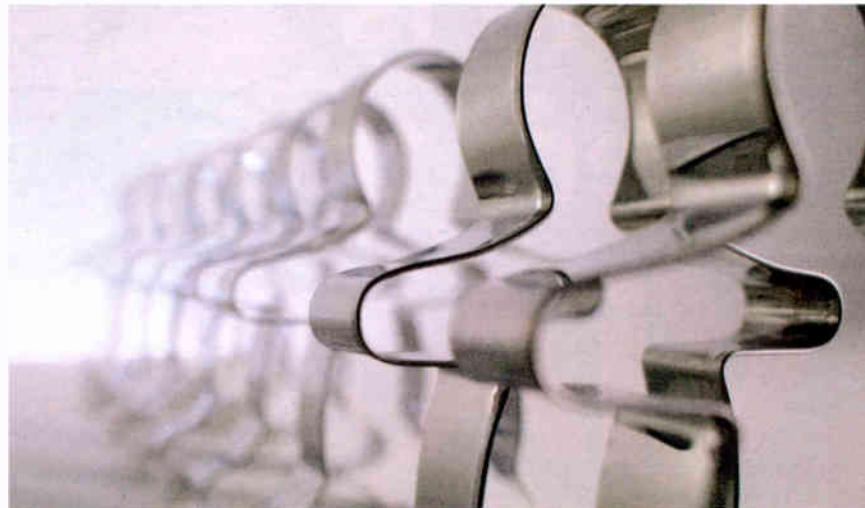
NAB said the opponents “insist on demonstrating their consistent misunderstanding of what it takes for radio stations to survive in today’s hyper-competitive audio marketplace.”

“Once again, we see musicFIRST and FMC file in commission proceedings concerning radio not because the companies and organizations those groups represent care about the proceedings at issue, but rather, to retaliate against broadcasters for those groups failing to convince Congress to enact a tax on radio stations when they play (promote) record labels’ music on terrestrial radio stations.”

The broadcast group also argued that their petition raises no new issues.

“The FCC correctly determined that, even absent the radio duplication rule, radio stations have no incentive to limit their appeal to listeners or advertising revenues by simulcasting the same content on multiple stations in the same market,” NAB wrote.

“To the contrary, the FCC explained that the best way for stations to reach the widest audience possible and maximize profits is to provide distinctive



Getty Images/Peter Cade

The opponents argue that lack of programming diversity is the likely outcome of the FCC’s action. “Larger corporate owners of FM radio stations could engage in widespread local duplication of FM programming in the wake of this needlessly drastic rule change.”

programming on their various stations, which is exactly the practice of broadcasters with multiple stations in the same market.”

They said the opponents had not named one instance where a station has taken advantage of the repeal in the way the critics worry about.

ciently cover a specific issue of local interest, for a limited period of time.

“Finally,” NAB wrote in its conclusion, “the entire point of the FCC’s media regulation modernization initiative is to modify or eliminate regulations that no longer serve an important purpose. ... [T]he rule is a perfect example of an unnecessary regulation that can needlessly hinder broadcasters’ ability to efficiently serve Americans, particularly during crises.”

“SWITCHEROO”

In reply comments, REC Networks, musicFIRST and FMC said that the NAB hadn’t even tried to refute its arguments that the commission had violated administrative procedures by allowing “a 180 degree switcheroo.”

They described the FM change as a drastic one rather than a “logical outgrowth” of the prior proposal. They reiterated their argument that eliminating the rule would provide no benefit that could not be obtained through waivers; and they said the real problem here is that FM stations that duplicate programming will necessarily be decreasing the diversity of voices on those airwaves.

And they criticized NAB’s statements about their allegedly retaliatory tactics as a “false ad hominem attack.”

The debate came at a time of transition at the FCC, with an incoming Democratic presidential administration and the expectation of a new chair along with a Democratic majority on the commission. Chairman Pai led his final FCC open meeting in January. Pai has said that regulatory transparency is one of the hallmarks of his tenure.

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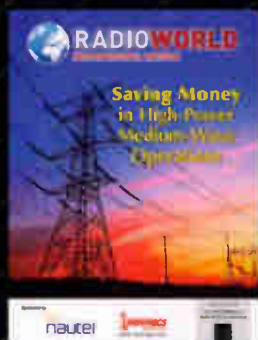
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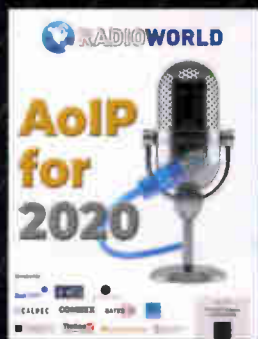
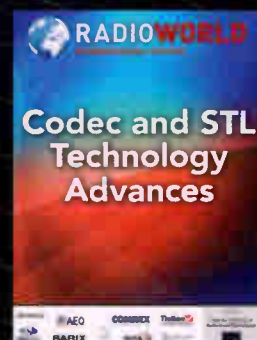


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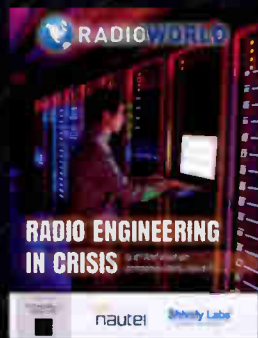
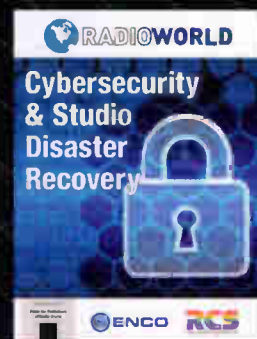
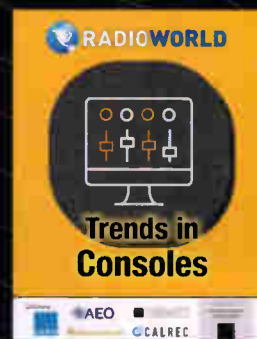
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Engage With Listeners Stuck at Home

Here are ideas to help jumpstart your creativity

PROMO POWER

Mark Lapidus



Lots of folks sing in the shower. I happen not to — even the water would boo — but I bring it up because that’s where I do a lot of creative thinking.

There’s something about the steam and sound that allows my mind to drift. Wherever your happy place, plan on spending some quality time there because it seems that this pandemic isn’t leaving anytime soon.

To retain and even grow your audience during this time when lifestyle patterns and priorities are in flux, you’ve got to be in a good frame of mind.

I’d like to lay out what I believe to be a path toward engaging your audience. While I can’t solve this specifically for you, I’m hopeful that these thoughts will jumpstart your creativity during that proverbial time in the shower.

1 What are musicians doing these days? Many are writing, producing and recording, recording, recording.

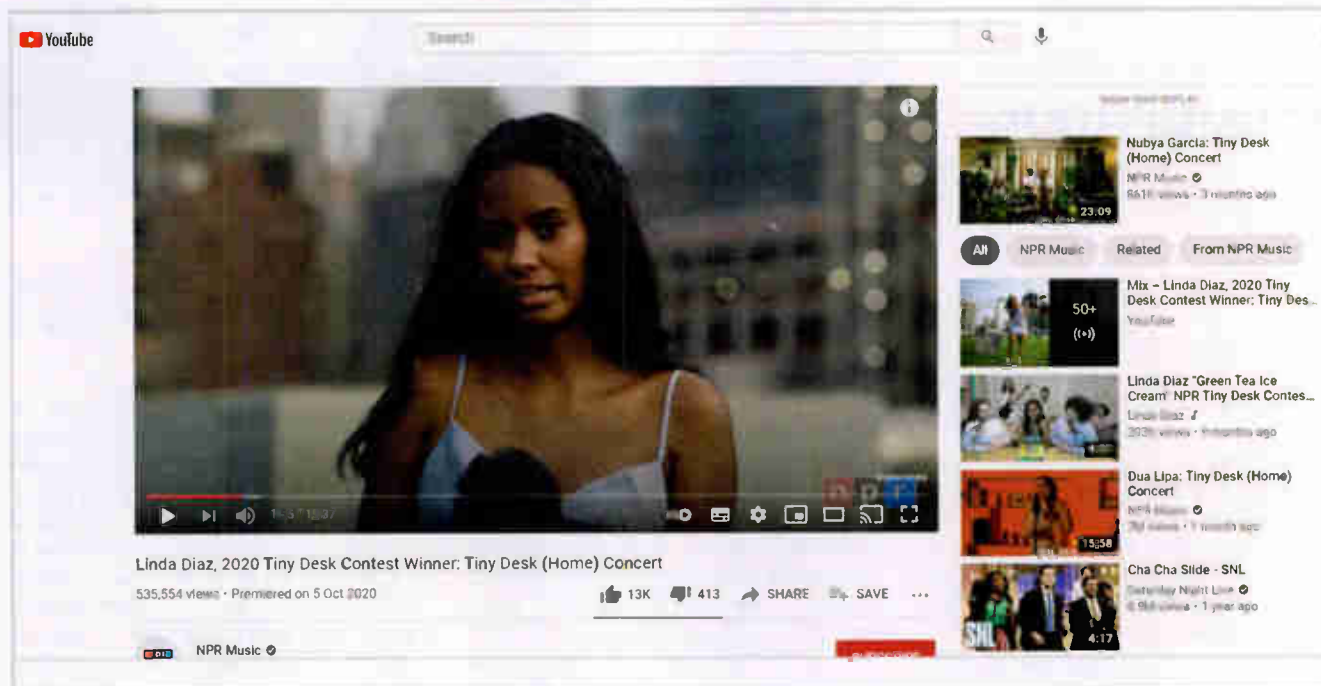
A local duo that I follow in DC called MLEMON has done four full albums since last March. They are not alone in their creative output. There are artists in your back yard doing the same.

While the barrier to releasing new materials has never been lower, reaching a big audience is especially challenging with shuttered venues everywhere. Radio to the rescue!

As a role model for this potential promotion, take a peek at NPR’s Tiny Desk (Home) Concerts. Instead of performing on-site at the Tiny Desk, the norm for over a decade, musicians are recording at home.



MLEMON have released four albums during the pandemic. There are local bands in your town doing the same.



Linda Diaz, shown on NPR’s YouTube channel, was the winner of the 2020 Tiny Desk Contest.

NPR also conducted its annual Tiny Desk Contest this pandemic year, capturing over 6,000 entries. You can read the rules for yourself, but I’d like to point out that one fun requirement is that every video include a desk. There’s even a sponsor, State Farm.

Leading up to the winner, NPR featured many of the entries on-air and then followed up by making their winner a featured guest on “All Things Considered.”

Could you pull this off? Yes! This can be done locally and during the pandemic. It has the potential to create huge buzz in your social media, your local press, and TV newscasts.

2 Next stop: Fashion. We may be stuck at home, but most of us still gotta get dressed.

This headline from inStyle caught my eye: “How Will Kim Kardashian Dress Without Kanye West Controlling Her Closet?”

No matter what your format — it could even be talk or news — there are many listeners who are interested in or at least curious about this subject.

Also, fashion is something that can be done from home. Create a fashion contest with best-of categories, some of which could be pandemic-specific: masks, lightweight gloves, indoor shoes.

And where would we be in 2021 without Best Unmatched Top and Bottom for Zoom Calls?

While the barrier to releasing new materials has never been lower, reaching a big audience is especially challenging with shuttered venues everywhere.

Post pictures and videos on your social channels and/or website. Have judges and a Listeners’ Choice award. Could you find a local clothing store as a sponsor? Of course you can.

3 It seems that animals are endemic to the pandemic.

If you’re not on a lot of Zoom calls, let me share that nearly every call I’m on features a pet’s enthusiastic greeting. While it’s usually dogs and cats. I have also met a talking bird named Buddy and the occasional fish or reptile. Do they distract on the calls? Yes, they do, and man, do people love that distraction.

Adopting or fostering shelter dogs and cats are a huge thing right now as people need companionship and many are isolated. You can easily become part of promoting pet adoption through this process already in place in your community.

You could bring back David Letterman’s timeless “Stupid Pet Tricks.” Of course, you could also do contesting around this one with winners for the best bark or mellowest meow.

You could have awards for the prettiest and, yes, the ugliest. Ugly pets can most certainly be adorable just because they’re so strange-looking.

4 Couples therapy! What happens when those in committed relationships can’t escape each other because they’re trapped in the same apartment or house, month after month? The time has never been better for a late night call-in therapist who specializes in Just A Little Too Much Togetherness.

This has all the elements that make for compelling radio: comedy, tears, marriage, divorce and more. Don’t have a host? Hold live on-air auditions with therapists in your city and then have listeners vote on the winning host. Of course, they will be doing their show from home. It may even help the show if their spouse, kids or pets would interrupt the live broadcast once in a while!

Mark Lapidus is a veteran media and marketing executive. Email him at marklapidus1@gmail.com.

Entering the Age of Audio Interactivity

The transformation will ensure that listening becomes even more personal

COMMENTARY

BY MICHAŁ MARCINIK

The author is CEO and founder of AdTonos.

Audio is an innately powerful and personal medium that delivers the soundtrack to consumer lives.

When listeners tune in to their favorite radio stations, they build trusted relationships with presenters — feeling like they’re being spoken to directly. When music is streamed, keen subscribers can access meticulously curated playlists full of meaning and memories. And when a podcast is carefully selected, the audiences’ personal knowledge expands.

As we move deeper into 2021, audio is in the midst of an interactive transformation that will ensure the listening experience is even more personal and engaging. Spurred on by the increased adoption and acceptance of voice assistants and smart speakers, this presents an exciting opportunity for advertisers to truly connect with listeners at a one-to-one level.

THE ACCELERATION OF AUDIO INTERACTIVITY

Listening to audio is no longer a passive activity as consumers are increasingly comfortable integrating their voice assistants and smart speakers into their everyday lives. A Juniper report revealed that consumers are expected to interact with voice assistants on 8.4

billion devices across the globe by 2024, up from 4.2 billion at the end of 2020.

Smart speaker adoption is growing particularly quickly, indicating that users trust the technology and find it beneficial. Worldwide

smart speaker sales reached almost 147 million in 2019 — an increase of 70% on the previous year — and by 2027 the global smart speaker market is projected to be worth an impressive \$19 billion.

In the U.K., more than a quarter of consumers already own a smart speaker, and this proportion looked set to grow over the 2020 Christmas period, with almost 20% of people planning to gift a digitally connected device. Whether it’s Amazon’s Echo, Google’s Nest or Apple’s HomePod, smart speakers are becoming an accepted feature of the modern home.

Smart speakers and voice assistants can respond — in a conversational manner — to hundreds of different commands, meaning audio is gaining a strong



Photo by Unius Rogge on Unsplash

We’re already seeing brands experiment with the potential of two-way communication.

sense of utility for users. Asking Siri for an update on lockdown restrictions or instructing Alexa to play a favorite radio show is no longer a novelty, but a practical and productive use of established technology. And the audio landscape is set to develop in more complex ways, with a view to provide smart speaker users with greater flexibility, such as booking doctors’ appointments, purchasing event tickets or adding items to shopping lists.

INITIATING TWO-WAY COMMUNICATION

Audio interactions are still largely initiated by the user, however with advances in artificial intelligence and machine learning, as well as the connectivity promised by the arrival of 5G,



Michał Marcinik

the potential for smart speakers to start the conversation first isn’t far off.

We’re already seeing brands experiment with the potential of two-way communication. For example, interaction triggers within audio ads can be inserted into commercial radio content, inviting the listener to respond using a pre-defined voice invocation and initiating the process of interaction between voice assistant and listener. We developed our YoursTruly technology to do exactly this and deployed it for the first time last year in partnership with Octave, for Omnicom Media Group’s PHD client, Audi.

When played through a smart speaker, the first ad of a commercial break featured a verbal call-to-action, to which interested listeners had the ability to engage with the voice assistant to complete a specific task, such as booking a test drive, before the listener was returned to the live radio station.

RAISING THE BAR FOR LISTENER ENGAGEMENT

Interactive audio advertising not only allows brands to nurture one-to-one customer relationships and deliver highly engaging advertising experiences, it also delivers valuable measurement data. Brands are able to see precisely how users interacted with their audio messaging and compare campaign results with other digital marketing channels. Additionally, interactive advertising provides publishers with a new way to monetise content, making audio even more attractive as an advertising medium.

Audio is already an incredibly emotive and engaging channel. As adoption of smart speakers and voice assistants escalates, the sense of utility will become more established and new technologies will further enable true two-way communication, welcoming a new age of audio interactivity.

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

Interaction triggers within audio ads can be inserted into commercial radio content, inviting the listener to respond using a pre-defined voice invocation.

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A Bounty of Microphones

Podcasting and WFH have energized the mic industry — to the benefit of radio pros

BY BRETT MOSS

It's no secret that microphones are a commodity product — inexpensive, widely available and of uniform high quality. But the last several months have seen an explosion of many additional affordable "broadcast/podcast" microphones on the market. Now with so many on-air professionals working from home, outfitting home studios, Radio World decided to ask some microphone makers about recent product introductions and their approach to this new microphone market.

AUDIO-TECHNICA

Gary Boss says A-T has been "doing podcast" since before it was a thing

Radio World: A few years ago Audio-Technica launched something that hadn't been seen in a while, a new broadcast-oriented microphone, the BP40. Is it still available and if so how is it doing? Are there plans for a followup?

Gary Boss: Why, yes, it is still available and doing quite well. Thanks for asking. I believe demand is currently exceeding our production at the moment. The nice thing is that when you create a high-quality microphone, many times the market will find other uses that we never targeted. As you know, the mic was designed to excel for radio broadcast use but has also found a place in podcasting, streaming, VO, singing and even for miking a kick drum. We do have products planned in the pipeline that are not meant to replace the BP40 but expand our offerings.

RW: Are headsets selling, especially to remote/at-home DJs and hosts?

Boss: Our headsets are another example of a product that has been adopted for many different markets/uses much like the BP40. They are being used for applications like sport commentary, remote radio DJ, streaming and e-sports.

RW: What has been the effect of the rise of the podcast on Audio-Technica?

Boss: Audio-Technica has been targeting and servicing the podcast



market since before it was a wave. Many of our products were already perfect companions for podcast use. The nice thing is that we had vocal mics in our line in both dynamic and condenser designs that suit a wide variety of budgets and needs. The dynamic BP40 is perfect for that radio-friendly reproduction. Its tight pattern also excels in minimizing the room noise in a poorly treated space. The condenser mics in our 20 Series and 40 Series studio mic lines, like the AT2020 and AT4047, provide very detailed and articulate sound for customers who prefer more open and articulate reproduction.

We also have created podcast/streaming packs that include not only a mic but a boom arm and headphones to get up and running fast. These bundles are available with USB or XLR outputs. The most popular are the AT2020PK and AT2020USB+PK.

Info: www.audio-technica.com/en-us

TASCAM

"The podcast explosion pushed us in the broadcast mic direction," says Joe Stopka

Radio World: TASCAM has a new mic out, one the radio broadcast industry might want to look at. The company isn't known as a mic company, what prompted the TM-70?

Joe Stopka: Podcasting is the new broadcast revolution. And with any revolution, the best tools for success are needed, especially one that needs to sound good. We'd been working on expanding our mic line for some time and the podcast explosion pushed us in the broadcast mic direction.

RW: What has been the effect of the rise of the podcast on TASCAM?

Stopka: We have seen a sharp increase in sales of our new US-HR interfaces, Series Interfaces and Model Series interface/mixer/recorder combo units

due to the podcasting phenomenon. It's also prompted us to expand our microphone product line with the just-released TM-70 and TM-82 dynamic mics. And, there will be more including a USB mic in the near future. We are making it easy for the entry-level and seasoned podcasters alike to step into this new era of broadcasting affordably and sound good with our legendary easy-to-use products.

Info: www.tascam.com



CAD AUDIO

Three more mics "just around the corner," says the company's Glenn Roop

RW: What prompted the recent introduction of the CAD Audio PodMaster line?

Glenn Roop: There is a new home studio boom — this time it's for content creation, podcasting, zooming, socializing and remote education. New technologies in chip design have made it truly as easy as plug and play. We at CAD Audio have been around for more than 85 years and in the USB mic market for about two decades. We recognized the need folks had for microphones that are easy to use and plug directly into your computer well before other pro audio companies — and as an audio company we were able to over deliver with audio quality. The PodMaster series refines years of expertise into three podcasting/broadcast mics currently on the scene and three additional offerings just around the corner for the DSLR and video production/streaming customer.

RW: What mics make up the line?

Roop: The PodMaster series has two USB versions (PodMaster D USB and PodMaster SuperD USB) and a traditional XLR-based microphone

(PodMaster SuperD) version. All are dynamic capsule-based with the SuperD varieties sporting a new ultra large 35 mm TrueFlex diaphragm and high-gauss PowerGap neodymium capsule, resulting in a hot, articulate, VOG signature. PodMaster mics are all supplied with a broadcast style boom mic stand and clip or shock mount.

RW: What has been the effect of the rise of the podcast on CAD?

Roop: CAD Audio and specifically the Equitek series were key drivers during the music production home studio boom of the early '90s and we carry with us extensive audio expertise. And now with podcasting/content creation, CAD Audio has solutions that resonate with a new generation of home-based content creators. It's been great — demand is very exciting, and we look forward to serving the customer with solutions for today's needs and tomorrows emerging creative endeavors.

Info: www.cadaudio.com



PRESONUS

A new broadcast dynamic microphone is now on the market. Wesley DeVore is with PreSonus

Radio World: PreSonus relatively recently released a "broadcast" mic, the PD-70. What prompted that?

Wesley DeVore: Over the last two years, we've seen huge growth among our customer base in the podcasting and streaming communities. As a company, we seek to provide end-to-end solutions for our customers, and while our condenser microphones have been very well received, we felt that a broadcast dynamic microphone would provide this new customer base with the best possible solution. Hence, the PD-70 came into being.

RW: Is it selling well?

DeVore: Yes. The PD-70 has been extremely well received and has won many online shootouts up against more expensive microphones. The fact that it delivers that classic "broadcast" sound without needing an additional gain-boosting device is a tremendous benefit. Plug it into your audio interface, and it just sounds great.

RW: What has been the effect of the rise of the podcast on PreSonus?

DeVore: PreSonus was at the forefront of the home recording revolution 20 years ago, and our philosophy of delivering professional solutions that are easy to use, while still affordable, is a natural fit for the rise in popularity of podcasting. As more people use our products for podcasting, our product development team has begun finding more targeted solutions for that use case. The PD-70 and the newly released Revelator are perfect examples of our commitment to supporting the podcasting community with solutions that help them achieve their goals.

Info: www.presonus.com



SHURE

Soren Pedersen: YouTubers and streamers have grown exponentially

Radio World: What prompted the development of the MV7?

Soren Pedersen: We understood there was a growing demand for audio streaming/recording solutions at-home for podcasters, gamecasters and live-streamers. The MV7 Podcast Microphone is Shure's first hybrid XLR/USB microphone to provide clear, intelligible audio designed to focus on the user's voice. Inspired by the iconic Shure SM7B Vocal Microphone, the MV7 allows audiences to get a clear, rich sound reproduction no matter the recording location and enables them to focus on what's most important: the content.

We know not everybody is lucky enough to record in a custom acoustically treated studio, so the MV7 is equipped with Voice Isolation Technology, meaning it's laser-focused on the speaker's voice to give them a professional recording, without any background or room noise. Once recording, users can use the built-in 3.5 mm headphone jack to monitor their sound and adjust mic gain, headphone volume, monitor mix and more using the built-in touchpanel.

RW: Are broadcast mics selling to at-home DJs and hosts?

Pedersen: Yes, we've seen an increase within the past year for radio shows that previously recorded their shows in a studio and now have transitioned to recording or streaming from home.

RW: Has the podcast wave reinvigorated the broadcast or affordable



mic industry? In other words, what has been the effect of the rise of the podcast?

Pedersen: There is no doubt that the increase of podcasts has led to more people needing a broadcast microphone solution; however, I don't think podcasts are the only reason. In the last few years we've seen a rise in the number of YouTubers and streamers grown exponentially and invest in professional recording equipment.

RW: Do you have any radio industry feedback on the MV7?

Pedersen: Jim Stagnitto at NYPR, home to WNYC and WQXR, has told us: "Many of our hosts are recording and broadcasting live from typical New York City apartments ... and this is a place where the performance of the MV7 microphone excels. It is a dynamic microphone, tuned for the voice — it's not going to pick up a lot of subway rumble or street noise as you might with a condenser microphone. We don't have to worry about putting up a lot of sound absorption materials in somebody's apartment. The microphone has a very tight cardioid polar pattern, so off axis audio is very efficiently rejected. We're aware that we are in our talent's homes, so if we can use the technology to help us get as close to a studio sound as we can without turning their living room into a studio, that's a big plus."

Info: www.shure.com

ELECTRO-VOICE

Electro-Voice says 2020 was its best year ever for selling RE20 microphones (which are also now available in black). Guy Low is marketing brand manager

Radio World: What has been the effect of the rise of the podcast for Electro-Voice?

Guy Low: The RE20's popularity has surged in recent years with the rapid growth of podcasting and home recording/production.

For many users, a microphone purchase is the first time they venture into the world of professional audio equipment, discovering the many brands, products and various performance/price points on offer.

Standards like the RE20 usually rise to the surface when shopping around, with customer reviews and industry publications/websites being particularly

good ways to research the market and expedite the learning curve regarding feature/benefits. Since many podcasts are also uploaded as videos, the mics of choice also become highly visible — you can see as well as hear what works well and what models the best-sounding podcasts choose. In that sense, RE20 has

more visibility now than ever. The mic becomes part of their creative success.

Your voice is at the heart of your brand as a podcaster who cares about bringing high-quality content to their audience — it's your voice, figuratively and literally, so mic it wisely. In that sense, the RE20 has long been a mainstay of the serious broadcaster, and now the same can be

said of the serious podcaster.

Often users will have burned through lesser mics before they arrive at the ROI a proper professional tool can deliver. They discover that a good mic makes all the difference, and how it will also improve their performance — when your voice sounds good in the headphones or monitors, you can focus on delivering the content in the moment without distraction, rather than on the tweaking and correction in post after recording with a cheap mic. Just look at the amount of complaints about sound quality you see in the comments section of a podcast recorded with a subpar microphone.

A key to the RE20's popularity is its unique Variable-D design, which minimizes proximity effect, giving users the

confidence that their tone will remain full, pure and accurate while they enjoy the freedom to work naturally around the mic at varying distances. Additional features include a midbass tone-shaping switch, a substantial integrated pop filter, and a humbucking coil to guard against line hum.

The pandemic has seen demand for microphones swell on an unprecedented level. While it continues to be a very challenging time for many of our customers, one positive side effect is the fact that so many people have been empowered to create content as a result of being at home. We appreciate being part of that and we appreciate the discerning ears of a whole new generation of EV users and their audiences.

Info: <https://electrovoice.com>



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MARKETPLACE

Earthworks Releases Icon Mics

Earthworks Audio has introduced its Icon USB and Icon Pro XLR microphones, both intended for use in podcasting, remote working, streaming and home recording.

The condenser-type Icon USB offers a frequency response of 20 Hz to 20 kHz, used a cardioid polar pattern, and can take on up to 132 dB. Meanwhile, the phantom-powered Icon Pro expands on those specs with a frequency response of 20 Hz to 30 kHz and a max acoustic input of 139 dB. Both versions weigh 1.5 pounds.

Designed with an eye towards providing visual flair for those who appear on camera with their mics, the Icon series mics are made of stainless steel. Earthworks partnered with Triad-Orbit to design and build a custom desktop microphone stand that ships with the Icon microphones. The integrated M-2R swivel ball joint can be disconnected and remounted on any studio mic stand or boom arm.

Icon Pro looks and feels similar, but is hand-tuned with an extended frequency response; the capsule has a faster rise time speed of 11.67 microseconds. Because it is an XLR broadcast microphone requiring 48 V of phantom power, it offers extended headroom and dynamics. The mic ships with an integrated Triad-Orbit M-2R adapter as well.

Both microphones are shipping. Components are machined and hand-assembled in Wilton, N.H. The initial launch will cater to U.S. distribution.

Icon retails for \$349 and Icon Pro sells for \$499.

Info: <https://earthworksaudio.com>



Mackie Debuts New EleMent Microphones

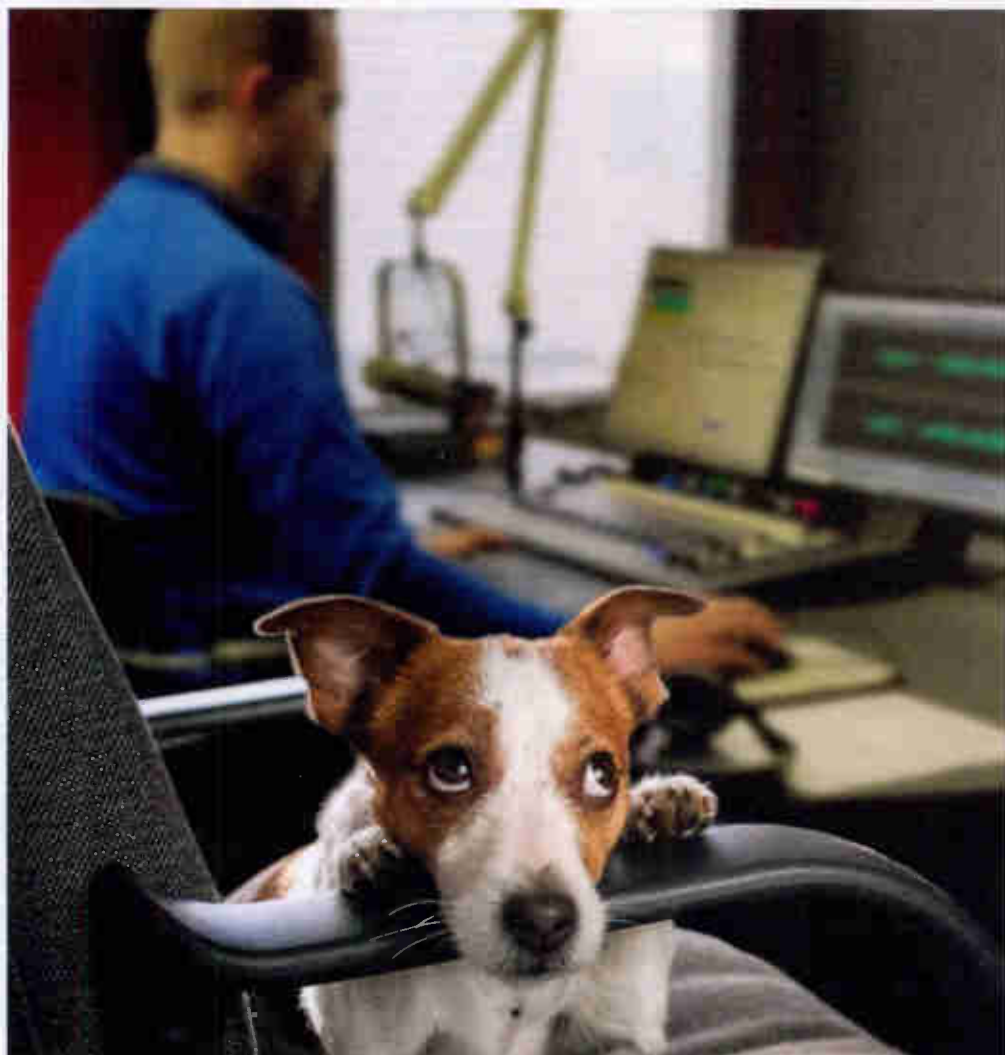
Mackie's EleMent Series of microphones for content creators and podcasters has new members. They are the EM-91CU USB condenser, Carbon USB condenser and Chromium USB condenser microphones.

The plug-and-play EM-91CU USB condenser microphone (\$49) sports a cardioid polar pattern, includes a USB cable and shockmount, and has a sample rate of 16-bit/48 kHz. Meanwhile, the Carbon USB mic (\$149) features Mackie's Onyx mic preamp circuitry and five selectable polar patterns: stereo, cardioid, bidirectional, supercardioid and omni. It, too, offers a sample rate of 16-bit/48 kHz and comes with a mic stand and USB-C cable.

As the line's flagship, the Chromium USB condenser microphone (\$199) features a built-in two-channel mixer with instrument and stereo 1/8-inch inputs, as well as four polar patterns — stereo, cardioid, bidirectional and omnidirectional. Equipped with built-in mixer stand, USB-C cable and a sample rate of 16-bit/48 kHz, the Chromium is intended for recording music, podcasts, live streams and online content creation.

Accessorizing these microphones, the DB-100 Desktop Microphone Boom Arm (\$79) and PF-100 Pop Screen for EleMent Series mics (\$14) are also available. MC-100 professional closed-back headphones are \$29.99.

Info: <https://mackie.com>



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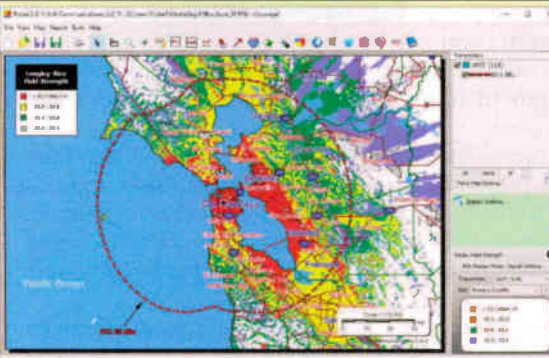
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FCC Issues EAS Enforcement Advisory

What steps can stations take to improve their participation and ensure compliance?

IN THE NEWS

The FCC in January reminded U.S. broadcasters and other EAS participants of their obligations to comply with the Emergency Alert System rules.

"In reporting on the most recent national level test of the EAS, the FCC's Public Safety and Homeland Security Bureau noted improvements in key areas, but identified several issues that impair dissemination of EAS messages," the Enforcement Bureau stated in a five-page advisory.

"The 2019 Nationwide EAS Test Report noted, for instance, that EAS participants must ensure that messages comply with the FCC's requirements designed to make the message accessible to individuals with hearing and vision disabilities."

After briefly summarizing how the system works, the FCC provided the following information under the header "What steps can EAS participants take to improve their participation in EAS and ensure compliance with the FCC's rules?"

The EAS rules are in sections 11.1 through 11.61 of the commission's rules. Key requirements include:

EAS participants must ensure that their EAS equipment's monitoring and transmitting functions are available whenever the stations and systems are operating. An EAS participant's failure to receive or transmit an EAS message during a national test or actual emergency because of an equipment failure may subject the EAS Participant to enforcement.

- To ensure the availability of these functions, EAS participants should take steps to secure their EAS equipment. For example, EAS participants should upgrade EAS equipment software and firmware to the most recent version recommended by the equipment manufacturer and update with current security patches. Participants should also change default passwords, secure EAS equipment behind properly configured firewalls, and take other protective measures.
- EAS participants should synchronize EAS equipment clocks to the official time provided by the National Institute of Standards and Technology if the equipment does not automatically synchronize to an Internet time source.

EAS participants must transmit national level EAS messages, required monthly tests, and required weekly tests. An EAS participant's failure to transmit an EAS message during a national test or actual emergency, e.g., based on the configuration of its equipment, lack of redundant monitoring sources, or an accurate understanding of its role as an EAS participant, may subject the EAS participant to enforcement

- EAS participants must understand and identify their role (or "designation") in the broadcast-based distribution architecture of the EAS. Most EAS participants have only the "participating national" designation. Section 11.18(a)-(g) contains a list of des-



ignations and state EAS plans that participants can use to confirm whether any other designations are applicable. Participants must know a facility's EAS designation to accurately complete the Reporting System's Form One.

- EAS participants must monitor multiple sources to ensure redundancy and reduce the possibility of message receipt failures. EAS participants should ensure that monitoring sources are independent and do not rely on each other to receive or transmit an EAS message.
- EAS participants should follow up with monitored sources when an EAS message is not received to determine the cause. For example, such issues could be caused by a transmission or reception issue that can be readily corrected. An EAS participant is required to determine the cause of its failure to receive an EAS message during a national test or emergency

EAS participants must ensure that an EAS message is accessible.

- For the visual portion of the message, the text must be displayed:
- At the top of the television screen or where it will not interfere with other visual messages (e.g., closed captioning);
- In a manner (i.e., font size, color, contrast, location, and speed) that is readily readable and understandable;
- Without overlapping lines or extending beyond the viewable display (except for video crawls that inten-



- tionally scroll on and off the screen); and
- In full at least once during any EAS message.
- For the audio portion of the message, broadcast stations, cable systems, and direct broadcast satellite services must play the audio portion of an EAS message in full at least once to ensure it is accessible to viewers who are blind or have low vision

EAS participants must submit their national test results to the FCC in the Reporting System. An EAS participant may be subject to enforcement if it fails to participate in a national test or submits incomplete or inaccurate information to the Commission in its Reporting System filings.

(continued on page 30)

The Integrity and Ethics of Broadcast Engineers

SBE's general counsel expresses concern over language from the FCC Audio Division

COMMENTARY

BY CHRIS IMLAY

This commentary originally appeared in the Society of Broadcast Engineers newsletter "The Signal."

I am moved to write about a matter now before the Media Bureau at the FCC. The subject is the ethical obligations of broadcast engineers.

Having served as SBE general counsel for 40 years now, I can count on one hand the number of times that the SBE board of directors has found it necessary to revoke an engineer's SBE membership, and still have some fingers left over. This, I think, speaks highly of the overall integrity and dedication to ethical principles of the SBE's membership, and of broadcast engineers overall.

In that same amount of time, I can honestly say that I have never had occasion to question the ethical integrity of any of the engineers that work at the commission.

Sure, we have disagreed, often actively, on policy matters, but on technical matters, I can always count on the accuracy and truth of technical findings by FCC staff. This speaks very well of the high level of integrity of the commission's engineers.

The only times during my tenure that an SBE member has had that membership revoked were those few cases when an engineer was found as a matter of fact to have violated the SBE Canons of Ethics.

The SBE puts a lot of stock in the Canons of Ethics, and rightly so. The SBE's Bylaws, at Section 3(a), say that "(a)ny Member may be suspended for a period or expelled for cause, such as violation of any of the By-Laws or Canons of Ethics of the Society or for conduct prejudicial to the best interests of the Society."

The Canons of Ethics have not been revised or amended in a very long time, largely because they don't need to be; they state principles of conduct for engineers that simply don't change.

The preamble to the SBE Canons of Ethics reads as follows: "Honesty, justice and courtesy form a moral philosophy when associated with mutual interest between human beings. This constitutes the foundation of ethics. Broadcast engineers should recognize such a standard of behavior not in passive observance, but as dynamic prin-

ciples guiding their conduct and way of life. It is the duty of all broadcast engineers to practice their profession according to this Canon of Ethics.

"The keystone of professional conduct is integrity. Broadcast engineers will discharge their duties with fidelity to the public and to their employers, and with impartiality to all. Broadcast engineers must uphold the dignity of their profession and avoid association with any enterprise of questionable character. Broadcast engineers will strive to be fair, tolerant, and open minded."

To me, the key element of this is the obligation of impartiality. It is what gives broadcast engineers the reputation for the highest levels of integrity.

Indeed, Section 5 of the SBE Canons of Ethics states: "The Broadcast Engineer will express an opinion when it is founded on adequate knowledge



Chris Imlay

and honest conviction while he or she is serving as a witness before a court, commission or other tribunal."

It is difficult to understand why the Audio Division concluded, as it did, that all consulting engineers are biased in favor of their client to the point that their work is summarily deemed unreliable.

and honest conviction while he or she is serving as a witness before a court, commission or other tribunal."

ETHICAL COMPANY

The SBE is not alone in its strong dedication to the highest level of integrity of its engineer members.

Article V, Section 3 of the Bylaws of the Association of Federal Communications Consulting Engineers (AFCCE) establishes as a standing committee the "Professional Ethics and Grievances Committee" whose job it is to "consider and report on all efforts to improve the professional conduct and ethics of engineering practitioners in the communication field, make such investigations of professional conduct and of abuses in connection with engineering practice by members and furnish information and make recommendations on the foregoing subjects to the Board of Directors and the Association."

and honest conviction while he or she is serving as a witness before a court, commission or other tribunal."

been accused by a second adjacent full-power FM station of causing interference to listeners of the full-power FM at various points near the transmitter site of the LPFM. In such cases, the accused LPFM is entitled to show that the alleged interference either does not exist or that the LPFM station is not the cause of the interference.

The licensee of the LPFM therefore retained a well-respected consulting engineer (and SBE-certified CPBE) who is located in a different state from the LPFM, to investigate the interference. The engineer did so using accepted methodologies, at all sites where

the interference was claimed to have been experienced, and the engineer submitted a written report to the Audio Division, Media Bureau, concluding that no interference was found at the locations where the listeners of the full power FM station reported interference, or even at the transmitter site of the LPFM, where second-adjacent interference potential would be the worst. There was no rebuttal of the engineer's showing by the full-power FM station.

There are a lot of other facts involved in the case, but the Audio Division's response to the interference study submitted by the LPFM as a part of its response was this: "We also decline to consider [the consulting engineer's] interference test results because [the consulting engineer] was retained by [the LPFM] and thus is not an independent party."

It is difficult to understand why the Audio Division concluded, as it did, that all consulting engineers are biased in favor of their client to the point that their work is summarily deemed unreliable.

If a licensee is precluded from engaging an independent consulting engineer to conduct a technical analysis and to fairly present the engineer's technical conclusions, simply because the licensee is paying for the engineering work, how, precisely, is the licensee supposed to address the technical issue presented?

This case is now on administrative appeal. It is hoped that the commission doesn't really have this low an impression of the ethics, impartiality and integrity of broadcast engineers.

Read "The Signal" and learn about SBE membership at sbe.org.

FCC ISSUES

(continued from page 29)

- EAS participants must update their Reporting System Form One submissions yearly. Because the Form One will auto-populate with information from the EAS Participant's previous Form One filing, EAS Participants should review the Form before submission to be sure it is current and accurate.
- EAS participants are required to participate in national tests and required to file information related to national tests in the Reporting System.
- The accuracy of Reporting System filings is critical. If an EAS

Participant receives or retransmits a partial EAS message, e.g., if the audio is missing in the data received and/or retransmitted, the EAS Participant is responsible for ensuring that its Reporting System filing reflects this issue and the reason it failed to receive the full message.

The document also discusses national tests and station reporting requirements. Read the full notice at radioworld.com, search "EAS advisory" to locate the story "FCC Issues an EAS Enforcement Advisory."

The commission said questions about EAS Participant obligations should be directed to Maureen Bizhko of the Public Safety and Homeland Security Bureau at (202) 418-0011 or email Maureen.Bizhko@fcc.gov.



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