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NAB & AES return to the Javits Center

Radio sessions are now part of NAB Show New York

Do I really need IPv6?

Wayne Pecena lays
out the benefits

Cranks and solar panels

Six of the best radios
for emergencies or
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Workbench

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FUTURE US, INC.

130 West 42nd Street, 7th Floor, New York, NY 10036

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Radio World (ISSN: 0274-8541) is published bi-weekly with additional issues in February, April, June, August, October and December by Future US, Inc., 130 West 42nd Street, 7th Floor, New York, NY 10036. Phone: (978) 667-0352. Periodicals postage rates are paid at New York, NY and additional mailing offices. POSTMASTER: Send address changes to Radio World, PO Box 1051, Lowell, MA 01853.



Future plc is a public company quoted on the London Stock Exchange (symbol: FUTR) www.futureplc.com

Chief executive Zillah Byng-Thorne
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Power in positive words

A little effort does go a long way



Paul McLane
Editor in Chief

W

e get lots of announcements trumpeting the achievements of radio CEOs, market presidents and morning show talent. Not so much about engineers.

So kudos to Newark Public Radio's WBGO for taking the time to announce that Chief Technology Officer David Antoine has been elected to the board of the Society of Broadcast Engineers.

David is a friend of mine, so I'm glad for him. But I bring it up here to reinforce this organizational behavior.

There are nine other worthy engineers who were named to the board or national office in the SBE's own press release. Yet WBGO is the only radio employer, as far as I'm aware, that issued its own announcement.

The station quoted WBGO President/CEO Steven A. Williams, saying, "This most recent acknowledgement of David's expertise and influence fits like a glove. He's one of an elite group of pioneering engineers that have kept broadcasting operations in the world's #1 media market running at the forefront of development and execution. There is simply no better place to be than New York City if you're a media professional, and that is largely because the engineers here are the best in the business. The work that David has done over the course of four decades is an integral part of that esteemed legacy."

How do you think David felt, reading those words? And it probably took WBGO Marketing Manager Brandy Wood all of 10 minutes to gather a quote and assemble and send that press release to her contact list. For that small investment of time, the station not only makes an important employee feel valued in a public way, it also sends a message to others in the industry: This is a good place to work.

So congrats to David and his SBE board peers, who include several other good friends to Radio World. Turn the page for their names. And thanks to WBGO for modeling good corporate behavior. It matters.

PS: A wry thank you as well to another friend, voice pro Don Elliot, for his email jazzing me about our typo in a headline on page 5 of the Aug. 17 issue. He knows that typos that get past me set my teeth on edge.

I do, in fact, know how to spell Arctic. ...

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Cummis Elected to Second Term



Andrea Cummis will serve another term as president of the Society of Broadcast Engineers. Cummis, CBT, CTO, is chief technical officer of PBS39/WLVT(TV) in Bethlehem, Pa.

A member of SBE Chapter 15 in New York City, she became the first woman to hold the president's role when elected last year.

Also re-elected was Vice President Ted Hand of SBE Chapter 45 in Charlotte, N.C.

Elected to two-year terms on the SBE board were David Antoine, Chapter 15 New York City; Greg Dahl, Chapter 96 Rockford, Ill.; Mark Heller, Chapter 80 Fox Valley, Wis.; Tom McGinley, Chapter 16 Seattle; Shane Toven, Chapter 43 Sacramento, Calif.; and Fred Willard, Chapter 37 Washington, D.C.

McGinley, Toven and Willard are incumbents and were reelected.

Secretary Kevin Trueblood and Treasurer Jason Ornellas ran for one other's offices and will swap duties when sworn in this fall. Wayne Pecena continues as immediate past president.

Jim Loupas Dies, Age 83

Longtime technical consultant Jim Loupas died in August. According to his obituary, he was 83 and lived in Coppell, Texas.

"Sound was always his passion," his obituary stated. "Radio, being pure sound, was his vocation and avocation since he was a high-school kid skipping school to run remotes for his hometown radio stations."

Loupas was director of engineering at WCFL in Chicago in the 1970s before forming a firm to consult radio, TV and recording companies.

He authored a Radio World commentary in 2004 arguing that while new digital radio formats might have appeal, analog signals would continue to be "hugely important."

"The listener, after all, is our end user — our customer," he wrote. "The listener's perceptions are what drive our numbers, both in the ratings books and at the bottom line. The listener's convenience and satisfaction are what make a radio station successful. We get lost sometimes in the airy realms of new technology, and we think everybody else cares as much as we do. But do they? Of course not. It's our job to sound good to the listener, no matter what technology or combination of technology is used to receive our signals. It's as simple as that."



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NAB and AES return to the Javits Center

With the demise of the annual fall Radio Show, NAB has added radio content to its New York event

Paul
McLane
Editor in Chief

Digital content, artificial intelligence, electric vehicles and podcasting are among session topics for radio managers at the upcoming NAB Show New York.

The October convention adds radio content for the first time, now that the annual fall Radio Show is no longer held.

The topics above will be part of a one-day track on Thursday Oct. 20 called "Radio Reimagined" and focused on station-level managers.

A separate executive seminar called "Radio Insights" takes place on Wednesday Oct. 19, presented by Bloomberg and only available

to NAB members. It will focus on C-suite attendees and includes a luncheon and tour of Bloomberg's building and media center.

The NAB Show will be co-located with the AES New York 2022 Convention. The two will share an exhibit floor at the Jacob Javits Center, with exhibits on Oct. 19-20. A Tech Chat stage will feature exhibitors talking about their products in 15-minute discussions. The floor also includes a Content Theater.

As of late August, there were about 190 exhibitors listed on the NAB portion of the floor, and another 64 for AES. NAB estimated that 10,000 people will attend its event.

Aerial view of the Javits Center, which has recently undergone a major expansion including addition of a one-acre rooftop working farm. The Javits website has info on roof tours.

Photo: Javits Center (www.javits-center.com)

Exhibit Hall Hours

Oct. 19
10 a.m.-6 p.m.

Oct. 20
10 a.m.-5 p.m.



Right
Evan Shapiro,
Susan Rogers
and George
Massenburg

Insights and reimaginings

The "Radio Insights" track on Wednesday includes a session featuring Urban One Founder and Chairwoman Cathy Hughes and Beasley Media Group President/CEO Caroline Beasley. There will also be a presentation about DTS AutoStage by speakers from Xperi and Cumulus Media/Westwood One.

A sample of sessions for the Thursday "Radio Reimagined" track: Daniel Anstending of Futuri Media will explore what programming and sales managers need to know about artificial intelligence.

Buzz Knight of Buzz Knight Media and John Vermeer of iHeartMedia will discuss how radio managers and programmers should prepare for the growing sales of electric vehicles.

John Ross of Triton Digital and Tim Clarke of Audacy will talk about generating revenue with digital content.

And a series of "Take Five" presentation blocks that day

“ Beyond radio, sessions or tracks are planned on cybersecurity, post-production, streaming, NextGen TV, the metaverse and Web3’s impact on the business of media. ”

promises helpful info delivered in five-minute bites.

The two days of radio sessions require their own registrations.

Winners of the NAB Marconi Radio Awards will be announced Wednesday evening. Among the many categories is "Legendary Radio Manager of the Year." The finalists are Dr. René Heredia, Guadalupe Radio, Los Angeles; Julie Koehn, WLEN(FM), Adrian, Mich.; Pamela McKay, KMJQ(FM), Houston; Joel Oxley, WTOP(FM), Washington; and Steve Wexler, WTMJ(AM), Milwaukee.

Up for "Best Radio Podcast of the Year" are WTOP(FM) in Washington, WDRV(FM) in Chicago, WBBR(AM) in New York, KSL(FM) in Salt Lake City and KYW in Philadelphia.

Beyond radio, sessions or tracks are planned on cybersecurity, post-production, streaming, NextGen TV,

the metaverse and Web3's impact on the business of media.

Film producer Evan Shapiro will keynote the opening of NAB Show New York, speaking about "Bringing Media Into the Current Century, Now." The association says, "Many in media know him as the official, unofficial cartographer of the media universe" and promises "a notoriously interactive presentation."

Also notable: U.K.-based Podcast Radio will hold a concurrent conference on Wednesday, also at the Javits, on the theme of "Getting Podcasts Heard."

Podcast Radio is a platform that plays sample episodes of podcasts, clips from podcasts and interviews with podcast producers and presenters, and it says it has investment money to expand its U.S. footprint.





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Honors for the Jacobs brothers

The National Radio Award will be presented to Fred and Paul Jacobs.

Fred is founder and president of Jacobs Media. He's credited with creating the classic rock format and has a background in audience research, having worked for Frank N. Magid and Associates and ABC Radio. He was inducted into the Radio Hall of Fame in 2018 and has served on the board of the Public Radio Program Directors Association.

His brother Paul is vice president and general manager of Jacobs Media, after having worked in sales and management at stations in Detroit and Dallas. He also started jăcapps, the first mobile app development company in radio. He has served as board chair for Greater Public and the Michigan Association of Broadcasters Foundation.

In 2017, the brothers partnered with the NAB Auto Initiative Committee to develop a "Best Practices" report to help broadcasters understand and improve their visual presence in car dashboards. They are sought after as speakers at industry events, and their annual Techsurvey is

a source of insights into the behavior of radio listeners.

Saluting parametric EQ

The Audio Engineering Society's 153rd Convention will celebrate "technologies now so foundational that they are indelibly integrated into audio production, and individuals so influential that they permanently advance the creative application of audio technology."

"Fifty years ago, the concept of a parametric equalizer was introduced at an AES Convention in a paper authored and presented by George Massenburg, now an AES Fellow and Gold Medal awardee," the organization said in a press release.


"At AES New York 2022, Massenburg will return full circle for the golden anniversary of this seminal and now ubiquitous technology, discussing his coining of the term 'parametric' and the experimentation and collaboration of individuals who contributed to the development of sweep-tunable EQ."

Another session will celebrate the late producer, engineer and mentor Al Schmitt.

Jonathan Wyner, AES Past president and chair of the convention, said,

"The parametric EQ is something we take for granted, but we shouldn't lose sight of its impact. It changed recorded music forever — and so did Al Schmitt, who set a standard for what recorded music could sound like."

Susan Rogers will deliver the Thursday keynote of AES New York 2022. Her talk is titled "This Is What It Sounds Like: A New Model of Music Cognition," promising insights into a new model of cognition that focuses on the listener profile, "the constellation of individualized preferences mapped to an array of musical and aesthetic dimensions to create a better understanding of our own unique auditory experience."

In addition to being a producer/engineer, audio technician, author and researcher, Rogers is a professor of cognitive neuroscience with a doctoral degree in experimental psychology. She has worked with musicians including Prince, David Byrne, Geggy Tah and Nil Lara. 

Above
Fred and Paul
Jacobs

If You Go

The cost of registration for radio events at NAB Show New York ranges from \$249 to \$399 depending on the package. An exhibits-only pass costs \$75 if purchased before Oct. 4.

For the AES New York show, an all-access registration purchased on-site is \$670 for non-members; discounts apply for members, student members and advance purchases. A more limited "exhibits plus" registration is free for AES members, \$50 for others.

AES is also offering an online version of the event that will be held later in October, at lower rates.



Photo: Jarvis Center (www.jarviscenter.com)

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John Bisset

CPBE

The author has spent over 50 years in broadcasting and is in his 32nd year writing Workbench. He handles western U.S. radio sales for the Telos Alliance and is a past recipient of the SBE's Educator of the Year Award.



Tips Please

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

Top

You'll find lots of uses for cable ties with tags. These by Nice Purchase were found on Amazon.

Right

"Flag" ties not only label but come in colors, too.

Flag your stuff with these handy wire ties

Also, a reminder about maintaining station logs from Larry Wilkins

Everyone has a favorite method to mark cables, wires and connectors, the gold standard being Brady label makers.

But from San Diego, Marc Mann writes that while self-adhesive machine labels are great, they require a cable jacket of a certain diameter if you want them to adhere while retaining legibility.

Marc often uses zip-tie flags that come in various colors. Their simplicity makes them an easy choice.

He marks both ends of every power supply wall-wart transformer, Ethernet cable and AC power plug for all his gear.

But the flags are not just for cables. Marc also uses them to solve the issue of keeping his flash drives organized. The flags are quick and easy to apply. Marc uses a fine-point black Sharpie brand or similar pen to identify them. A wipe of alcohol lets you erase any errors or relabel a flag for a different purpose.

The best part is that these identification labels have not fallen off due to high temperatures or movement or vibration of the cable.

A quantity of 100 in various colors costs less than \$10. On Amazon, search for "cable ties with tags."

Wart problem?

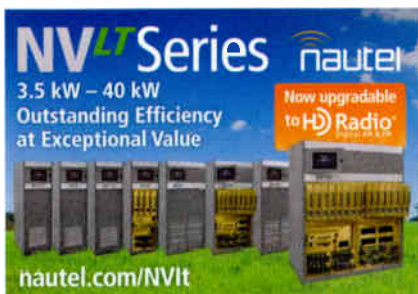
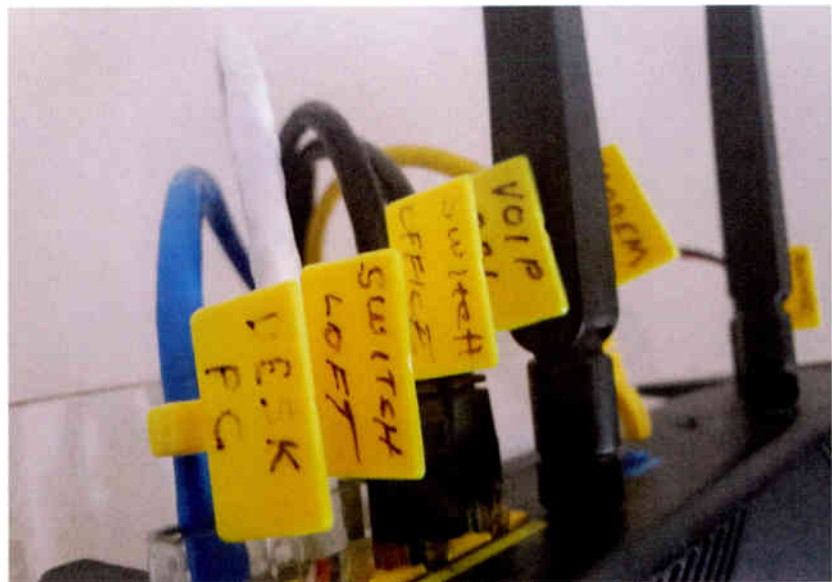
Speaking of labeling wall-warts, contract engineer Allen Branch offers a great solution to a common problem.

You've encountered the situation: You plug a wall-wart into an outlet strip only to find that it blocks the adjacent sockets too. Allen's solution is genius: Purchase a three-to-two-prong adaptor plug. The wall-wart plugs into

the adaptor, and the adaptor raises the wart above the adjacent outlet sockets. Problem solved, efficiently.

Thanks, Larry

If you're not getting Larry Wilkins' Monday Morning Coffee and Technical Notes e-newsletter, you can subscribe by



sending Larry an email at lwilkins@al-ba.com. Subscriptions are free.

The Alabama Broadcasters Association has done a stellar job of educating broadcast engineers, through Larry's efforts; it's one of the reasons he is a past recipient of Radio World's Excellence in Engineering Award.

In a recent newsletter, Larry reminds readers of the importance of maintaining a station maintenance log. This document needs to show all EAS activations and receptions, tower lighting malfunctions as well as information concerning RF-related maintenance or issues.

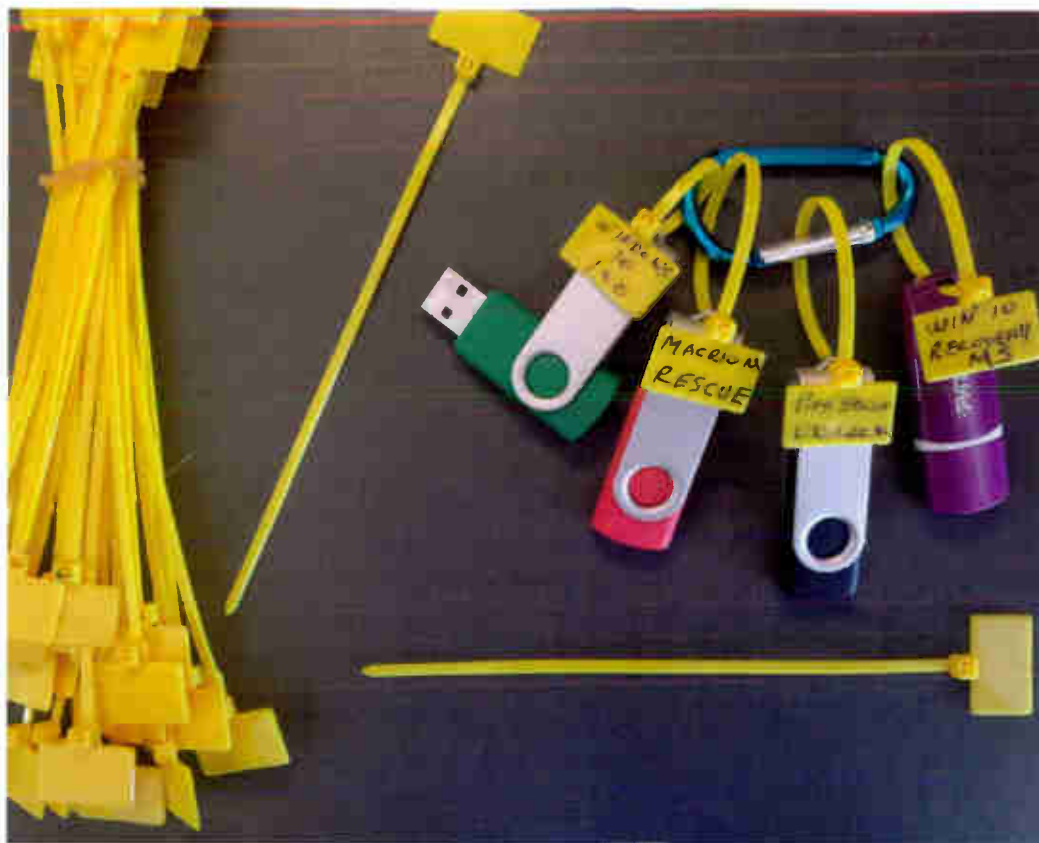
Most important, logs must be kept for two years and must be reviewed, signed and dated once a week by the Designated Chief Operator. Furthermore, any discrepancies need to be documented in the log and reported to the appropriate department. These are the kind of things that can be forgotten when an engineer handles multiple sites.

Larry's newsletter is worth reading. If you're looking for some basic engineering training, consider the ABA's Engineering Academy Seminars; they are free and have been offered for a decade now. You don't have to belong to the ABA to attend.

Please make this product

Projects Engineer Dan Slentz had a "holy cow" moment when he saw videos about the Vivo Flying Drone Camera Phone.

As depicted online, a little drawer built into the phone case houses a teeny 1-1/2-by-2-inch drone that is equipped



Top
An easy way to identify thumb drives.

Below
An image from the website GSMarenaspecs shows a miniature drone camera from Vivo. RW could not confirm with the manufacturer whether this is anywhere near being a real product, but one can hope.

with a camera lens. The drawer opens and the drone flies out, capturing video on the cellphone screen. It's the slickest thing you've ever seen, if it actually works.

Dan says U.S. pricing is about \$1,000. But whether it is a real product or a "maybe someday" project seems unclear. Check it out at <https://gsmarenaspecs.com>, search "Vivo flying drone camera phone."

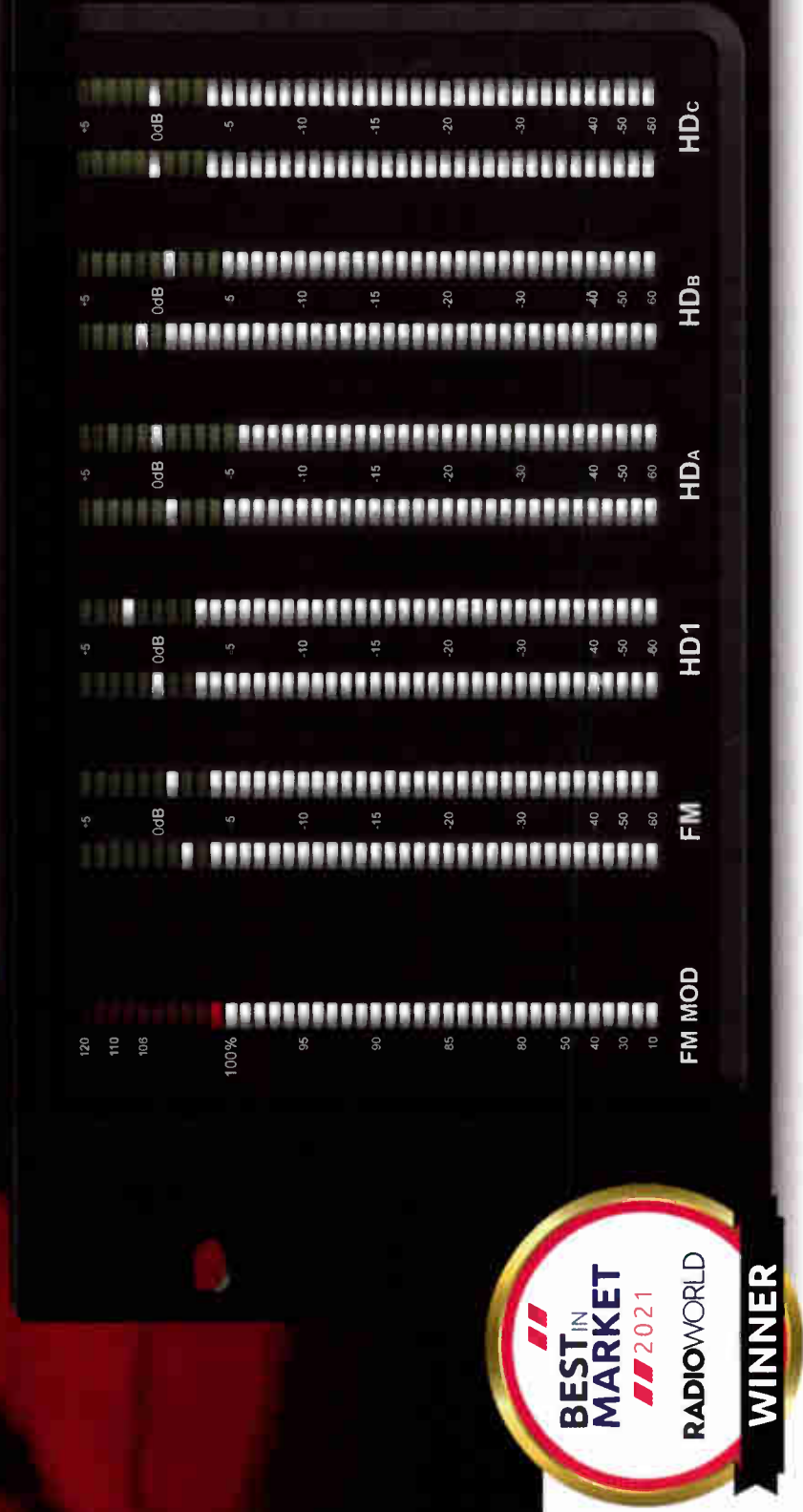
If you have used any very teeny drone cameras, let me know at johnpbisset@gmail.com. 📧

“ Logs must be kept for two years and must be reviewed, signed and dated once a week by the Designated Chief Operator. ”



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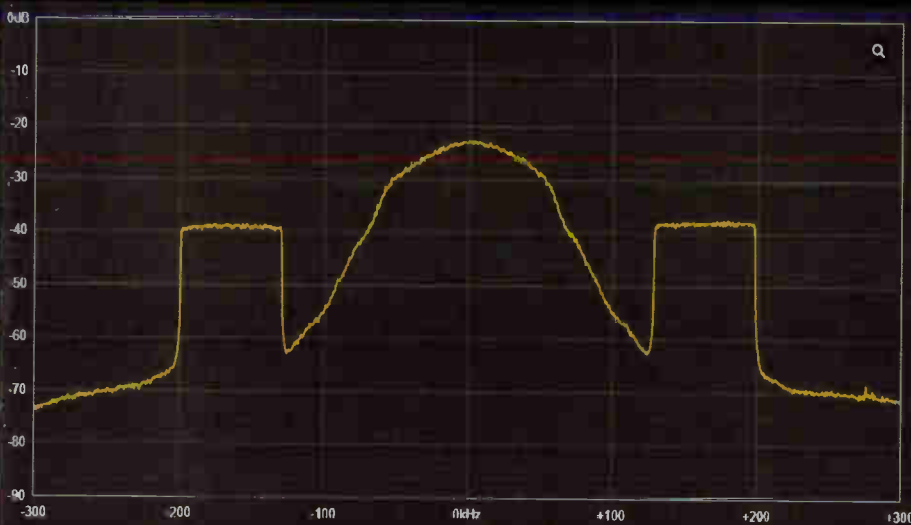
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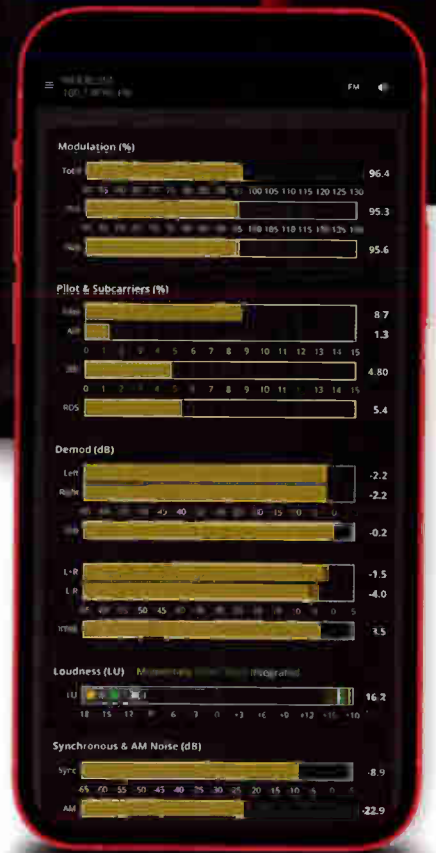
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Writer



Susan Ashworth

Longtime RW contributor and the former editor of TV Technology magazine.

Xperi cautions against one-stop approach to receivers

Says FCC should adopt a minimum product requirement that includes digital radio

The developer of HD Radio has something to say when it comes to the performance of receivers and efficient uses of wireless spectrum — namely, that the Federal Communications Commission should avoid a one-size-fits-all approach.

Xperi also would like the FCC to adopt a minimum product requirement that includes digital radio capabilities for car and portable AM/FM radio products.

The commission had invited comments in a notice of inquiry about promoting efficient use of spectrum through improved receiver interference immunity.

Xperi wrote that in the 20-plus years it has been working on digital radio, it gained significant expertise in terms of how system design can result in effective use of spectrum.

It said it wholeheartedly agrees that improvements in receiver performance will help make spectrum management more efficient. But any effort must preserve existing spectrum and protect current users. Also, “[A]ny approach to improving receiver performance must begin with a recognition that not all technologies operate in the same way and different spectrum bands experience different interference concerns.”

Xperi noted that the NOI “does not once mention” the impact of noise from unintentional radiators, which has a significant effect in raising the noise floor. It pressed the FCC to consider the ongoing impact of such radiators.

It said wireless power transfer systems that have been proposed to charge electric vehicles use switching frequencies that generate harmonics in the lower AM band. As carmakers design more efficient ways to transmit power, “the seemingly inexorable increase in AM-band noise floors can be expected to continue.” Meanwhile, new technologies in products like LED lights will degrade reception in FM.

“With increasing noise and interference in the AM/FM bands, the digital IBOC modulation used in the HD Radio system provides a significant level of noise immunity,” the company said.


“As more radio stations convert to digital operations, a minimum product requirement including digital radio capabilities for car and portable AM/FM radio products will ensure continued efficient use of the AM/FM band and the services they provide.”

It also said that the lessons Xperi learned in developing its digital technologies could be useful to the FCC, including aspects like signal enhancements, noise and interference reduction, sensitivity and selectivity, receiver clock accuracy, antenna system design, shielding, cable routing, filtering and component placement.

But it emphasized that despite the general applicability of these principles, “it would be a mistake to assume that the practices that have worked for digital radio would necessarily work for other applications.”

Xperi said the FCC should adopt an industry-specific approach to receiver performance. What works for aviation equipment — the focus of many comments to the commission’s NOI — may not work for broadcast or 5G, so the commission should establish guideposts for each industry with individual performance metrics and test programs.

Industry-led guidelines are the best way to assess receiver performance, it said, and Xperi pointed to the rollout of the IBOC radio standard and HD Radio technology as examples of how an “industry-based approach” produced helpful lessons about receiver performance and use of spectrum.

Comments from entities like Collins Aerospace, the CTIA, AT&T and others are part of ET Docket Number 22-137. 



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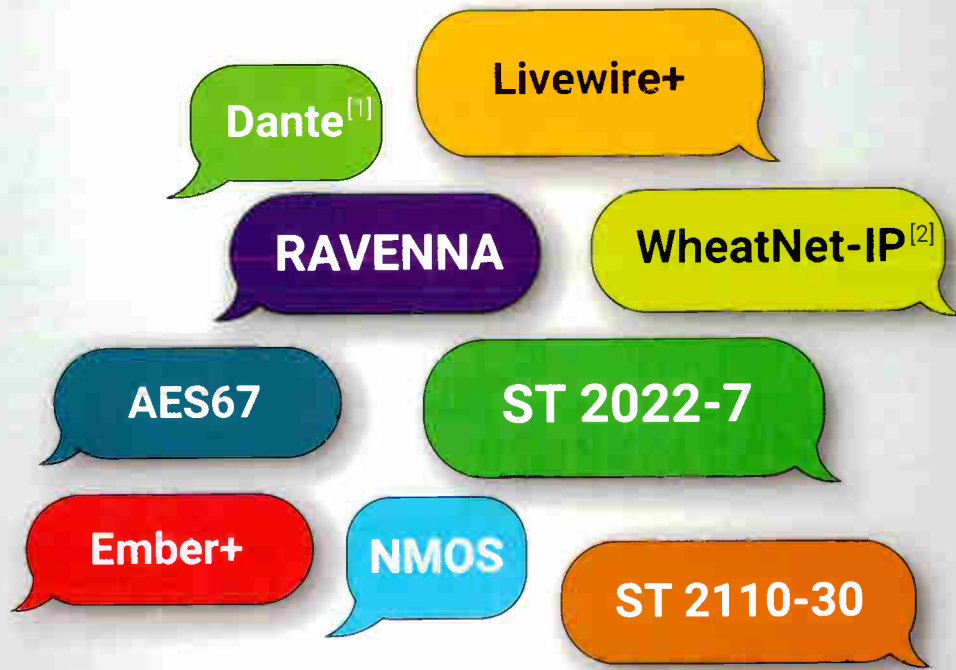
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[1] Dante is a Future release and requires an additional internal card | [2] WheatNet-IP requires an additional internal card

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August 2022
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130 West 42nd Street, 7th Floor, New York, NY 10036



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Radio World (ISSN: 0274-8541) is published bi-weekly with additional issues in February, April, June, August, October and December by Future US, Inc., 130 West 42nd Street, 7th Floor, New York, NY 10036. Phone: (978) 667-0352. Periodicals postage rates are paid at New York, NY and additional mailing offices. POSTMASTER: Send address changes to Radio World, PO Box 1051, Lowell, MA 01853.



Future plc is a public company quoted on the London Stock Exchange (symbol: FUTR)

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Here's your Fall Product Planner!



Paul McLane
Editor in Chief

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You can do all that and more with the products you'll find in this supplement to Radio World.

It contains dozens of new, recently introduced or newly upgraded products from major equipment and service providers who support the radio and new audio industries.

Autumn is a great time to plan your 2023 cap-ex spending (or your new-era op-ex outlays). We hope you'll find these pages helpful.

As always, let me know how Radio World can make our publications more useful to you. Email me at radioworld@futurenet.com.

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Here Comes Nautel's VX Series

Introduced this spring and scheduled to begin shipping soon are Nautel's new VX Series low- to medium-power analog FM transmitters.

The line consists of 10 models with power output ranging from 150 W to 5 kW.

"Building on the legacy of the company's proven VS Series, the new VX Series offers advanced control, instrumentation and features in a compact footprint," Nautel says.

"The architecture of the new Series incorporates state-of-the-art DSP, power supply and FET technology to ensure robust performance, serviceability and value."

The RF power chain uses a high-voltage FET and is mated with a dual-core DSP. Nautel also highlights its "Titanium-grade" industrial power supplies, which can be swapped out from the front panel. The transmitters are only 20 to 25 inches deep.

Control is via the new HTML5 Advanced User Interface.

Features include RDS, SNMP, presets, Nautel PhoneHome and optional Orban Inside processing.

The company is taking orders for lower-power models, to be shipped in late 2022, while the higher-power models are expected to ship next year.

Info: www.nautel.com



Model 551 Brings Advanced Signal Monitoring

For advanced FM and HD Radio signal monitoring, this new offering from Inovonics simultaneously monitors your off-air FM modulation along with up to four HD Radio channels in real time.

The Model 552 collects a history of signal parameters and displays HD Radio album artwork, station logos and similar visuals on

the remote web interface, a sample of which is shown. The 552 includes a BandScanner, real-time clock and full SNMP functionality

Rear-panel alarms constantly check for audio loss, RF loss, multipath and overmodulation, while advanced notifications alert personnel with e-mail or SMS messaging when any or all of the alarms occur.

Spectrum graphs include RF baseband, MPX and Left/Right Audio. O-Scope views for MPX, Pilot, RDS and all audio channels. StationRotation enables you to monitor up to 30 station presets.

Also check out the Model 551, with high-resolution 7-inch touchscreen.

Info: www.inovonicsbroadcast.com

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Chameleon: AI-Based Processing From Angry Audio

Angry Audio says radio program audio processors work for their intended purpose but can be expensive for a streaming

application, and hard to set up for consistent quality and loudness.

The Chameleon C4 is controlled by a form of artificial intelligence. It analyzes the incoming audio and continually adjusts its parameters to fit the content. Applications include radio pre-processing, TV audio, remotes, inter-studio feeds, network head-ends and auxiliary HD channels.

"Rather than the usual bazillion knobs and buttons, C4 automates all that complexity," the company says. "No need for that expert. Just hook it up, flip a few switches and Chameleon gets right to work."

The processor was designed by Cornelius Gould to deliver loudness, consistency, punch and clarity, with an open and natural sound.

Angry Audio included a precision loudness controller with which you can set a loudness target from -24 to -14 LUFS via a calibration control, if you choose to use it. So you can comply with loudness standards from Apple, YouTube, AES (proposed), Amazon and others.

Retail price is \$999.

Info: <https://angryaudio.com>



Deploy Containerized Products With Virtual Rack

Virtual Rack from Broadcast Bionics takes the pain out of deploying packaged software with an optimized appliance ready to run broadcast applications.

It is a combination of an optimized appliance (2U or 3U physical) and purpose-built software that enables you to deploy up to 16 Application Units of containerized products quickly and efficiently.

A built-in library facilitates fast and flexible installation. You can link multiple units for large systems. Bionics adds, "It's super-easy to create redundancy and failover."

Info: <http://bionics.co.uk>



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Flagship Omnia Gets Dynamics Boost

Telos Alliance says its flagship Omnia.11 FM processor now ships with the G-Force Dynamics Engine standard. G-Force is also available as an optional plug-in for units in the field.

“Designed by Frank Foti and Cornelius Gould, Omnia.11 with G-Force represents a significant update to Omnia.11’s dynamics,

so significant, in fact, that Omnia has updated the GUI to a vivid cobalt blue,” the company said.

A dynamics processing framework enables the processor to set the overall EQ for signature consistency, making it sound cleaner, clearer, louder, more consistent, more open, and more pleasing.

The Omnia.11 processor itself is available in FM+HD with separate processing paths for FM or HD/DRM and FM without HD/DRM.

The FM-only model is upgradeable to FM/HD at a later date. Switchable Single Sideband Suppressed Carrier (SSBSC) technology for potential reduction of multipath is standard. A touchscreen GUI on a 10.5-inch diagonal screen provides ease of use and enhanced metering and diagnostics.

Remote access is available via any web browser. Livewire, AES/EBU digital and analog I/O are standard, as are fanless cooling and its rugged 4 RU chassis.

Both FM+HD and FM-only models can be upgraded with an optional Perfect Declipper Plug-In, a new algorithm by Hans van Zutphen that restores clipped areas in audio recordings. The algorithm not only restores dynamics but removes distortion.

Info: www.telosalliance.com



Xpeak Is Intercom Without a Matrix

AEQ has introduced a matrix-less intercom system suitable for remote production.

“Xpeak supports up to 28 user terminals in different formats: desktop, rack, wired belt-pack, wireless belt-pack and PC application,” it said.

“All terminals interconnect with maximum operational flexibility and without the need for a matrix.”

Interconnectivity is simple even if the devices are on different locations, as long as they have access via the internet.

Its wired user terminals have Bluetooth and USB connections, admitting all types of headsets (headphone/microphone combinations) with these interfaces and facilitating connection with smartphones and PCs.

Other recent introductions include the Atrium digital IP audio console and Talent IP audio codec.

Info: <https://aeq.es/xpeak>



VX Series

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RCS Is Ready for Demands of Remote Work

RCS has expanded remote features throughout its product line, focusing on the user experience and automating everyday tasks.

Zetta automation has a revamped Zetta2GO Voice Tracker with Zetta tools like volume points, trim in and trim out. The platform now has multiple Zetta themes, performance improvements for scalability, Virtual Events (identifying multiple assets within a single long-form file) and redesigned Hot Keys.

New Zetta2GO features include expanded drag and drop, keyboard navigation with Windows shortcut functionality, and F1 dynamic help.

Another focus is RCS Cloud, which the company calls a true disaster recovery cloud solution, written for and on Amazon Web Services, following best practices and securities.

"RCS Cloud disaster recovery can not only back up your audio, logs, metadata and SQL backups, securely with Zetta's built in Site Replication service, but we've also incorporated business friendly workflows."

New GSelector 5.0 got a subtle thematic facelift recently, with the addition of new themes, scalable icons and a user-customized Song/Link Window, allowing users to organize and hide or display metadata based on multiple layouts.

"Programmers can already view and schedule their time granularity by hours and minutes, but now, with GSelector's Flex Clocks, users can build their clocks and grids down to the minute or a single clock up to 24 hours a day, allowing for endless programming opportunities to

save time and efficiently."

Selector2GO allows users to add or edit elements, adjust clocks, schedule and message logs, and analyze their spins.

Info: www.rcsworks.com



Tieline Gateway Now Includes Livewire

Tieline's 16-channel Gateway codec leverages flexibility and interoperability by acting as a media converter on the edge of your network, or in a data center, and transporting multiple channels of mono or stereo audio across LANs, WANs and other supported AoIP networks.

Livewire+ support was recently added, and the codec now delivers native support for AES67, ST 2110-30, ST 2022-7, RAVENNA, Livewire+, NMOS IS-04 and IS-05, Ember+, AES3 and analog I/O as standard.

An optional card delivers streaming compliant with WheatNet-IP. An optional Dante card available later this year will

support Dante networking. Tieline highlights the codec for its wide range of open standard and proprietary AoIP protocols.

Integrating Livewire+ facilitates stream discovery and advertisement when streaming real-time IP audio between Gateway and Gateway 4 codecs across Livewire AoIP networks.

The Gateway is suitable for audio distribution, STL, studio-to-studio links and managing multiple incoming remotes at the studio simultaneously. It includes SmartStream Plus redundant streaming and data aggregation using Fuse-IP. The codec supports HTTP Shoutcast or Icecast

streaming, plus multi-unicasting, multicasting and up to eight channels of phase-aligned surround sound audio. All functions can be remote controlled using the Toolbox HTML5 Web-GUI, or Cloud Codec Controller.

Also, Tieline will soon launch an HTML5 version of its TieServer Console for registering networked codecs to a TieServer domain, as well as configuration and control of Report-IT user accounts. The updated HTML5 browser delivers an improved layout, higher security and more efficient control of Tieline devices connected to TieServer.

Info: www.tieline.com/product





Dielectric AIO Virtualized Modeling Service

Dielectric has launched its virtualized antenna modeling service, with three shipments out the door for two Canadian FM broadcasters. The first shipments include two DCR-H ring antennas and one DCPJ cross-dipole panel antenna.

The Artificial Intelligence Optimization procedure ensures the geometry for each antenna generates the desired radiation patterns while maintaining FCC compliance. Dielectric said its use of High-Frequency Simulation Software (HFSS) helps to drive the computer simulation process for the AIO antenna modeling process.

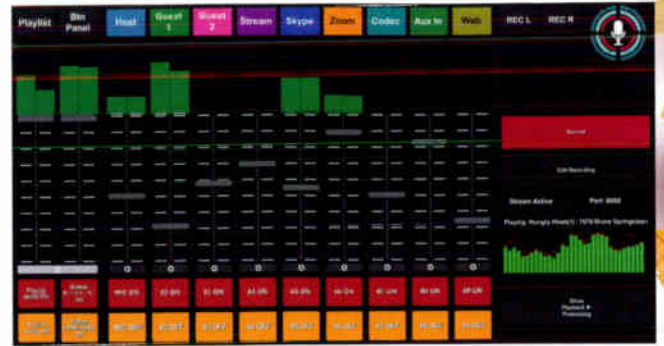
The company notes that physical antenna models are difficult to manage and take time to get results. They require using standardized tower sections, and the technician must gradually make small adjustments. HFSS makes small changes efficiently across the virtual design process, allowing Dielectric to optimize radiation patterns without time and material constraints or settling on a design.

HFSS also accelerates the workflow from design to shipment. "This process greatly increases the accuracy through direct input of all dimensions that effect the antenna radiation pattern such as tower leg diameter, transmission lines in the aperture of the antenna, antenna orientation, standoff, and ultimately parasitic length, location and orientation," the company says.

The AIO modeling process uses an optimizer that drives AI-driven decision making outside of the HFSS environment. Dielectric's solution utilizes OptiSlang, an optimetric language that reduces setup times (from physical to virtual) by several hours, and reduces man-hour labor from an average of 40 hours to one.

Dielectric's AIO virtualized antenna modeling service is now available for its FM antennas.

Info: www.dielectric.com/



A Podcasting and Internet Radio Solution in One

DJB Radio Studio, a recipient of Radio World's "Best of Show" Award at the 2022 NAB Show, is based on the popular Button Box "infinite cart-wall" app.

It allows you to connect up to 10 audio sources to a PC, laptop or Windows tablet for professional audio podcasting or long-form recording.

The on-screen virtual mixer features per-channel VU and lets you mix the local cart-wall or play-stack audio with any external USB mic, audio interface or analog device.

"Simply record your podcast with the push of a button, then edit the final product in an easy-to-use waveform editor," the company says.

DJB Radio Studio also carries the tools to run an internet stream or standby automation solution. Its scheduler will rotate music, IDs and other elements while the database editor allows you to catalogue and categorize your audio. Drag and drop your tracks onto the cart-wall and clean them up with the on-board waveform editor.

Talent working remotely can mimic in-studio automation with the built-in playlist editor, play-stack, cart wall and "live-to-tape" voice tracking. It's suitable for morning shows, talk radio contributors, sports commentators and more.

Info: www.djbradio.com



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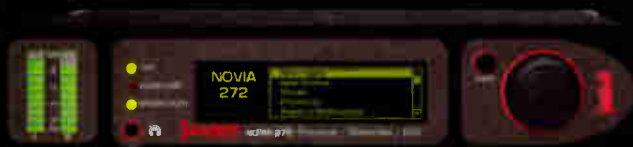
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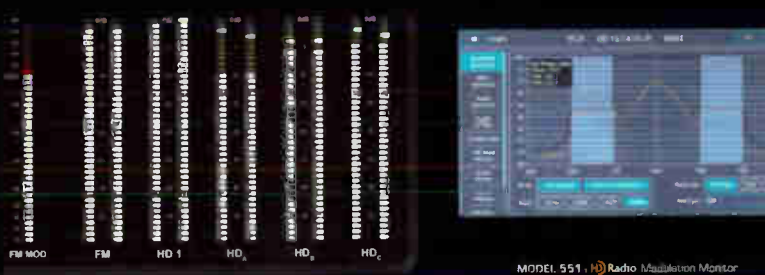
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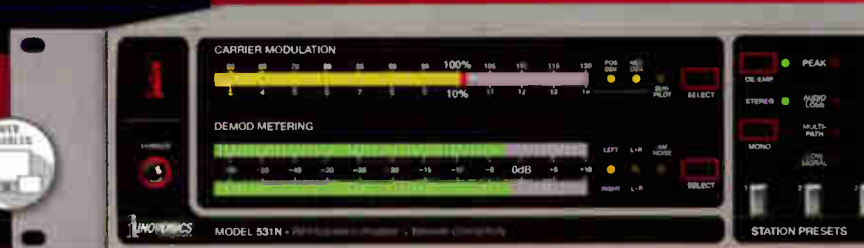
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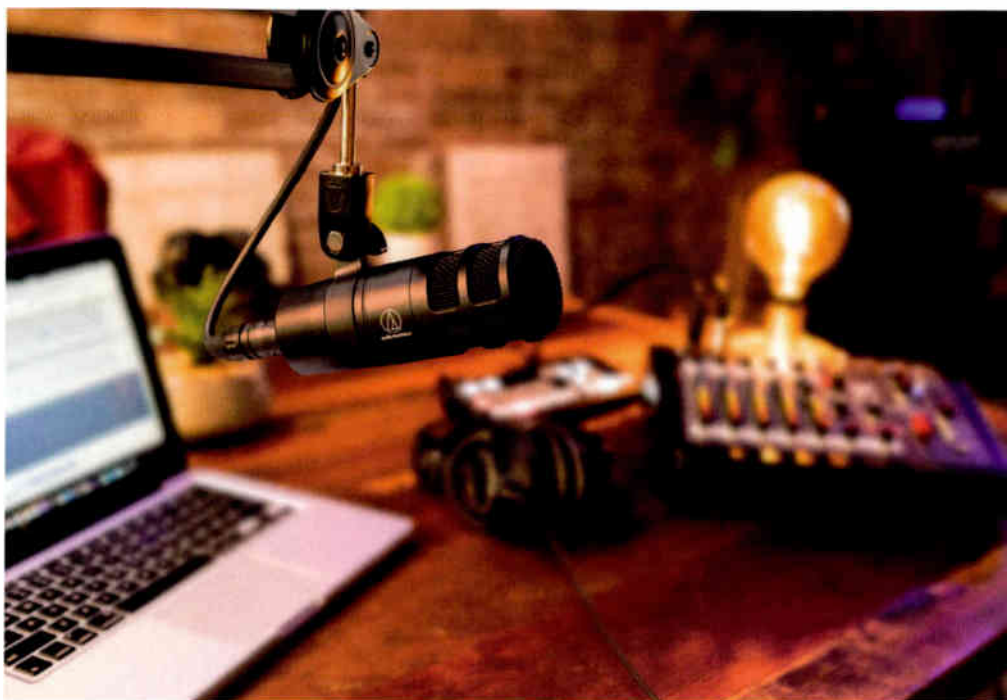
AT2040 Hypercardioid Dynamic Podcast Mic

The AT2040 Hypercardioid Dynamic Podcast Microphone from Audio-Technica is intended to provide broadcast-quality sound in an economical package. The U.S. minimum advertised price is \$99.

Features include rugged metal construction and rejection of room noise due to its tight hypercardioid polar pattern. A-T says the mic excels at isolated/up-close vocal reproduction, providing a smooth, warm and natural sound.

A multistage windscreens combines a nonwoven filter with foam mesh to provide internal pop filtering; the integrated shock mount prevents unwanted noise by attenuating vibration from a boom or stand.

The AT2040's XLR output connects to a conventional analog



microphone input, suitable for use with USB audio interfaces and professional mixing consoles. The mic comes with a pivoting stand mount, 5/8"-27 to 3/8"-16 threaded adapter and soft protective pouch.

Info: www.audio-technica.com.

16

WorldCast Launches Ecreso AiO Series

WorldCast Systems has announced a new generation of Ecreso FM transmitters called the AiO series. The first models are rated at 1 kW and 600 watts.

These transmitters occupy only two rack units and are highlighted for efficiency of up to 76% efficiency. "When the patented SmartFM technology is activated, they can further reduce their energy consumption by up to 40%," the company said. "With the soaring price of electricity and growing environmental concerns the AiO series offers reliable performance that also contributes to energy savings and the de-carbonization of FM transmission."

The AiO series features an embedded APT IP Decoder. "It directly ingests audio over IP to the digital FM modulator, and is

compatible with both SureStream and APTmpX," WorldCast states. The transmitters also include a new full RDS encoder and UECP capabilities.

Features include a new RF planar design, swappable power supply and a fan that can be removed from the front panel. "For remote configuration, monitoring and network management, there is a user-friendly web and mobile GUI, SNMP support and cloud monitoring with Kybio, another WorldCast software product."

The first models are expected to begin shipping in October. Retail prices range from \$4,500 to \$9,600. Ecreso transmitters carry a 10-year warranty.

Info: www.worldcastsystems.com/



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ENCO Highlights WebDAD 3.0

The next generation of ENCO's browser-based, remote automation control interface is WebDAD 3.0.

"The new version features a completely revamped architecture designed to improve the user experience while laying the foundation for future functionality and scalability," the company says.

It lets users remotely manage and control studio-based ENCO DAD systems from anywhere with an internet connection. It supports remote access for functions like uploading content, modifying playlists and voice tracking.

WebDAD lets users manage operations and keep their station on-air even when personnel can't be in the studio, supporting flexible new working models.

The most visible enhancement is a redesign of its browser-based user interface. Layout changes enable more intuitive



operation and streamline workflows. Dark/light modes let users tailor the look. Reactive forms retain information across interface screens, minimizing the need to re-enter data in different sections.

ENCO said WebDAD 3.0 also improved security with more granular control over user permissions, such as the ability to restrict access to specified libraries, functions and

systems. It added support for third-party accessibility assistance tools.

WebDAD also serves as the user interface for ENCO's cloud-based DAD Disaster Recovery solution, which provides a continually synchronized clone of the broadcaster's on-premises DAD deployment.

Info: www.enco.com

Telos VXs Virtual VoIP System

Telos Alliance introduced broadcasters to the benefits of VoIP with VX, the first VoIP talk show system, in a hardware appliance.

A decade later, Telos VXs helps broadcasters reap the benefits of virtualization as they adapt to changing broadcast workflows and operations, while making it easier for teams to produce content. "Using VoIP, VXs combines modern networking with the power of digital signal processing developed by Telos over the past three decades," the company says.

"Every call gets fifth-generation audio processing packed full of technology engineered to extract the cleanest, clearest caller audio from any phone line, even noisy cellular calls."

VXs includes Smart AGC coupled with the company's three-band adaptive Digital Dynamic EQ, a three-band adaptive spectral processor and noise gating. Call-ducking and host override are provided too.

Users can conference multiple lines with clarity and fidelity.

"Send" audio has its own sweetening with an AGC, limiter and Acoustic Echo Cancellation technology that eliminates open-mic feedback. Calls from mobile handsets with SIP clients, HD-capable telephone sets and PC apps will benefit from the system's native support of the G.722 codec, improving caller quality.

VXs will work with all console brands, networked or not, using Telos Alliance xNodes and a VXs Call Controller drop-in controller. xNodes break out audio into analog and digital formats, along with GPIO logic commands.

Info: www.telosalliance.com



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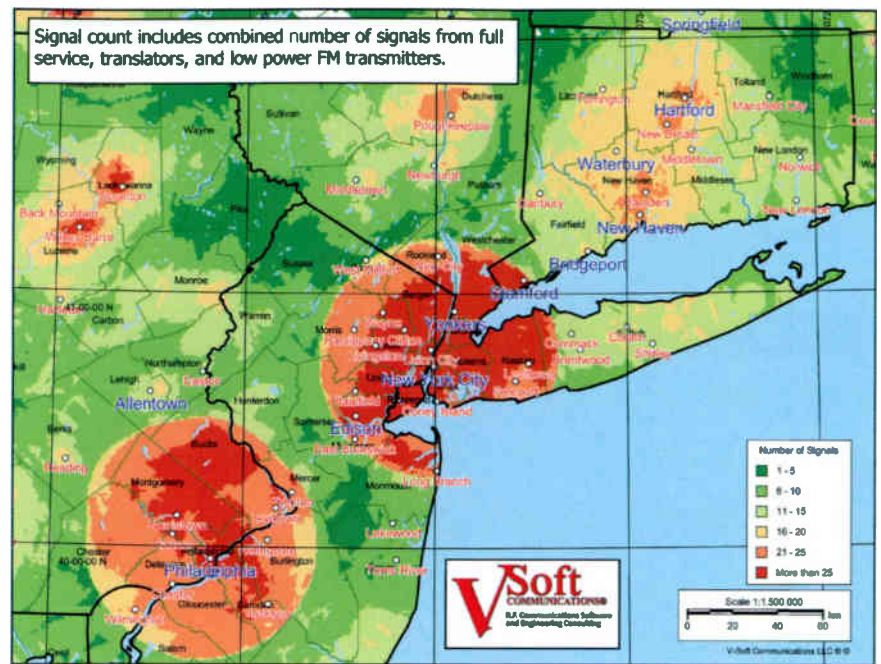
Probe 5 software from V-Soft provides professional-level RF propagation modeling.

"With the recent addition of authentic U.S. topographic map backgrounds, Probe 5 produces spectacular 'atlas-type' maps integrated with the latest U.S. census high-resolution population databases," the company states.

Probe 5 has always contained propagation modeling programs such as Longley-Rice, Okamura-Hata, Cost-Hata, PTP #1 and #2, line of sight, shadow density and standard contour-based FCC. The ITU propagation model {P. 1546} is optional.

The newly updated Probe 5 features 2020 census TIGER boundary files. These include mapping boundaries for consolidated city areas, county, state and urban areas, as well as the core-based statistical areas, combined statistical areas, metropolitan division boundaries and county subdivisions.

For path profiles, Probe 5 includes an interactive profile tool that graphs the terrain elevation and signal profile between transmitter and receiver points.



Probe 5 software comes in three tiers ranging in price from \$7,995 to \$13,995. There are several option modules available including a Single Frequency Network (Booster) module, Measured Signal Import module and ITU-R propagation model.

Info: www.v-soft.com

DHD Rolls Out a Desktop Mixer

The DX2 from DHD began shipping in June. It is a desktop audio mixer for applications such as video editing booths, commentary suites, remote/OB trucks and podcast studios.

According to Christoph Gottert, head of international sales, "It is based on the 52-1214A four-fader central module plus the 52-1220A six-fader expansion unit, both of which are robustly built to withstand round-the-clock operation. The maximum number of faders is determined by the capabilities of the connected core."

The central module has four faders plus a dedicated section for setup, monitoring and talkback. Connectivity features include a broadcast-quality XLR mic input, right and left line outs to feed active loudspeakers, a 6.3 mm jack stereo headphone output plus a 3.5 mm mini jack input port that allows direct audio insertion from a smartphone for phone interviews.

The expansion module has six professional-grade 100 mm motorized faders with dust protection. Each channel incorporates faders, two control buttons, a UTF8-supported channel identifier, adjustable gain settings, an input channel meter and program/off-air selection. Each fader can support a second layer.

Both modules are equipped with a user-configurable 7.8-inch multi-touch

screen for viewing fader and central control parameters. The optional Assist App 52-8512 can be used to control the mixer via a 1:1 copy from any browser. The DX2 can be connected to all DHD XC3 and XD3 processing cores. It integrates with Series 52 I/O modules such as the Dante or AES67 AoIP interfaces, 3G/HD SDI embedder/de-embedder, MADI or DHD APC audio.

Info: <https://dhd.audio>



DAD: Powerful Radio Automation

DAD is an audio playout and automation system trusted by thousands of broadcasters worldwide. Forged over decades, DAD's flexible, customizable and interoperable architecture and interface support a variety of workflows. From centralized content and effortless scalability to cutting-edge virtualization and mobile solutions, a DAD system is the perfect fit for your station now and into the future.



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World Radio History



A Multi-Format Problem Solver From Tascam

Tascam's new CD-A580 is a cassette recorder, CD player and USB flash drive recorder all in one. The installation market is one of its targets.

According to the company, its integrated cassette recorder uses a single-direction logic-based transport control. The mechanism facilitates copying content from CD to cassette in addition to being able to record content from the USB flash drive or the Line Inputs.

The transport includes +/-10% pitch control. For playback, Normal (TYPE I), Chrome (TYPE II), and Metal (TYPE IV) cassettes are supported. For recording, Normal (TYPE I) and Chrome (TYPE II) cassettes are used.

As a CD player, the CD-A580 supports playback of CDs, CD-R/CD-RW

discs and data CDs containing MP3 files. In addition to conventional CD playback, the system supports repeat, shuffle and programmed playback.

The CD-integrated USB flash drive recorder/player allows users to transfer cassette tape content to MP3 format on a USB flash drive. Additionally, audio from both the CD drive and the Line Inputs can be recorded in MP3 format to USB flash drives.

A RC-1329 remote control, rack ears and mounting screw kit are included with purchase.

Info: <https://tascam.com>

WinSafe Can Protect Your Station

WinMedia says broadcasters have become vulnerable in a world where cyberattacks have increased more than 50% since 2019.

"Every day you hear about another ransomware threat, hacker attack or climatic change with more and more disasters, so your daily mantra is 'Save, save, save' and 'Protect, protect, protect.'"

The company offers the WinSafe disaster recovery solution to keep your station on the air. In a failure situation you can return to on-air operation with a few clicks, or "load-balance" your signal because a playout is running in parallel from the cloud using the latest copy of your database.

You have also P2V optional VM mirroring of your physical computers, allowing almost instant access to the workstations that are critical to your workflow.

WinSafe provides permanent incremental backup, retaining 14 days of your data and backing up every hour of the year using stealth and anti-malware Hyperion archiving back-up, GDPR-compliant. High-speed D2D2D transfer will help you rebuild your station in as little time as possible.

Info: winmedia.org/winsafe



Telos

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caller audio for VoIP
talkshow systems is now
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Telos VXs

TelosAlliance.com/TelosVXs



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World Radio History

Diamond Is a Modular Broadcast Console

Lawo describes its new console as “a modular powerhouse designed to deliver the fastest, most intuitive workflows yet for radio and TV.”

Diamond is configurable and available with a console-width “Virtual Extension” touchscreen option. Diamond can be customized to fit operational scenarios from two-fader production booths to major MCR installations with 60 physical and 120 virtual faders, with tabletop or counter-sunk mounting.

The console’s size is suitable for today’s smaller studios. Information is provided to operators via high-resolution color TFT displays per fader strip, touch-sensitive faders and rotary controls, and customizable color-coded control groups.

Nine types of module offer two fader styles, full- and half-width monitor options, and several key/rotary control modules. The Virtual Extension’s 13.3-inch HD color touchscreens visualize context-sensitive data like loudness metering, EQ curves,



compression settings, DSP functions and routing setups.

“Diamond also provides smart tools that speed up production workflows, like the AutoMix function that automatically maintains the balance of multi-mic productions, AutoMix Grouping which applies automatic mixing to multiple independent source groups, and AutoGain, an automatic gain setting function that optimizes guest and host mic levels at the touch of a button,” Lawo says.

This is a native IP device, and flexible installation options are available. Its mixing

engine can be in the studio, placed remotely in a rack room or data center, or installed in a remote facility and connected via LAN or WAN.

The mixing engine is Lawo’s compact 1RU Power Core, which accommodates hundreds of AoIP, MAD1, Dante, AES3 and analog signals. License packages tailor capabilities to operations; the top-tier MAX license enables up to four independent consoles to share the resources of a single Power Core.

Info: <https://lawo.com>

New Audio Processing Algorithms for All

Wheatstone said its multipurpose Vorsis MP-532 introduces new algorithms to produce “even deeper lows, detailed highs and a warm and present midrange that until now have simply not been possible from an audio processor.”

New distortion-canceling algorithms and precision look-ahead limiters provide clean audio and what the company calls “loudness-ability.”

The processor is multipurpose for any broadcast application: FM, AM, FM HD, AM HD, HD-only, or streaming.

In addition to a built-in RBDS/RDS encoder, the MP-532 includes a multiplex power controller, eliminating the need for another costly unit to meet ITU-R BS.412-7 modulation requirements for reducing adjacent-channel interference.

Info: <https://wheatstone.com>



Orban Serves Your Enterprise

Orban's new Optimod XPN-Enterprise is intended to meet the needs of radio and internet broadcasters who are moving operations to centralized, often virtualized, environments.

It is a Linux-based, customizable processing platform for multiple broadcast stations or streaming services with centralized control. It provides proprietary OptiCloud processing for up to eight FM and eight HD/DAB+ radio channels plus eight internet stream processing channels for a total of 24 output channels, all in a 1 RU package, using an enterprise-class softGear server and the appropriate Optimod XPN-Enterprise Nodes.

Content to be processed is brought to one location, using any of the common methods of audio transport including AES3, AES-67, SMPTE 2110-30 or Livewire+, and creates the necessary outputs (analog, AES3, FM Composite, DMPX and Orban uMPX) using the appropriate Orban XPN-Enterprise Nodes for distribution to each transmitter site.

With this system, Orban says, users get a maximum of flexibility as the setup can be adapted to your needs and changed or extended if required.

The Optimod XPN-Enterprise

server supports AES67, SMPTE2110/2027 or Livewire+ and allows you to set up an AoIP audio processing system. Content for each input is individually processed. Opticloud factory presets give users a quick start for each format, and its "Less-More" controls simplify dialing in your stations' sound by combining multiple audio processing parameters with a handful of controls.

Kantar or Nielsen watermarking for each broadcast output is provided using the appropriate XPN-Enterprise Node.

Info: www.orban.com



An advertisement for WinCam, a fully automated visual radio solution. The background is blue. At the top center, the text 'winCam' is written in a large, white, sans-serif font, with 'win' in lowercase and 'Cam' in uppercase. Below it, 'FULLY AUTOMATED VISUAL RADIO' is written in a smaller, white, all-caps font. To the right of the text are four colored squares: red, orange, blue, and green. Below the main text, the words 'CAMERA', 'AUTOMATION', 'SCENARIOS', 'PUBLISH', and 'STREAMING' are listed vertically in white, all-caps font. On the left side, there is a black, professional-looking camera on a stand. In the center, another similar camera is shown from a different angle. At the bottom left, a laptop screen displays the WinCam software interface with various controls and buttons. At the bottom right, a hand is holding a smartphone that shows a live video feed of a woman speaking into a microphone. At the bottom center, there is a QR code. At the bottom right, there are logos for 'NDI', 'SRT ALLIANCE' (with the tagline 'SECURE RELIABLE TRANSPORT'), 'YouTube', 'f LIVE' (Facebook Live), 'Twitter', and 'twitch'.



GatesAir Introduces Flexiva GX

New from GatesAir is a lower-power analog FM transmission line that the company says provides customers with the strongest power-to-size ratio for power levels up to 10 kW. It is called Flexiva GX.

The company says LDMOS technology is deployed to support exceptional power density in a compact 5RU chassis, providing 5 kW and 10 kW FM solutions that deliver an overall efficiency rating up to 76 percent.

"The engineering breakthroughs in power density, efficiency and footprint are made possible through the Flexiva GX's design, enhanced by GatesAir's third-generation PowerSmart high-efficiency transmitter architecture."

It expects that broadcasters seeking to update existing infrastructure

for large regional and national networks will be a key user base. The transmitters support N+1 configurations, enabling network operators to build flexible and consolidated transmission sites.

The new series features modular, redundant designs with hot-swappable power supplies. The transmitters provide auto-switching inputs, with dual AES (including AES192), dual composite and analog left/right audio inputs.

Options include a GPS receiver to support SFN functionality, and GatesAir's new Intraplex IP Link 100e module. The latter enables direct receipt of contributed FM content instead of requiring an external codec.

Info: www.gatesair.com

Comrex Gagl Is Now Available

Gagl, a new subscription-based cloud service from Comrex, is now available.

Subscriptions will be available to purchase directly from Comrex for \$35 USD per month, or \$350 for an annual subscription with a dealer code. New subscribers will get a 14-day free trial.

"Gagl delivers audio from multiple contributors in high quality," the company states. "All participants can hear each other, and their combined audio (if more than one user) is sent to a hardware Comrex IP audio codec such as an ACCESS or BRIC-Link. Gagl supports up to five contributors per session."

Participants connect and send audio by clicking a link using common web browsers on their smartphone or computer, making it accessible for non-technical guests.

Gagl could be used as the hub for a round-robin reporting program or for a "morning

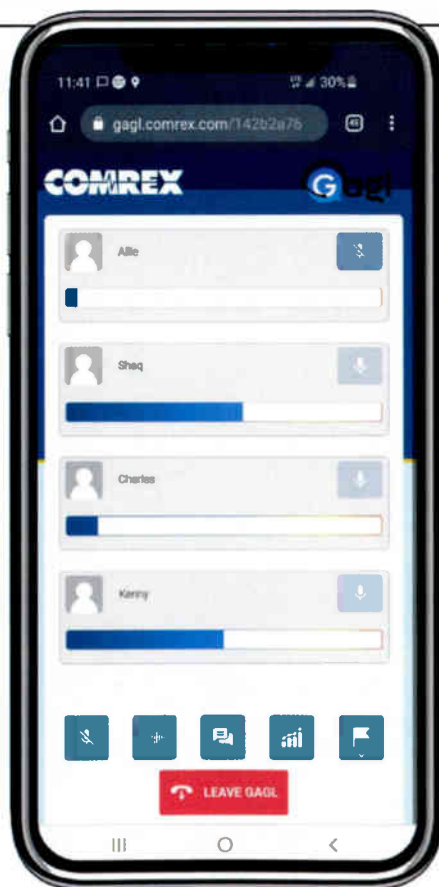
zoo" radio show and supports multiple simultaneous connections. Comrex says that because it offers low latency, it's appropriate for call-in talk radio.

"Gagl could also be used to allow a single contributor to connect back to the studio from a computer or smartphone."

Designed with audio quality in mind, Gagl provides stable connections with limited bandwidth. Gagl uses the Opus audio encoder, with a bit rate that the company says delivers both voice and music in excellent quality. Gagl also delivers audio directly to a Comrex codec, with the stability enhancements, pro-grade audio connections and features that hardware codecs provide.

Gagl works with Comrex hardware IP audio codecs including the AES67-compatible ACCESS NX Rack IP audio codec and ACCESS MultiRack multi-channel IP audio codec as well as the BRIC-Link series.

Info: www.comrex.com



Sage Introduces Alert Portal

Released in June by Sage Alerting Systems Inc., Sage Alert Portal is a software add-on for the Sage ENDEC. (It is not a required update.)

"Alert Portal provides a simple browser-based GUI allowing the user to originate over-the-air EAS alerts, permitting Local Primary EAS stations and Local/State/Tribal emergency centers to craft and send legacy EAS messages," the company stated.

Audio can be recorded on the PC and uploaded when the alert is sent, or audio can be fed into the air chain from any other source.

"Alert Portal allows users to choose from a pre-defined set of locations and event types, or select from a list of previously stored alerts. It features optional two-person authentication to reduce the chance of an incorrect origination."

Alert Portal replaces the older ENDEC DJ and ENDEC PRO PC software. Contact Sage for a demo of Alert Portal, which retails for \$600 and is available from any Sage distributor.

Info: www.sagealertingsystems.com/



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Henry Engineering BackUPS

This failsafe power switcher automatically bypasses a failed (or failing) uninterruptible power supply. If the BackUPS unit detects an unstable UPS output (or no output), it switches to Direct Line power, bypassing the UPS in milliseconds to prevent critical equipment shutdown.

Henry notes that many UPS units become "flaky" when the internal battery ages. The output will drop, then come back on, repeating this cycle until the unit fails

completely.

"BackUPS instantly detects this failure and removes the UPS from the circuit," it says. "The UPS can now be removed for safe battery replacement without having to shut down power to the load."

Whenever UPS power is restored, the BackUPS Restart Timer monitors the UPS output voltage for stability. Only when the output is stable for a preset time (user



adjustable, 10 sec. to 16 min.) will the UPS be switched back into the circuit. BackUPS can be remotely controlled. Retail price: \$325.

Info: <https://henryeng.com/>



Wheatstone Layers: One Server Does It All

New from Wheatstone is its Layers software suite that runs on commodity servers.

One or two servers can host mixing instances for all your AoIP consoles, locally or remotely, replacing racks of hardware. Also, Layers gives you backup mixing, audio processing and stream provisioning in an instant, controlled from your laptop or tablet with no other hardware required.

Layers includes "glass" software for the laptop or tablet and server software for mixing, routing, logic and FM/HD audio processing, with full MPX out to the transmitter as well as provisioning and metadata for multiple streams out to the CDN provider.

"Layers is the best of both worlds, combining the scalability of commodity servers with the deep reliability of WheatNet-IP audio networking, a complete AoIP system with console surfaces, virtual tools, routable audio codecs and processing," the company says.

Layers software will be available in late 2022.

Info: <https://wheatstone.com>

WideOrbit Has V5.0 of WO Automation for Radio

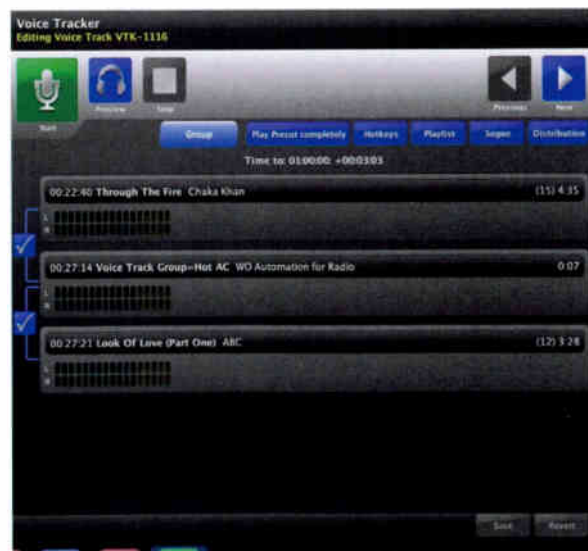
The latest version of WO Automation for Radio includes enhancements for broadcasters conducting "distributed operations" and remote work.

WideOrbit says these improvements help users manage station operations with a decentralized staff; run programming from home or elsewhere via mobile devices; manage content and playlists remotely; and integrate with other systems like MusicMaster and WO Traffic.

"Native apps can be installed and operated from virtually anywhere there's an internet connection, on almost any device, including desktop environments running macOS, Windows or Linux, as well as on iOS mobile devices."

Also new, a "Stop Media Asset Workflow Action" allows on-air assets to be stopped automatically or on-demand. And "Content Import Prioritization" streamlines the downloading of important content first whether from local drives or FTP sites.

Info: <http://wideorbit.com>



Axia Quasar Line Grows

Axia Quasar is the sixth generation of AoIP consoles from Telos Alliance, which highlights the XR and SR models, offering users the benefits of modularity, scalability and workflow flexibility.

Quasar XR is the company's top-of-the-line mixer, featuring extensive metering built into the surface, on every channel display and next to each fader, as well as on the monitor module.

These LED meters allow users to live mix rather than only confidence monitor, giving them active control over their environments for the best outcome.

Less-seasoned board operators will appreciate the recently introduced Quasar SR model. It retains the ergonomics, industrial design and appeal of the XR line while featuring a streamlined surface design. Fader modules are non-motorized. There are fewer, larger



and easier-to-reach buttons on each channel strip, and it features confidence class metering.

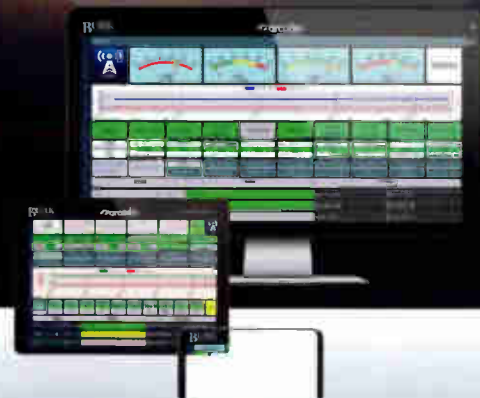
"Powered by mature and sophisticated AoIP technology from Telos Alliance, the inventor of AoIP for broadcast, Quasar is designed for steadfast reliability with no single point of failure," the company states.

Info: <https://success.telosalliance.com>



BURK TECHNOLOGY

centralized data without the data center



remote control and management of the radio network

Managed by Burk and hosted in the Burk Cloud, Arcadia24 makes secure remote access easy. No NOC required.

Contactors, engineers and managers will love the ease of use and the ability to manage the network from anywhere.

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Stay in control wherever you are. Learn more at www.burk.com/arcadia24 

Automated Weather Reporting From Summit

Summit Technology Group's latest version of ATMOS Automated Weather Reporting adds approximately 300 new voices, including many multilingual speakers, to deliver weather reports for foreign-language stations.

The update also features a new "phrase manager" to perfect the speaking style of the synthesized voice and a "temperature trend" tool that allows users to add to their script templates comparative statements about temperature data.

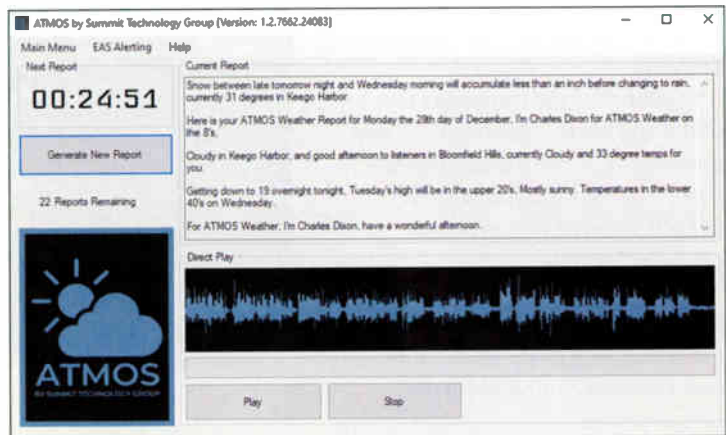
The phrase manager can be used to replace overly technical weather terms with those suitable for broadcast. For example, instead of the term "broken clouds," the user may prefer the term "partly cloudy." Summit says this tool is also commonly being used for negative temperatures. Instead of "minus 4 degrees" the user may prefer to hear "4 below."

The temperature trends tool compares the magnitude and direction of a temperature swing and inserts a user-defined phrase to describe such a trend. For example, for a large increase in temperatures between now and next Friday, the product could say something like "temperatures are increasing considerably by this weekend with a

high in the low 70s on Friday night."

Summit said the new version contains dozens of smaller new features and improvements to the user experience as suggested by its user base.

Info: www.summittechgroup.com



Win-OMT Works for Your Enterprise

Win-OMT is an automation solution provider to the media and broadcast industry. Its products include Win-OMT iMediaTouch, a feature-rich automation system, and Win-OMT iMediaLogger.

The company also provides large-scale audio delivery systems used by DTH satellite services and cable music systems.

iMediaTouch Enterprise is its latest offering. With a customizable on-air user interface, the platform supports multiple screen layouts and can be used for live assist, unattended or satellite automation applications.

Features include drag-and-drop content insertion, audio import and editing, voice tracking and rain delay for sporting events.

Enterprise supports touchscreen monitors and provides a web portal and SoundExchange reports.

Info: <https://imediataouch.com/>



Parts and Service for Older Orban Products

"Our goal in forming Orban Legacy Parts and Service was to provide quality parts and service for all older classic Orban products where possible," says founder Jay Brentlinger.

"We have many 'new old' stock parts that go back to Bryant Street in San Francisco from the early 1970s."

In 1991 Orban relocated to San Leandro, Calif., and these parts were moved to the

new location. "When I became the president of Orban in 2000, I was amazed with the amount of parts inventory and the total number of Orban products that had been built and were still in service worldwide," he said.

"Once again in 2006 we moved the Orban manufacturing to Tempe, Ariz., with yet another move to new building located in Scottsdale in 2009. And once again all of these older models parts were relocated."

Brentlinger said that with the 2016 sale of Orban, part of the agreement was that he would support older-model products.

"We shipped all of the older parts to our Autogram operations in Benton, Ark., where we are today. With over \$3 million in parts here we provide parts and service to help maintain, preserve and service all the older Orban legacy products. And while we may not have some discontinued parts, we do have most everything needed to repair the older Orban AM/FM models."

The company accepts older Orban products as trade-in toward the purchase of new Orban Optimod models. It also maintains an Orban Legacy Museum, which contains the first Orban audio processors built, including original pre-production prototypes.

Info: www.orbanlegacy.com



Arcadia24 Enables Secure Web-Based Control

Burk Technology now offers the Arcadia24 Hosted Subscription Service. It is intended to make secure web-based remote control accessible to smaller groups and individual stations.

"Building on Burk's popular Arcadia system, Arcadia24 delivers remote facility control to station engineers and managers via their mobile devices," it said.

"Hosted by Burk Technology on AWS, each customer's Arcadia24 service is installed, configured and maintained by Burk remote control experts."

Web links from mobile devices to the Arcadia24 server are locked down and encrypted using Transport Layer Security (TLS), ensuring that only authorized users can access and control each remote facility. Encrypted VPN tunnels and firewall protection guard communications between Arcadia24 and each site.

Arcadia24 communicates with each site at its optimum rate, accommodating variations in communications speed and performance. "The most current data from all sites is then made available for instant display on authorized mobile devices," Burk says.

Users are authenticated via Microsoft AD LDS, with

access restricted to specified channels, sites and station groups. Control of critical functions can be limited to key personnel while overall performance may be made visible to a wider group. Sites can be grouped based on regional hierarchy, engineering responsibility or other criteria.

Info: www.burk.com



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<https://henryeng.com/powerclamp>



Audioarts DMX for Multi-Studio Facilities

"Go from an analog studio to an AoIP-routed studio in a snap with the Audioarts DMX console system," says Wheatstone. DMX has IP audio networking and mixing console all in one, with Ethernet switch included.

The console with mix engine is suitable for a multiple-studio facility where each studio can act independently as a separate standalone entity, but all are linked together through an IP network.

The DMX console is available in an eight- or 16-fader frame with four program busses and bus-minus on every fader, as well as a convenient multi-function knob on each channel for adjusting pan, mode, dynamics and input sources. The Audioarts mix engine uses RJ-45 connectors for audio, logic and network connections and is WheatNet-IP compatible. Pricing starts at just over \$7,500.

Info: <https://wheatstone.com>



Economical Time Distribution From RAM

RAM Systems announced the introduction of its model CLK-100 to the broadcast market. It is designed to offer broadcast facilities an economical way to distribute accurate time and switching.

Balanced SMPTE serial time code is output on regular two-conductor shielded cable, with NTP output on an RJ-45 connector.

The local display uses large, bright digits viewable up to 25 feet. The display can be switched between 12- and 24-hour modes.

The CLK-100 is designed for installations where only digital time displays are needed. It is a desktop unit that also can be mounted onto a rack shelf.

Features include three Opto outputs, four form "C" relay outputs, GPS lock display, time and date display, and programmed date and time Relay/Opto switching.

The CLK-100 is 5-3/4 inches wide, 6-1/4 inches deep and 1-5/8 inches high. It has a sale price of \$1,399.

Info: www.ram68.com



New AES/EBU Silence Detector From Broadcast Tools

Broadcast Tools' latest web-enabled AES/EBU digital audio silence detector, the AES Audio Sentinel 4 >> Web, is available now.

It features four AES/EBU inputs, each with silence detection, stereo phase monitoring and AES error detection. Alarm notification is available via front LED indicators, email, SNMP and open-collector alarm outputs for integration with external equipment. The stereo inputs may be configured to act as two separate mono channels, allowing the user to monitor up to a total of eight different mono digital audio sources.

The device's browser-based HTML5 web interface is powered by a high-performance ARM Cortex processor, which supports SSL/TLS email (Gmail, etc.), SMS-email notification, as well as SNMP. Silence detector trip level is configurable from the web interface for each audio channel in 1 dB steps from -15 dB to -35 dB. Precise alarm and restore time delays are configurable from 0 (OFF) to 65535 seconds (18 hours, 12 min and 15 secs) in one-second increments for input each channel.

Installation is easy, with XLR jacks used for the AES/EBU inputs and pluggable screw terminal block connectors used for the open collector outputs. A surge-protected universal switching desktop power supply with an IEC AC inlet is included.

Two units may be mounted on the optional rack shelf.

Info: <https://broadcasttools.com>

Customized Solutions From Marketron

Marketron says its Custom Solutions Desk provides customized solutions in sought-after channels to help advertisers get in front of their target audiences.

It is a suite of products that enables media sellers to expand cross-channel tactics to include niche digital partners in a turnkey solution. Sellers can expand an advertiser's reach and position themselves as a valued digital partner. Users receive hands-on support, publisher-direct reporting and campaign optimizations for advanced tactics.

New channels introduced include LinkedIn, Pinterest, YouTube and Snapchat.

Marketron NXT also has new channels. NXT is a platform for third-party digital and radio spots for media sellers. It consolidates traditional and digital media with an integrated ad platform, according to the company.

Users can create proposals, execute order entry, run campaign reports and streamline invoicing from one source.

Third-party digital tactics available include targeted digital display and video (with geofencing) and OTT/CTV. Newly introduced channels include SEM (search engine marketing), which



Marketron says provides sellers a smarter way to sell paid search with a solution that does much of the work for them. Also new to the NXT lineup are expanded custom channels, encompassing many of the most popular social media sites.

NXT users also get access to the NXT Training Academy.

Info: www.marketron.com/custom-solutions-desk and [/marketronnxt](http://marketronnxt).

orban

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ERI Precision Coaxial Directional Couplers

Electronics Research Inc. has a new family of precision directional couplers.

The coaxial directional couplers are available for 1-5/8-inch, 3-1/8-inch, 4-1/16-inch and 6-1/8-inch coaxial transmission lines with one, two, three or four sampling ports. The standard sampling port connections are Type N or SMA.

"The line sections are constructed to securely position and hold the inner conductor to ensure the coupler remains stable and calibrated through shipment and installation," the company tells us.

"These directional couplers are constructed with rugged aluminum outer conductors and are very compact, allowing them to be mounted in congested locations."

The couplers have an operating frequency range from 54 MHz to 800 MHz and can be set for coupling levels from -30 dB to -70 dB with directivity of 30 dB or better.

ERI also makes adjustable coaxial directional couplers and produces waveguide directional couplers for all line sizes used for terrestrial broadcast applications.

Info: <https://eriinc.com>

The Latest AudioVault From Broadcast Electronics

BE describes the new AudioVault 11 as "the most progressive version our automation system to date."

AudioVault is enhanced with several features, and BE says it now has the scalability to manage the smallest stations to the largest corporate broadcasters.

"Our team recognized the challenges many of our users faced as our society shifted to remote positions. As a result, we have developed specific features to meet these needs," BE stated.

Among new features, AudioVault Anywhere schedules and controls a station from any place, anytime, via a browser on any device.

AudioVault Enterprise Radio Automation controls any part of an audio delivery network from any place.

CloudVault distributes and synchronizes your audio assets via the cloud to all your locations as needed.

And AudioVault now offers full integration with BE's music and traffic system partners.

AudioVault 11 is available for a single workstation software package of \$4,000.

The company's Digital Service Team is based in Quincy, Ill., with 24/7 availability.

Info: www.bdcast.com



The Mini Audio Codec Server by Ferncast

In July Ferncast launched the Mini Audio Codec Server, which is powered by aixtream Compact software. The company says applications include STLs, SIP communication, OTT online streaming, audio on demand, DVB multiplexing, loudness control and transcoding.

"The Mini Audio Codec Server is the most optimal combination of small size and power," Ferncast says. "It is handy with a

small size and low power consumption. It is in fact small enough to be easily transported and installed anywhere, but still allows up to 10 mono, stereo or multichannel programs."

It natively supports AES67 and Ravenna as well as third-party USB audio interfaces so it can handle any input/output requirement.

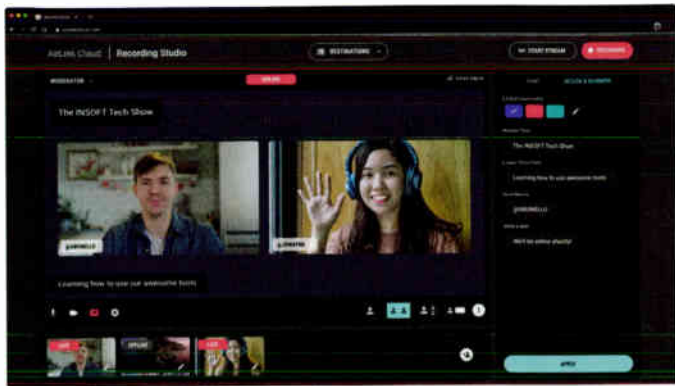
The multiple USB ports can be used to connect various other devices to expand how it can be used, for example by

connecting diagnosis devices or expanded storage for recording use cases.

The Mini is part of a new product class of Audio Codec Servers, or ACS. The company says they combine the flexibility and scalability of server installation with the convenience of traditional hardware boxes.

Info: www.ferncast.com





AirLink Heads to the Cloud

InSoft has a new virtual studio offering called AirLink Cloud that lets you record a video podcast in HD to the cloud, invite multiple remote guests and stream live over social media.

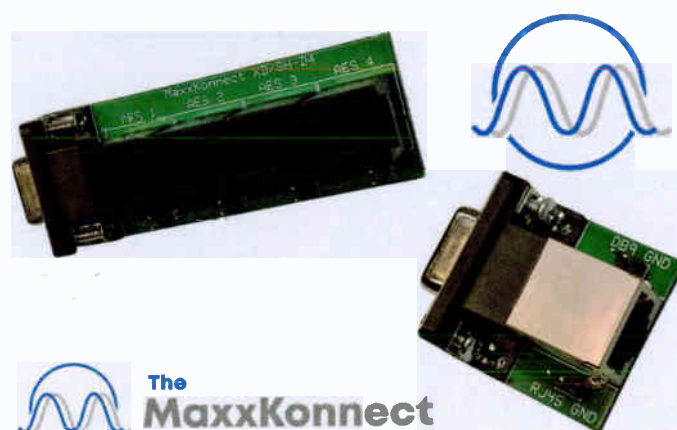
A starter plan is free, with Lite and Pro versions available for \$25 and \$39 per month on an annual contract, according to its website.

The paid versions include AI-based automated video switching, your logo, overlays and customized backgrounds, as well as more recording and storage time. The pro version has 15 hours of cloud-based, multi-camera recording and 10 hours of cloud storage.

According to distributor BSW, AirLink Cloud Pro uses broadcast-quality bidirectional audio codecs and handles mix-minus feeds to each participant. It also feeds on-air host video to each participant to support on-air interactions.

InSoft is familiar to many in radio for its HDVMixer product.

Info: www.airlinkcloud.com



The MaxxKonnnect GROUP
www.maxxkonnnect.com

MaxxKonnnect Adapts to Solve Studio Problems

The MaxxKonnnect Group, based in Pelham, Ala., has launched a line of problem-solving adapters called MaxxAdapt.

"These handy, cost-effective devices will save you time and headaches for various audio and logic installations," it states.

The MKXD/SH-4 adapter breaks out the DB-9 AES outputs on the XDS-PRO series satellite receivers into four StudioHub-compatible RJ-45 jacks. Each passive output jack has a removable ground jumper, and the entire board is no wider than the DB-9 jack. Top-mounted connectors keep cables out of the way. A two-output version is also available.

The MKXD-ANA adapter is useful to adapt the analog DB-9 outputs on the XDS series satellite receivers to StudioHub-compatible RJ-45 jacks. These passive adapters have removable ground jumpers for both the RJ-45 connector, as well as the DB-9 to help isolate ground loops.

Additional versions will be released soon, including an XDS relay adapter. All versions include removable mounting screws.

Info: www.maxxkonnnect.com



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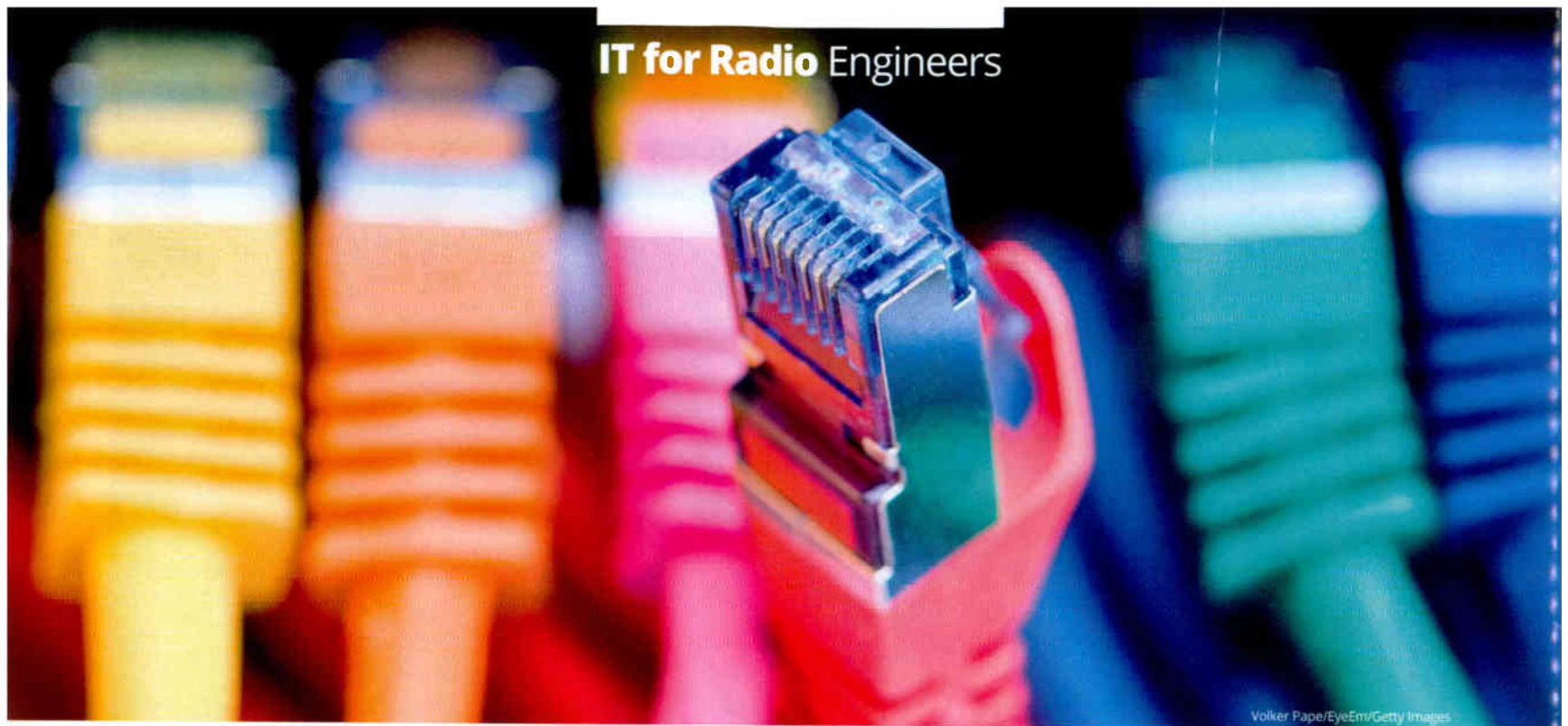


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Do I really need IPv6?

It allows many more unique addresses, but there are other benefits too

This is Part 3 of a series. Find Parts 1 and 2 in the Aug. 17 and Sept. 1 issues at <http://radioworld.com/digital-editions>.

In 1998, IETF RFC #2460 was issued. It outlined IPv6 as a solution to the demand for address space.

The Internet Protocol Version 4 (IPv4) is the most common Internet Protocol (IP) address in use today. With any mention of an IP address, an IPv4 address is assumed or simply an IP address.

The familiar IP address is defined in detail by the Internet Engineering Task Force (IETF) Request for Comment (RFC) #791 finalized in 1981.

The 32-bit address provides some 4.2 billion (2^{32}) unique addresses. The address space is divided into five blocks or classes consisting of A, B, C, D and E expressed in the familiar dotted-decimal format of four eight-bit octets or four bytes separated by a decimal yielding 192.168.1.1.

Class A, B and C are the most common addresses, with class D reserved for multicast use and class E for experimental use. Within class A, B and C address space additional reserved uses can be found such as private address blocks (often referred to as RFC 1918 space), loop-back and zero configuration address space (RFC #3927). At the end of the day, there are around 3.7 billion unique addresses useable for host assignment in the public internet address space.

Soon after adoption, it became apparent that the IP address space standard adopted was not going to be adequate to fulfill a rapidly growing demand.

Lots (lots) of addresses

IPv6 provides a 128-bit address yielding some 340 undecillion or 3.4×10^{38} unique addresses. I will leave it to your imagination to grasp the size of even 1 undecillion of anything.

In an IPv6 environment, the address allocation focus becomes allocation of networks or subnets rather than individual IP address, as one does with IPv4 addresses. Auto-configuration features within the IPv6 protocol suite handle individual host IP address assignment and configuration. There are no subnet masks to deal with and CIDR notation is used exclusively.

One of the challenges of implementing IPv6 is changing one's mindset to subnet allocation rather than address allocation and accepting multiple addresses per host interface. At a minimum, an IPv6 host will have a global unicast address, a unique local address and a link local address.

Faced with 128 bits to represent in some form of an address, the IPv6 address is formatted as eight groups of 16-bits (also known as quads) expressed in hexadecimal and separated by a colon yielding:

2607:b800:faa:3:f1e2:65b7:5675:1984

The IPv6 address may be daunting at first glance. The IPv6 address can be simplified by breaking it down into



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IT for Radio Engineers

three parts: the routing prefix, the subnet ID and the interface ID.

The routing prefix represents the left-most 48 bits of the address and is assigned by a Regional Internet Registry or a service provider. The next field is the subnet ID that the broadcast IT engineer allocates for the site. And the right-most 64 bits of the address is configured automatically by the host or manually in a specified format by the engineer.

2607:b800:faa:3:f1e2:65b7:5675:1984

Routing Prefix

Subnet ID

Interface ID

IPv6 is far more than larger address space. It was an opportunity to reengineer the IP address scheme described in the original IETF RFC.

Improvements or enhancements were made in reducing the IPv6 header size with fixed length fields and a larger payload size yielding faster packet processing in routers.

Another important advantage is the elimination of the need for Network Address Translation (NAT) as each host device has a unique address restoring the end-to-end host-host communications model that IP was founded upon.

IPv6 adoption has been slower than many predicted. NAT and private addressing have allowed many networks



About This Series

This article is based on an excerpt from the Society of Broadcast Engineers CBNT/CBNE Study Topics webinar series, designed to assist those seeking SBE certification and to provide others a broad overview of IT as used in broadcast engineering. This webinar and many others are available to anyone for a modest fee, with members receiving a discounted rate and free to those with the SBE MemberPlus upgrade. Consider joining if you are not a member at sbe.org.

to extend the life of IPv4 without the expense of upgrading the infrastructure to one supporting IPv6.

Carrier Grade NAT (or double NAT) is often found in internet service provider networks, which can create complexity and adds latency to real-time media packet flows.

As the broadcast IT engineer looks ahead, consider IPv6 to be included in your network designs. A dual-stack approach accommodating both IPv4 and IPv6 is supported and allows a gradual migration. Major and regional Internet Service Providers (ISP) support IPv6 today, and more and more broadcast equipment suppliers are supporting in their products, as all major operating systems have been IPv6-compliant for some time.

Studies have shown that IPv6 connections are noticeably faster when compared to an IPv4 connection. One such Akamai study demonstrated that IPv6 web sites load on the order of 15 percent faster than on IPv4. For the broadcast station distributing real-time media, the gains can be significant to the consumer.

IPv6 is the future as the demand continues for internet-enabled host devices. The Internet Protocol was developed for Arpanet as a governmental research network.

Vincent Cerf is considered one of the fathers of the internet and headed the team that choose the 32-bit IP address scheme. He has stated, "Who the hell knew how much address space we needed for an experiment?"

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Station moves fast to replace antenna

K KPT, a Class C FM in Little Rock, Ark., moved quickly to get back to full service after its main broadcast antenna system was zapped by lightning.


The classic rock station, owned by Signal Media of Arkansas, is licensed for 100 kW ERP at about 1,600 feet and has an auxiliary license for 8.7 kW at approximately 820 feet.

Mike Kennedy, program director for KKPT, said lightning whacked its ERI eight-bay antenna system during a severe thunderstorm on July 30. Kennedy said the 36-year-old fixture was 1,000 feet up on leased tower space. The transmission facilities are part of the Shinall Mountain

antenna farm on the western edge of Little Rock.

KKPT/The Point 94.1 resumed broadcasting with its backup transmitter and six-bay antenna on another tower while a new eight-bay antenna was custom-made by ERI. The antenna arrived on Aug. 29, and installation was expected shortly after.

On the backup, Kennedy said KKPT still covered all of the Little Rock metro area, which includes Pulaski, Saline, Lonoke and Faulkner counties.

"We've been telling listeners outside that area that if they have trouble hearing us, they can stream from www.kkpt.com, get our Alexa skill and listen with an Amazon device or get our free app for iPhone or Android." 




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Writer
James
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Ranking emergency radios for the outdoors

These rugged models are great in everyday life as well as a crisis

We wrote here in July about the evolution of the emergency radio. In addition to providing access to AM/FM/SW/Weather broadcasts and backup power during unforeseen circumstances, these rugged radios can be useful in everyday life.

Radio World asked Nicole Adams, a wilderness enthusiast who enjoys camping, backpacking, hiking and canoeing — she has scaled Mount Kilimanjaro — to rank several emergency radios for outdoor use.

“I am often accompanied by my beloved chocolate lab BonBon on my canoe trips,” said Adams. “Unfortunately, she is much better at retrieving than paddling!”

6 Sangean MMR-88 AM/FM/Weather/Crank/Solar/Flashlight/ Siren/Phone Charger

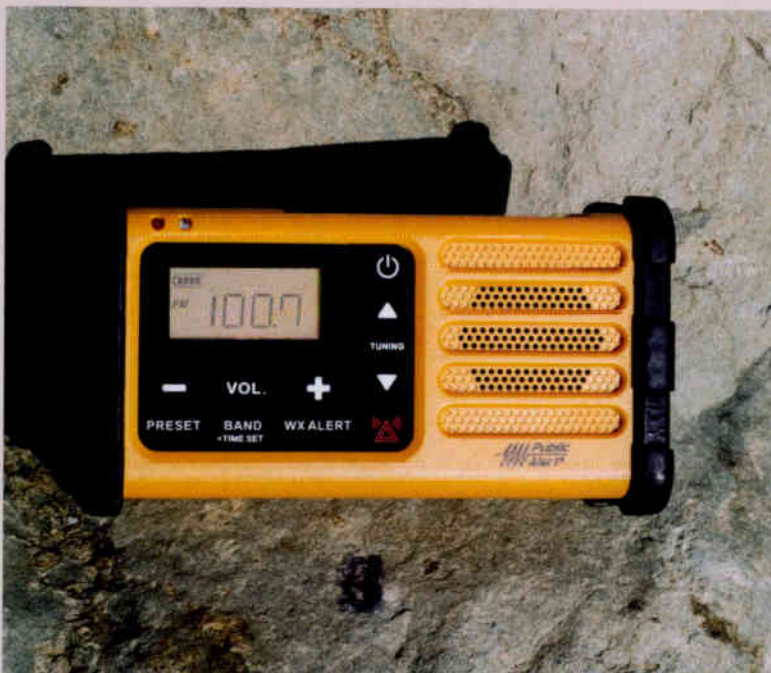
The Sangean MMR-88 “has a clunky design and the battery is too small for the size of the device,” says Adams, “but it’s compact and has a full suite of features — digital display, solar and dynamo charging, flashlight and a decent sound. The MMR-88 has a USB port as well, which is a vital feature in today’s highly connected era. It would be a good fit with any camper’s gear, but I wouldn’t recommend it over any of the others.”

Retail \$69.99

Best feature: Has everything you need in a compact size

Worst feature: 850 mA battery is too small

Website: www.sangean.com/products/product.asp?mid=182&cid=



5 Kaito KA500 AM/FM/SW/Weather/Crank/ Solar/Flashlight Reading Lamp/ Phone Charger

“The Kaito KA500 was the second-largest of the radios I reviewed,” said Adams, “nearly the size of the C. Crane device by volume. It’s well-designed with a strong battery, all the same features as the rest, and has a rugged and solid design. But the KA500 lacks a digital radio display, and while it does everything well, it comes up just short of the other models I tested.”

Retail: \$75.98

Best feature: Rugged design

Worst feature: Size

Website: kaitoradio.com/ka500yellow.html



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Climate Menu



OFF

4 RunningSnail MD-090 AM/FM/Weather/Crank/Solar/ Flashlight Reading Lamp/ Phone Charger

The RunningSnail MD-090 was “the most pleasant surprise of the bunch,” Adams said. “It’s slightly smaller than the Sangean MMR-88, but with a much stronger battery and a solid design to it. The MD090 lacks the MMR-88’s digital display, but that’s the only downside of this emergency radio. It’s sleek, strong, has all the same features as the other five radios I tried, and deserves its place on this list.”

Retail: \$29.90

Best feature: Battery strength relative to radio size

Worst feature: Lack of digital display

Website: www.runningsnail.com.cn/collections/emergency-radio-371



3 CCRadio Solar Digital Radio AM/FM/Weather/Crank/Solar/ Flashlight/Phone Charger

“The CCRadio Solar Digital Radio is a huge upgrade over the previous model”

— C. Crane’s analog dial/display CC Solar Observer, still on sale for \$59.99 —

“with a compact, full-functioning design where no space is wasted,” said Adams.

“This radio has all the same features as the others, with the much-needed USB port embedded in the device,

which the previous model was sorely lacking. The sound quality and sensitivity of the radio is excellent, the lithium-rechargeable battery has a solid capacity, and this model has a large solar

charging panel relative to its size.”

Retail: \$99.90

Best feature: Wide range of attributes

Worst feature: Clunky design

Website: <https://ccrane.com/ccradio-solar/>



#1 and #2: Eton Scorpion II and Eton Sidekick

AM/FM/NOAA Weather Radios

“This is a toss-up,” said Adams, “because the two best radios are excellent but for very different reasons. Both are Eton models; I’ll leave it up to the reader to decide which is better depending on their needs.”

For backpacking or canoe trips, “The Scorpion II is the lightest and smallest of all the radios on this list, and it has all the best features including solar and dynamo charging, digital radio display, flashlight, rugged and solid build, USB port and rechargeable battery,” she said.

“The small capacity of the battery is a weak point if you need a lot of power, but given how small the Scorpion II is, this is a great radio for those trips where every ounce of weight makes a difference. It also has a strong metal clip on the top, so you can clip it to your backpack as you hike, and let the sun charge it for you.”

Retail: \$57.39

Best feature: Compact size

Worst feature: Small 800mAh battery

Website: etoncorp.com/products/scorpion-ii

Meanwhile, she ranked the Eton Sidekick as #1 for canoeing or leisurely camping.

“It has the strongest battery of the bunch, plus many more features than its competitors. The Sidekick is the same size as the Voyager KA500 and slightly smaller than the CC Solar Observer, but it has a digital display, USB port, alarm clock, all the same radio bands, and even has Bluetooth capability, which makes it unique among the radios I sampled. You could play evening music from your phone using the Bluetooth, then charge both of them with the device’s solar panel the next day.

“If you can spare the space, and you’re looking for a radio that can do everything well, this is the top choice. I would take it on a tandem or group canoeing trip, where I expected to be out in the woods for a while.”

Retail: \$99.99

Best feature: The Sidekick has everything

Worst feature: Large size due to 2600 mAh battery

Website: etoncorp.com/products/sidekick



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WFH is part of life at NPR, too

NPR is one of the most recognizable news brands in the United States. In the Radio World ebook "Remote Contribution," Audio Engineer Natasha Branch took our questions; here's one. Read our interview with Branch and NPR Technical Director of Master Control Michael Cullen in the ebook, which you can find at radioworld.com/ebooks.

RW What is NPR's primary forms of remote contribution and how do you accomplish them?

Natasha Branch: Before the onset of the pandemic, our remote contributors were overwhelmingly correspondents or guests on location. But over the past couple of years, most of our newsmagazine hosts and newscast anchors have worked almost exclusively from home.

Several of them have returned to NPR headquarters for broadcasts [as of May 2022], but many of them continue to use IP audio codecs to connect to our studios for preproduction and live shows.

Meanwhile, our correspondents are using a combination of IP audio codec hardware, AoIP mobile applications and fixed fiber paths for remote connectivity. We have also seen



Above NPR pool codecs. "NPR has purchased IP audio codecs from multiple vendors. We can connect natively with most remote users."

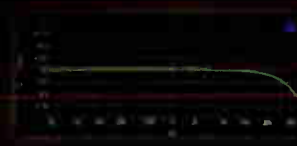
a massive increase in the use of consumer applications, including FaceTime, Zoom and WhatsApp, to reach domestic and international guests.

Though we have moved almost entirely away from ISDN, I should mention we still occasionally use it to accommodate contributors at NPR Member Stations and other public and private institutions. 🎧

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Writer



James Careless

Longtime Radio World contributor has written often about shortwave radio, consumer electronics and industry trends.

WorldDAB speakers predict car radios of the future

Experts speculate about longer-term evolution of infotainment systems



Watch the Session

To view the WorldDAB session, search "WorldDAB Automotive 2022 - Session 4" on YouTube.

What will car radios around the world look like in years to come? What role will they play in future multimedia infotainment systems? The topic was tackled during the WorldDAB Automotive 2022 conference in London this summer. While some of the conversation was Euro-centric, much of it applies to the in-car radio experience globally.

Betting on car radio?

Peering into his crystal ball, Radioline COO Xavier Filliol foresees in-car radio's development going through three phases.

"The first one is digitalization," he said. "The second is interactions with podcasts." And the third is direct interactive transactions between listeners and online business.

A case in point: Radioline is working to provision a software-based online betting icon on in-car radio systems.

"The idea ... is to be able to game and to bet on action for live sports events," Filliol said. But this version isn't based on betting money. Instead, players bet in order to win free pizza.

In-car betting isn't vaporware: "We are testing it with people and there is already one big major group in the U.S. that is interested," he said. This approach could also be used for in-car "coupons, with ticketing, with so many possibilities."

Multimedia for kids

Developed by Folder Media, Fun Kids is a digital radio service carried on DAB in the U.K. Today it is an audio service, but Matt Deegan, Folder Media's creative director of radio and podcasting, sees Fun Kids expanding into a multimedia platform that will engage kids wherever they are.

Five to 10 years from now, Deegan expects Fun Kids' audience to be "wearing Oculus Rifts (VR headsets) or having a version of that on a phone or a tablet," he said. The challenge for Fun Kids will be to provide compelling in-car content "that's probably free ... to take our children from a journey that might start in the home, or home from school, into the car and onwards."

One thing is certain: To keep Fun Kids viable as a commercial entity, this content will have to be compelling and attractive to kids ages 6 to 11. These in-car consumers are digital natives, Deegan said.

"They do not care what has been in the past. They do not care what a dashboard has previously looked like. They're about the here-and-now and what's available for them, and what they can do and what satisfies them.

Above
An artist's concept image of a futuristic car cockpit. The speakers at the WorldDAB conference described developments well beyond heads-up displays and touchscreens.

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"What's great about kids is they tell you exactly what they like and don't like, and they don't sugarcoat it," he added. "They'll turn something off and just move away to the next thing. They're the most honest audience."

Mind control

Jacqueline Bierhorst is project director at Digital Radio Netherlands. Asked for her take on car radio's future, she observed that "vehicles and radio are approximately 100 years old and have been married ever since ... What's happening in the last couple of years, and the 10 years to come, is mind-blowing."

For instance, automakers and radio broadcasters are forming strategic partnerships with tech giants such as "Google, Amazon, Apple and others," said Bierhorst. The advances being planned by these players are awe-inspiring.

"At last year's international show in Geneva, Mercedes even showed that they are now working on a concept car in which you could change radio stations, dim lights or control navigation simply by thinking about it."

When it comes to her own view of radio's in-car future, Bierhorst foresees DAB+ and web-connected hybrid radio playing major roles in the dashboards of the future.

"Interoperability through DAB+ combined with IP, including metadata directly from the reliable source of the radio stations themselves, is easily available for all car companies," she said.


"In the next one to three years, the radio experiences in all new cars should be hybrid FM, DAB+ and internet



Above

From left: Folder Media's Matt Deegan, Radioline's Xavier Filliol and Commercial Radio & Audio's Ford Ennals (moderator), with Digital Radio NL's Jacqueline Bierhorst on screen.

radio. This will be the 'base radio,' the platform on which new features should be built and enriched with radio broadcasters' podcasts, enhanced with brilliant visuals, (and) have perfect voice control: radio always plays what you ask for."

"Radio will get personalized," she concluded. "There will be different listening options for passengers and suggestions for content according to mood. And in the longer term with autonomous cars, radio will look even better, which could mean live video clips from studios, guest interviews, easier engagement in competitions or more commercial opportunities ... and the sound quality will even be better and more enhanced." 

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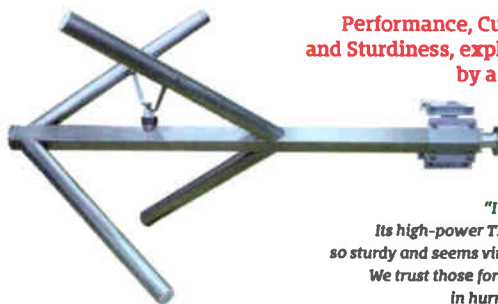
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Find more at www.amglo.com. The author welcomes emails to jfogel@amglo.com.

Why you can still count on xenon flashlamps

Choose tower warning lights for safety, reliability and compliance

It's a regular part of your job as a radio station engineer or technician: ensuring that the lights on your station's tower stay lit and flashing to remain in compliance of the FAA and FCC, and to increase safety for aircraft flying in your area.

Not much in this part of your career has changed over the years. However, the advent of LED lighting today is giving stations like yours a decision to make: Replace the xenon flashlamps with LED systems, which are much more expensive but also longer-lasting? Or remain with tried-and-true xenon flashlamps?

Let's consider a few things you might want to take into consideration before making a decision.

There are several reasons xenon flashlamps continue to be a smart choice for broadcast station towers today. For decades, these lamps have been counted on to emit bright flashes on towers that are 150–250 feet to 500 feet and beyond. Xenon flashlamp high-intensity strobes (also known as high-intensity obstruction lighting) continue to be crucial for pilots of all types of aircraft to be able to see these obstructions by day or night, depending on weather conditions or distance to an airport.

Xenon flashlamps last for many years before requiring a climber to go up and change them out. They last between 5 million and 7.5 million flashes (some reaching more than 10 million flashes!).

Furthermore, these lamps and parts for fixtures are readily available and easy to obtain.

There are currently more options for xenon flashlamps for high-intensity strobes than there are LED versions. The reason xenon flashlamps continue to be the first choice for lighting broadcast towers is because stations making a switch to LEDs often require replacing fixtures with very expensive systems designed only for LED.



Photo by Sergio Souza/pexels.com

With some radio groups having more than just one tower — often multiple transmitters in different places — this could be an expensive and time-consuming project for your budget. Towers with multiple lighting fixtures midway up would multiply expenses even further.

Additionally, you'll also need clearance with the FAA and FCC to make these changes.

When it's time to order new lamps, or when discussing the choice of lamps with your station's tower service provider, ensure that the lamps are certified and that they have been tested by the manufacturer. The lamp manufacturer should have years of stable production in the industry, and they should also be doing quality assurance inspections before you receive the shipment.

Like the programming that may be changing on your radio station, the lighting on the broadcast towers that transmits your station's quality programming may also change. For the time being, you can still count on dependable xenon lamps, which last for millions of flashes, remain in FAA and FCC compliance and don't entail the expense of replacing entire fixtures on multiple towers. 📻

Correction for "Remoting In"

Contributor Dan Slentz writes:

Thanks to reader John Drake, who emailed to comment about my article on "Remoting In" that appeared in the Aug. 3 issue. In part of the text I crossed up the terms VPN and VNC. One hides your IP address and the other is remote access.

The article correctly listed five free alternatives for remoting in, but below are

replacement choices for what we listed under "Five Paid." They include Splashtop, which John says is an excellent VNC. A big thanks to him for his note.

- Splashtop — Varies from \$5 to \$8.25 per month. <https://www.splashtop.com/>
- Real VNC / VNC Connect — \$3.39 to \$16.99 per month. <https://www.realvnc.com>

- AnyDesk — May be free for personal or non-profit, but \$9.90 to \$29.90 for commercial. <https://anydesk.com/en>
- ZOHO Assist — Like AnyDesk, might be free for qualified users. Otherwise \$10 to \$24 per month. <https://www.zoho.com/>
- TeamViewer — As low as \$6.95 for personal use to \$206.90 per month commercial. <https://www.teamviewer.com/en-us/> 📺

Writer
John
Schmidt

The author is a semi-retired engineer who has been a chief engineer, assistant chief, contract engineer and TV network engineer.

When it comes to support, caveat emptor!

Don't wait until after you purchase to start thinking about factory support

In an earlier letter to the editor, Michael Baldauf told of a disappointing interaction with the support department of a transmitter manufacturer.

When I worked at a TV network, we expected support from our vendors and manufacturers.

Contracts didn't always go to the low bidder; support history played a significant part in our choice of equipment. There were companies with whom we stopped doing business because of unsatisfactory support.

In times past, businesses in the professional equipment world provided free, ongoing phone support; if the equipment was in use 24/7, support was available at all times. In the event of a fire or tower collapse, vendors would even get people out of bed to ship replacement gear.

Today, while this may still be the case at some companies, many sell "pay for support" plans. The trend started with IT-oriented companies, often supporting corporate data centers. It spread in broadcasting to cover audio or video editing software, automation systems and such. An NPR station with which I was involved paid a considerable annual fee for support of its playout automation.

What is "full" support?

One transmitter vendor states in its advertisement: "Full Support: You can count on us ... A Support Level Agreement

is also available for customized support and maintenance." It's not clear how much support is free (24/7?) and how much you get with your (presumably paid) SLA.

Another vendor advertises "24/7 service and support." My experience with the company has been that its telephone service is free and forever; you may wait a bit for a return call if you call at 3 a.m., but they will call you back.

So, is it possible that the vendor who told Michael Baldauf to "send us an email" did so because the owner hadn't paid for an available support plan covering telephone support?

An equipment shopper or an engineer making recommendations should ask: What support is available for free, what's available with a paid contract, and what is not provided? Also inquire of friends at other facilities regarding quality of support.

There is another consideration. What level of redundancy is built into your facility?

If you have a redundant system, a backup transmitter etc., your facility may not need 24/7 support. You may have a more reliable operation and possibly save money on a support plan.

Making an investment

Is that 3 a.m. situation an emergency only because the owner was unwilling to invest in a sufficiently robust, redundant plant? With modern remote-control equipment, you, the chief engineer, can probably avoid that 3 a.m. trip to a redundant facility by switching to a backup from home or even automatically.

This is usually just a matter of money. Is the owner willing to spend to build a redundant facility with full remote/automatic control? Are you being adequately reimbursed for those overnight calls, particularly if you are on contract? How quickly are you really required to respond? If you've come to hate hearing your phone ring in the middle of the night, perhaps you should look to put your talents to work in a different, and perhaps better-paid, part of the electronics/IT world.

Last, if you believe you have a redundant facility, double-check the design to eliminate, or at least be fully aware of, single-point failures. Routinely run that backup transmitter on the air, not just into the dummy load, for several hours at least, not just a few minutes. Do routine under-load power tests for your generator by pulling the main switch and seeing what happens. Running the generator only with the "exerciser" unloaded is no real test.

Don't end up with self-inflicted wounds. 





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