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Your guide to radio technology

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Let RTP be your friend
What to know about this protocol for transport of real-time data.

Automation and traffic
The Buyer's Guide section features products from Arrakis, BE, CGI, DJB, ENCO, Marketron and RCS.

The right mindset
Gary Begin on nourishing a healthy and successful workplace.

Transmitters get smaller & smarter

Manufacturers talk about what's changing in the design and use of these key products.

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Happy 40 to Henry Engineering

The maker of small boxes has found some big success

Paul McLane
Editor in Chief

Henry Engineering is marking its 40th anniversary. Radio World's Elle Kehres recently asked founder Hank Landsberg how he came to start the company.

"I have always been interested in radio broadcasting, ever since I was a little kid," he said. "My first 'radio station' was the Knight Kit AM Broadcaster that I built when I was 11. My first job in radio was as a combo DJ/contract engineer at KMAX(FM) radio in Arcadia, Calif."

In 1974 Landsberg was hired as director of engineering for Drake-Chenault, which produced music programming for tape-based automated radio stations.

"I often had to build 'matching amplifiers' to interface consumer audio equipment to the professional gear in the

Continued on page 4

Continued from page 3

studios. Oddly enough, this device didn't exist as an off-the-shelf product."

After building several, he realized that radio engineers probably had the same issue; this gave rise to the idea for The Matchbox, an iconic radio product. It was followed by a device to control a Technics turntable remotely.

When D-C was sold and moved to Albuquerque, Landsberg stayed in California and made Henry Engineering his main focus.

"I'm still amazed that we've shipped over 60,000 Matchboxes. And I'm proud that nearly all of our products were 'firsts,' useful 'engineering problem-solvers' that nobody else was producing."

He mentioned the SixMix, a broadcast console that included a USB audio interface; the USDA, an audio distribution amplifier with stereo/mono switching; and an on-air tally light controller, the Superelay. More recent hits include the BackUPS, which automatically bypasses a failed or failing UPS unit so critical equipment keeps working while the UPS itself is being repaired or replaced.

"I'd like to thank everyone for their continued support and interest in Henry Engineering's products," Hank told Elle. "We'll keep 'em coming!" You can read the interview at *radioworld.com*, search "Henry hits 40."

Newswatch Rosenworcel Wants to Tighten EAS Cybersecurity

Tom Williams/Getty Images

In the interest of cybersecurity, radio and TV stations could soon have additional EAS requirements to meet.

FCC Chairwoman Jessica Rosenworcel in September said she was circulating a set of proposals among the commissioners that would "bolster the security of the nation's public alert and warning systems," including the Emergency Alert System and Wireless Emergency Alerts.

One idea she is floating is to require stations and other EAS participants to report compromises of their EAS equipment. Another would require EAS participants and wireless companies that participate in Wireless Emergency Alerts to certify every year that they have a cybersecurity risk management plan in place, "and to employ sufficient security measures to ensure the confidentiality, integrity and availability of their respective alerting systems."

She also wants to consider ways to improve the operational readiness of EAS, including looking at "the amount of time that broadcasters, cable providers and other EAS participants may operate before repairing defective EAS equipment."

If an NPRM is adopted, it would open the issue for public comments before any further FCC action.

adventtr/Getty Images

Writer
Paul McLane
Editor in Chief

Transmitters get smaller & smarter

Manufacturers are also integrating formerly "peripheral" functions

Established transmitter suppliers have introduced several new product lines this year, with most of the action coming in FM at lower power levels. What other trends are notable in transmitters? We asked several manufacturers.

More watts, fewest cubic inches

Jeff Welton, regional sales manager for the Central U.S. at Nautel, said, "I think that we are not quite finished seeing the 'miniaturization,' if you will, of transmitter products, as manufacturers attempt to put more watts into the fewest possible cubic inches."

He said this will bring challenges that users should be aware of, with respect to moving the heat out of the system, as seen with some of the compact transmitters developed in the past few years.

"However, improvements in device efficiency and airflow modeling are allowing comparable improvements in equipment design, allowing us to overcome those challenges and provide systems that run cooler and are more accessible from a maintenance perspective," Welton said.

"On the topic of technology helping to improve design, I believe we will also see more movement toward 'all-in-one' packages, where it is possible to put, as an example, automation, processing, remote control, HD Radio, etc., all in virtualized or containerized packages running on the controller in the transmitter."

He said fewer pieces means fewer potential single points of failure, but it also means a greater need for redundancy, or caution during configuration, because failures can result in a higher probability of an off-air situation with less ability to patch around (again, depending on configuration).

"It will change how we do things but will offer power and flexibility that we could not have even dreamed of 10 to 15 years ago," Welton said.

"We could potentially have almost the entire facility housed virtually in the transmitter chassis, to provide a complete off-site backup in the event of a studio failure, for one thing. If there is one thing that COVID taught us, it is that we have the tools to provide our customers more options to help them deliver their content today than they ever had before and it is our job to show them how we can help them leverage that freedom."

Nautel's recent product introduction is its VX Series of FM transmitters, with 11 power levels starting at 150 Watts up to a just-added 6 kW version.

Consolidating peripherals

David Houze, Ecreso product manager for WorldCast Systems, said that during the pandemic, radio organizations reinvented their studio architectures to simplify remote operation and maintenance.

"Virtual and cloud solutions emerged to replace hardware equipment, resulting in a scalable, cost-effective, easy-to-deploy and highly available architecture."

Expect the same trend at transmission sites, Houze said.

"FM transmitters must evolve to be capable of hosting new features and remove peripheral equipment at the transmitter site. This transformation has already started with the 'premium' manufacturers. Their transmitters already integrate hardware modules that replace physical devices," he said.

"Manufacturers must go one step further to offer to the market a unique solution that can replace all the peripheral equipment with software features embedded into the transmitter."

Houze said WorldCast's AiO series reflects this direction. "This new transmitter is the first on the market that embeds an audio over IP decoder, sound processor and full RDS encoder as a software."

He said the benefits include economies in operating expense, lower costs of components and a smaller footprint. "Maintenance is drastically reduced; only one product has to be verified instead of four as in the past."

Learn More

For a deeper dive, read the free ebook "Trends in Transmitters 2022" at *radioworld.com/ebooks*.

> **"Manufacturers must go one step further to offer to the market a unique solution that can replace all the peripheral equipment with software features embedded into the transmitter."**

AoIP to the site

Ted Lantz, product line manager for GatesAir, said, "With the challenging economic environment, reducing operating expenses continues to be the trend and focus in FM transmitter designs.

"Maximizing the overall efficiency, reducing the overall footprint using the latest RF power devices and highest efficiency components are the strategic thoughts that go into the latest designs for FM transmitters."

Such components, he said, include very efficient power supplies, variable speed controlled fans and low-loss combining techniques.

"Other features that assist in reducing expenses are providing FM transmitters with integrated options, such as AoIP, audio processing and GPS receiver for SFN applications."

GatesAir in August introduced a line called Flexiva GX, analog FM transmitters in power levels up to 10 kW.

Dennis Pieri, CEO of Bext Corp., says like all industries, broadcast transmitter makers are always looking to innovate.

"At most times we're talking of small incremental improvements, mostly refinements, like higher efficiency, friendlier user interface and things of that sort," he said.

"But there is one specific strong trend that took off a while back and seems to continue to expand at a fairly rapid pace. That trend is transporting the audio content to the transmitter site by audio over IP.

"While there are still many stations using more traditional methods such as microwave STLs, where stations have a reliable high-speed internet connection available at their transmitter sites, sooner or later they start inquiring about digital audio transport through the internet, which makes perfect sense."

He said Bext offers such capability on its broadcast transmitters, including most if not all of the multiple, often competing, digital audio transport platforms.

"Bext feels that in the interest of being less confusing for the broadcasters who approach this type of audio transport for the first time, it would be better if the wide array of audio over IP choices was a little less fragmented and if there was better compatibility among them," Pieri said.

"That said, this trend is definitely a positive one and we believe the broadcast industry will continue to benefit from it."

Bext makes solid-state FM transmitters across a range of power levels, but Pieri says there has been particular interest of late in its XL 6000, a 6 kW transmitter in a rack-mountable enclosure that occupies only four rack spaces.

Transmitter, heal thyself

Perry Priestley, CEO of Broadcast Electronics, notes the challenge stations face in finding qualified engineers who are both reliable and available.

Especially in that context, "Complete remote visibility 24/365 of the operational status and health of your transmitter is an absolute must," he said.

He laments that radio decision-makers often focus on the initial equipment purchase price, with little consideration of the long-term cost of ownership.

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"Running a radio station is a day-to-day operation, and unexpected costs can make the difference between making a profit or going broke."

Priestley said that with the cost of engineering services increasing, he believes making transmitters "self-healing" will be the next big leap.

"Deeper diagnostics, as already available in BE-Elenos transmitters, will become paramount. Incorporating AI and Big Data into the internal monitoring and diagnostic systems, coupled with greater redundancy, will allow transmitters to diagnose problems, fall back to redundant systems, and notify operators of needed repairs before the transmitter suffers noticeable failure."

Priestley said a key goal for future development is to build transmitters that can be analyzed and repaired by a non-technical person.

"Imagine diagnosing and safely resolving an off-air emergency with simple, intuitive, alerts and a plug-and-play module. Our goal is to restore full operation in a matter of seconds by any member of the radio station staff, without the need for detailed component or board-level repair."

Important current features, he said, including user-friendly web-based remote control, SNMP and remote firmware updates, which are key to reducing costly site visits. Reliable audio over IP, backup audio playout systems and integrated audio processing are also important. Users, he said, should also look for vendors with locally manufactured, stocked and available spare parts.

"The initial cost of a transmitter and its operational efficiency are certainly important considerations, but the 1 or 2% difference between options or a big color screen is not going to matter when you're off the air. The truly important factors are your on-air time and minimizing any low-power events. Transmitters that support fast, intuitive, low-cost problem diagnosis and recovery is the evolutionary trend that is happening now."

This spring BE introduced the STXe-5 and STXe-6 models to its STXe lineup.

Making the case for LiSTNR

Writer
James Careless

LiSTNR is an Australian free online/app entertainment platform that launched a year and a half ago. Southern Cross Austereo Head of Digital Product Chris Johnson described it in a session at Radiodays Asia in Malaysia in September.

"LiSTNR is a platform that provides Australians with an all-day audio companion with content to suit any need," Johnson said. "It carries our 99 broadcast radio stations, 25 exclusive specially curated music stations and 108 original podcasts all created by us in Australia, as well as many more from our partners."

Why go to all the trouble when Australian content producers could post on Spotify or some other global platform?

"For us, it's really about looking at how we plan to compete, not just now, but in the future ... We really believe in controlling our catalog. We need to control our distribution and decide when and where we make something available."

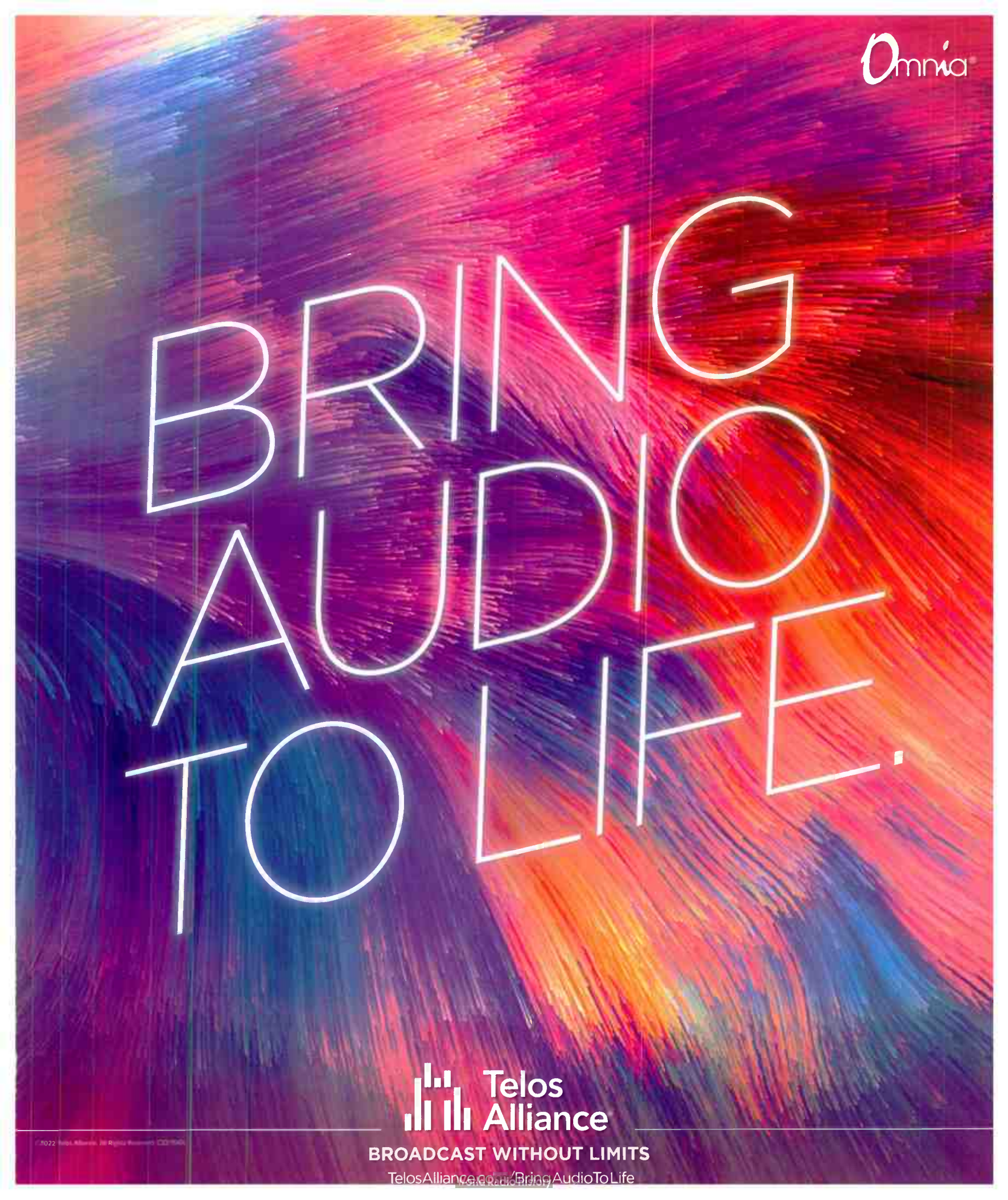
Within four months of being launched, LiSTNR's members finished migrating listeners from various Australian streaming platforms onto this single site. "Now we're transitioning into our second horizon. This will see us continue to grow the offering and the capabilities of the platform driving increased, consumption, and listenership from our audience and continue to accelerate and diversify our digital audio revenue streams."

LiSTNR is basing its efforts on the pillars of personalization, content discovery and successful commercialization to keep it free for listeners.

Personalization is based on listeners' personal data so they can select content from a refined list. AI and machine learning helps the organization better understand listeners and predict behavior.

The pitch to advertisers is that the audience is addressable, it can be targeted by age, gender, location and device. A company called NumberEighty uses mobile telematics data and other information such as what Wi-Fi the listener is connected to, to deduce where the user is when they're listening.

Johnson said LiSTNR next is exploring adding photos, graphics and video. "We're increasingly noticing that the boundaries between audio and video are beginning to merge, particularly in the podcast space."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Useful reader comments on Workbench topics

More options for quiet in-window air conditioners

John Bisset
CPBE

The author has spent over 50 years in the broadcasting industry 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.

Got a Tip-Top Tip?

Workbench runs on your good ideas. Email *johnpbisset@gmail.com.*

In the June 29 issue, we discussed Oslo inverted-U window-mount air conditioners. Their design reduces indoor noise.

Aaron Read is IT and engineering director for Rhode Island Public Radio. He hasn't used Oslo models, but based on his work with similar products from Soleus, he offers a caveat: condensate drainage.

In the first generation of these units, the inverted-U design required a separate drain tube be run through a hole you had to drill below the window to the outside. The drainage issue was the major reason why Aaron decided to buy four Midea 8,000 BTU U-Shaped Air Conditioners, Model MAW08V1QWT (*www.midea.com/us*).

It uses a similar concept, but the "U" is not inverted, and everything drains easily to the outside.

Aaron says he loves these units, they work really well and are amazingly quiet. The design lets you open the window while installed. Features include smartphone control via iOS and Android apps, and voice control with Amazon Alexa and Google Assistant.

They are a bit heavier than comparable 8000 BTU window units, and installation is not terribly intuitive. But overall, he says, they're almost as good as a real central-air system.

One thing to keep in mind with any window-unit A/C is that the drum fan inside will collect dust/dirt over time each summer. It is a real pain in the neck to pry apart the Midea to extract the drum fan; it's an even bigger pain to use soap, hot water and cotton swabs to laboriously clean the inside of 120+ little fan blades.

But it must be done; every autumn there is a lot of dirt buildup on the blades, and if you don't clean it you'll not only lose efficiency but you'll get a funky smell in short order.

Cousins, identical cousins

Brad Jones of Stokesdale, N.C., sent a clarification on vintage microphones described in the July 20 column. The photo above shows two nearly identical condenser mics. On the left is the RCA 4A, and to the right, the look-alike Turner Model 1 condenser microphone.

The Turner has an upgraded Western Electric element and was manufactured in Cedar Rapids, Iowa. The RCA

Right
A promotional image for Midea U-shaped air conditioners.

Above
Similar microphones manufactured by RCA and Turner.

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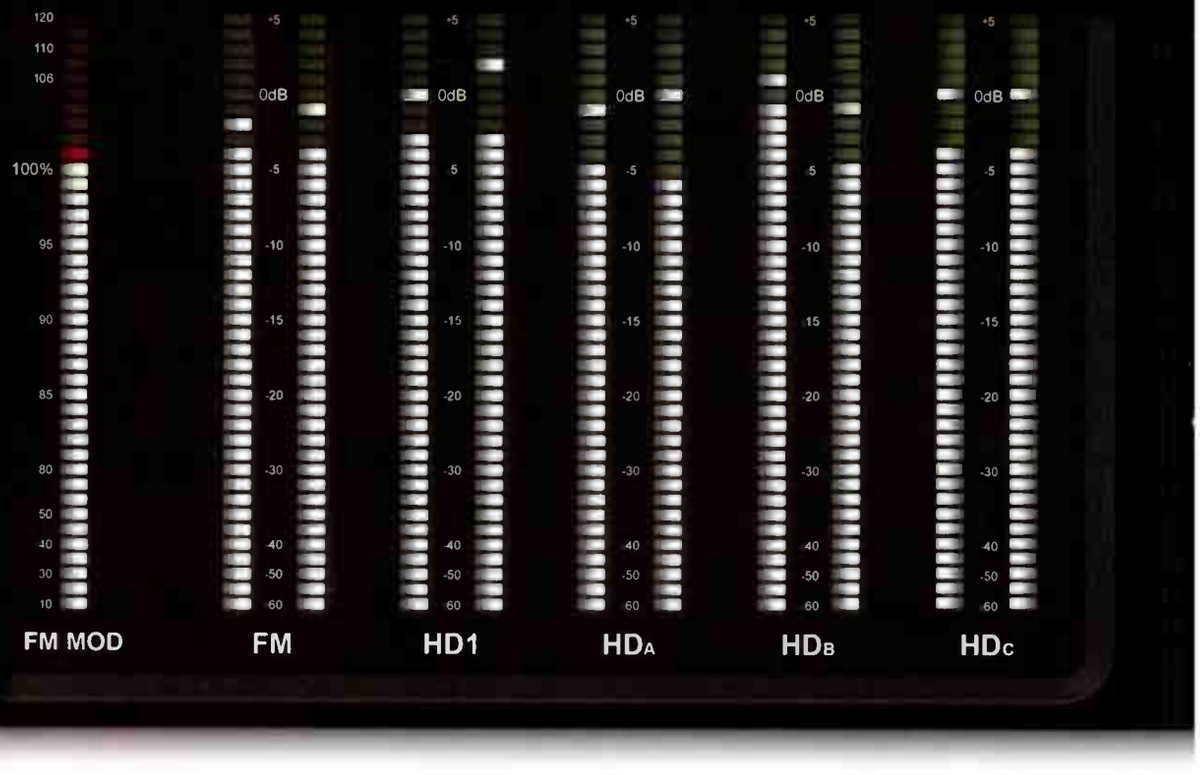

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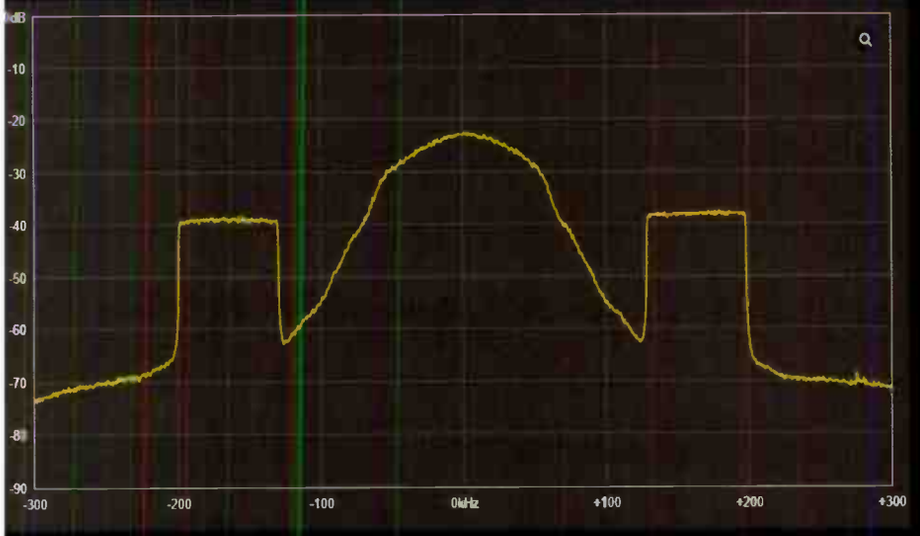

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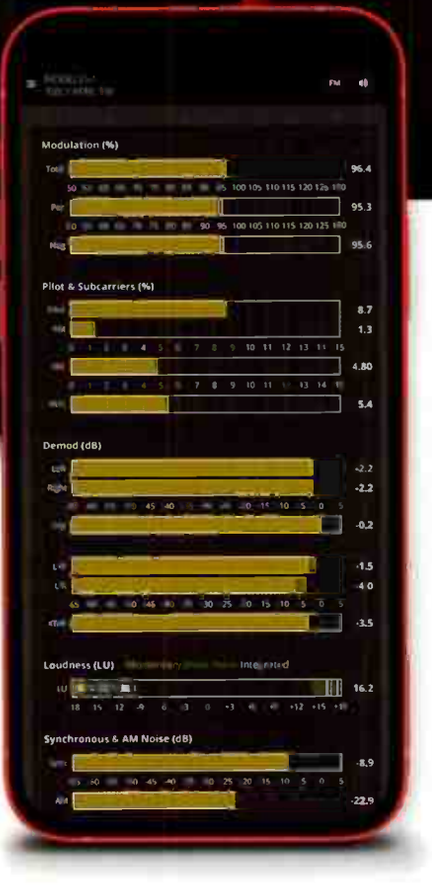

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uses a different stand and metal case, which includes a dimple on the top as well as an ID plate.

By the way, eBay has these for sale for between $3,000 and $4,000. Thanks, Brad, for the clarification.

A shocking experience

Michael Shovan, CBTE, is with fd&t Technical Services in Newburgh, N.Y. He weighed in on topics from our April 27 Workbench.

Like Frank Hertel, he had the shocking experience of innocently touching an Austin Ring transformer on his station's main tower and got a brief yet long-lasting RF burn. The lesson prompted lifelong caution when dealing with anything electrical. Michael believes the experience engaged his obsessive-compulsive tendency to always "look, point and say before doing."

> **Michael believes the experience engaged his obsessive-compulsive tendency to always 'look, point and say before doing.'**

He also described the "fun" of working with hard-wired telephone networks. Befriending visiting telco techs, Michael would listen for "secrets" and tips that helped him troubleshoot — and sometimes correct — minor problems.

Every year, one station did a fundraiser "call-in" special where they would run the old 50-pair cables and jackboxes from the service panel to the studio. He learned the trick of dialing 9-9-0, which would return an automated voice that identified each pair's Central Office number.

The owners of another station decided to install a "managed" long-distance system to control long-distance costs, requiring a code to be dialed before the long-distance number was entered. One of the telco technicians showed Michael the "secret" code to bypass the long-distance restriction — in the event of equipment problems, of course.

It wasn't long before the news director found out and demanded the code so his staff could get away with murder making free long-distance calls. Michael refused, knowing the owners of the station would notice a spike in the long-distance bill charges, and Michael would get an appropriate "spike" in the least-comfortable spot. Oh, the good old days!

Right
Block inrush current limiter, model ESG 5.

"Block" it out

It is said that the world seems to be shrinking thanks to technology. This certainly has been true for Workbench over the years.

Most recently we received a letter from Nicolin Salis in Switzerland, expressing thanks for Dennis Sloatman's contribution in the Sept. 1 issue about limiting inrush currents using NTC or negative temperature coefficient devices.

Nicolin is a broadcast engineer who has four 27-inch monitors on his office desk. He experienced the same inrush current problem as Dennis did. In his case, the large inrush current repeatedly destroyed the switch on the power strip, requiring regular replacement!

Dennis' solution was simple and inexpensive, but if you're short on time, Nicolin suggests a ready-to-use answer. He recommends the ESG 5 model from Block. Nicolin isn't sure if this device also works using NTC, as the inside is filled with potting compound. But the ESG 5 solved the problem. Having had success with his office desk monitors, Nicolin added an ESG 5 to his workbench, with its many measuring devices.

Allied Electronics Communications offers several Block models. Go to *www.alliedelec.com* and enter "Block USA inrush current limiter" in the search field. A specifications PDF can be found at *tinyurl.com/3awcbspe*.

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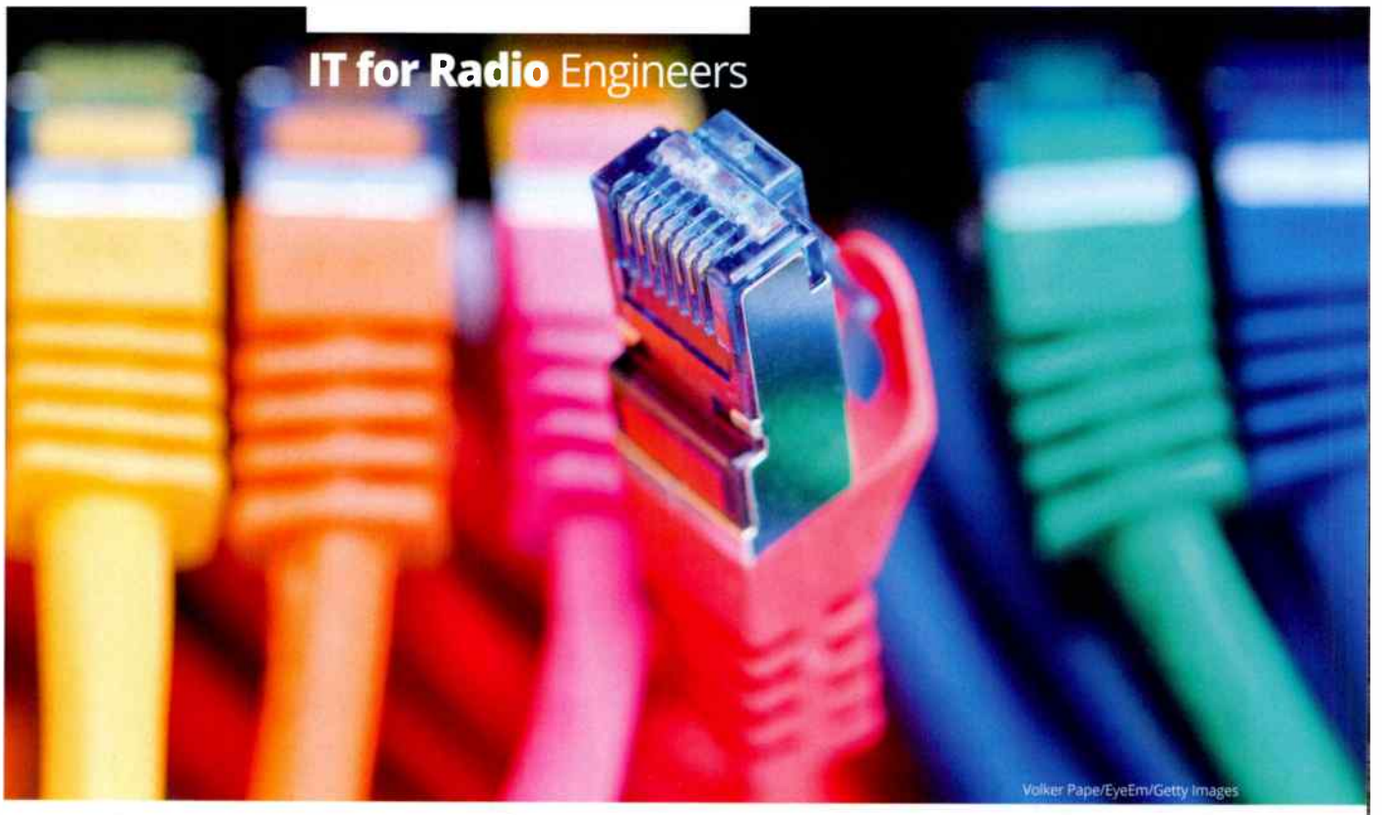

Writer

Wayne M. Pecena

CPBE, 8-VSB, AMD, ATSC3, DRB, CBNE

Member, SBE Education Committee

RTP should be your friend

What to know about this protocol for transport of real-time data

This is Part 4 of a series. Find previous parts at http://radioworld.com/digital-editions starting with the Aug. 17 issue.

The transport protocols utilized within the Internet Protocol (IP) family are the foundation of host-to-host communications in our broadcast station network.

Most broadcast engineers are familiar with the Transmission Control Protocol (TCP) and the User Datagram Protocol (UDP).

TCP is known as a reliable transport protocol due to the acknowledgement handshake and possible packet re-transmission occurring between a send host and the receive host. UDP is commonly described as a best effort or non-guaranteed transport protocol. UDP offers the advantage of low latency as time is not taken up with any host-to-host handshake exchange or packet re-transmission.

Potentially less familiar is the Real Time Protocol. RTP is essential to the audio over IP (AoIP) systems we use today in our broadcast plant that requires low latency and minimal packet loss. Whether Dante, LiveWire, Wheatnet or whatever your favorite system may be, RTP is in use.

RTP is outlined by the Internet Engineering Task Force Request for Comment #3550 and is defined as the "common protocol for the transport of real-time data."

RTP is actually transported by UDP by encapsulation of the real-time payload data with associated header information. The RTP Encapsulation diagram shown here illustrates the encapsulation process beginning with the RTP payload data with added RTP header through the UDP segment to an IP packet and finally to the Ethernet frame which is in turn transmitted as bits across the network.

The RTP header is relatively simple and contains several data fields describing the payload data. The header is at least 12 bytes in length, but may be longer based upon the use of optional extension header fields.

Several of the header data fields are worthy of describing in greater detail including packet sequence numbering, timestamping and payload type.

The packet sequence number is used to check for any missing packets and reorder packets that may be received out of the proper order. Packet loss is not usually found in the Local Area Network (LAN) environment, but may occur in a more complex network. If packets are missing, no correction is attempted as the UDP transport that RTP rides on does not offer any retransmission. Correction is left to a higher layer such as the AoIP application to mask or re-create the missing packet information. The packet sequence number begins with a randomly selected 16-bit number by the send host and is simply incriminated with each packet sent. The use of the initial random selected sequence number is to minimize potential cybersecurity attacks. The sequence number can be thought of as a sequential serial number for each transmitted packet.

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*.

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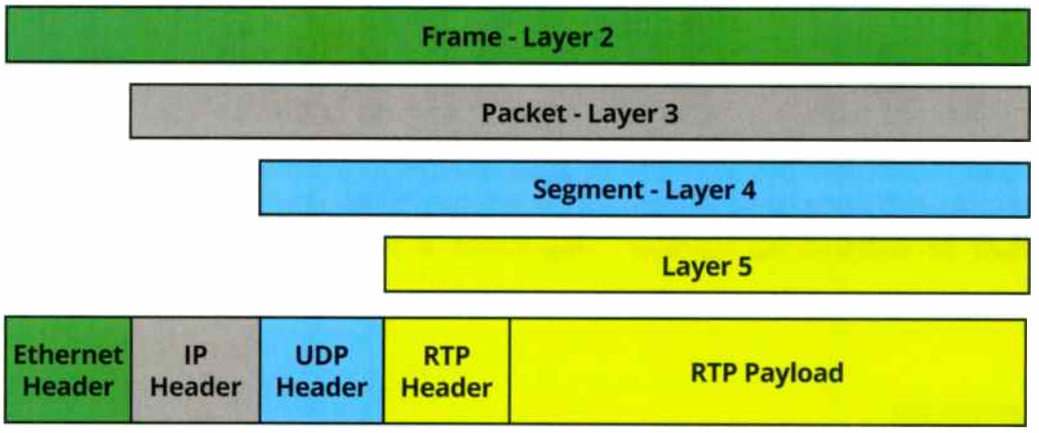
The packet timestamp is utilized to determine jitter or the correlation of the timing of received packets by the receiving host and to synchronize companion streams such as an audio stream and associated video stream. The 32-bit timestamp indicates the sampling of the first octet of the RTP data packet. The timestamp is simply a count or a number of ticks rather than an actual clock time.



Above
RTP Encapsulation

The payload type (PT) field allocates seven bits to specify the type of data in the payload. This indicates the format of the data in the payload field or the source codec used to the receiving host. The Internet Assigned Numbers Authority (IANA) coordinates the RTP payload type registration. A unique number is used for the PT such as "4" indicating a G723 audio codec, or a "34" indicating a H.263 video codec.

Additional header data fields include the frame identifier or marker bit to indicate a significant event such as the start of audio or in the delivery of data packaged in logical units such as a frame in a video data stream. The contributor identifier field may be used when multiple RTP sources are available in a session. If a single source is involved, this field is set to zero (binary 0000).

Closely associated with RTP is the Real-Time Transport Control Protocol (RTCP), which works hand in hand with RTP allowing the receiving host to provide feedback information to the sending host. RTCP is described in RFC # 3550 along with RTP. RTCP does not transport any payload data and only conveys transmission performance metrics from the receiving host to the sending host.

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About Buyer's Guide

The Buyer's Guide section appears in every other issue, focusing on a particular category of equipment and services. It is intended to help buyers know what's on the market and gain insight into how their peers are using such products.

RCS says customers want more cloud options

Generali: Radio workflows are evolving away from devices

What do you think is the most important trend or change happening in radio automation?

Philippe Generali: The most important overall trend is dematerialization. The same way pictures and music started being made of bits 15 years ago when the first iPhone was released, we see critical functions in radio automations not needing specific hardware anymore.

Sound processing, electronic ratings, console mixing are evolving from devices to pure cloud-based software, the same way our Zetta automation system is evolving into a cloud-based playout with no specific hardware needed on premises. Where and how people work with automation systems for content creation and presentation — the transition to a virtualized environment has really pushed what you can do from afar. The customer demand for these new virtualized environments seems to be scaling up at surprising rates.

There was a time when "remote" broadcasting was primarily only used for the car dealer or local game broadcasts. Now many customers are operating in this "remote model" 24 hours a day, seven days a week.

Zetta was a pioneer in this space over a decade ago and continues to be the leader in remote workflow feature sets.

Above
Philippe Generali

Right
Zetta2GO running on an iPad.

RCS was early to market with the message that automation systems could be run from the cloud, for disaster recovery if not more. Can you update us on how the market is responding to that message?

Generali: Clients are quickly adapting to cloud options and are clamoring for more. Based on this feedback we are customizing cloud-based automation and workflows for our clients.

What was once only a simple emergency playout and backup solution now boosts bidirectional content contributions such as voice tracking. This allows users to break free of the traditional VPN-oriented remote contribution and allow users to simply use a two-factor sign-in to lay in voice tracks into the cloud. This content loaded directly into the cloud can now be migrated back to a traditional system for insertion and playout. This multi-point solution allows the ultimate in flexibility and control over where and how you want to remotely work.

More Info
www.rcsworks.com/

What else should we know about what's going on at RCS or in the automation space?

Generali: Software is evolving quickly with workflow architecture changes in the broadcasting space.

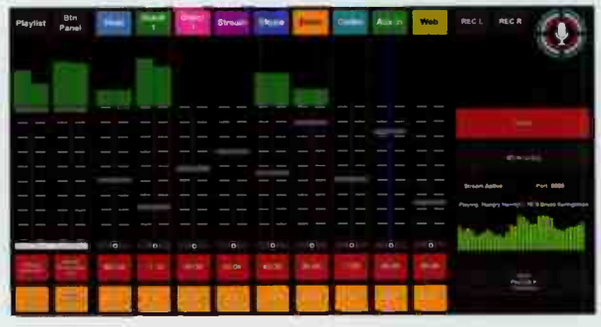
It is quick and relatively simple to place a virtual machine on a cloud service, run legacy software and call it a "cloud solution." While by definition it may be a cloud solution, that approach does not scale well because it relies on an infrastructure that was designed and intended for traditional hardware platforms and really isn't "cloud-based."

A true cloud-based design and platform should not revolve around the constraints of an OS environment, rather it should be based on a containerized architecture that can scale up and down dynamically based on need and loading conditions. Users would be best served to understand and compare the foundations of the solutions.

RCS is committed to a fully featured platform in the cloud and will always build upon a base of cloud design and architecture for best-in-class performance.

Tech Update

DJB Radio Studio
Builds on the Button Box



DJB Radio Studio is based on the company's popular Button Box "infinite cart-wall" app.

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

The on-screen virtual mixer provides per-channel VU and lets you mix the local cart-wall or play-stack audio with an 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 has 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. You can 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 included playlist editor, play-stack, cart-wall and "live-to-tape" voice tracking.

It also has applications for morning shows, talk, sports and other uses.

Info: www.djbradio.com

"The Next Round" deploys Marketron Traffic

Sports podcast uses the platform to streamline ad workflows and monetize

Fifty-seven percent of Americans have listened to a podcast; 80 million say they are weekly listeners. With so many topics, from true crime to famous faces lending their voice to the medium, there's a podcast for everyone.

Sports talk radio has long been a fan favorite, and podcasts take that to the next level, as is the case with "The Next Round," which launched in August 2021 and deploys Marketron Traffic.

Radio veterans took the leap on the venture to create a community to discuss all things sports, with a focus on the Southeastern Conference, the famous SEC. Marketron said the team had the talent and most technology in place but lacked a way to streamline ad workflows and monetize the podcast.

Operations Manager Jon Lunceford approached another radio traffic provider familiar with monetizing podcasts. "Their answer was that it would take six months to get up and running, and we needed to launch by the beginning of college football season," Lunceford said.

The alternative would have been an entirely manual workflow with spreadsheets. That would have been time-intensive, prone to error and not scalable. The sales director at "The Next Round" encouraged Lunceford to contact Marketron.

More Info
www.marketron.com

Run a podcast like a station

"The key to scheduling ads and billing for them was to simplify it and run it as a station setup in Marketron Traffic," according to the software company.

"The podcast runs live on weekdays from 9 a.m. to 1 p.m. After the live airing, it loops for the next 20 hours. That means one spot has six plays in a 24-hour cycle."

The log looks like a station and accommodates both spots and live reads. The traffic system works as it would with broadcast, streamlining

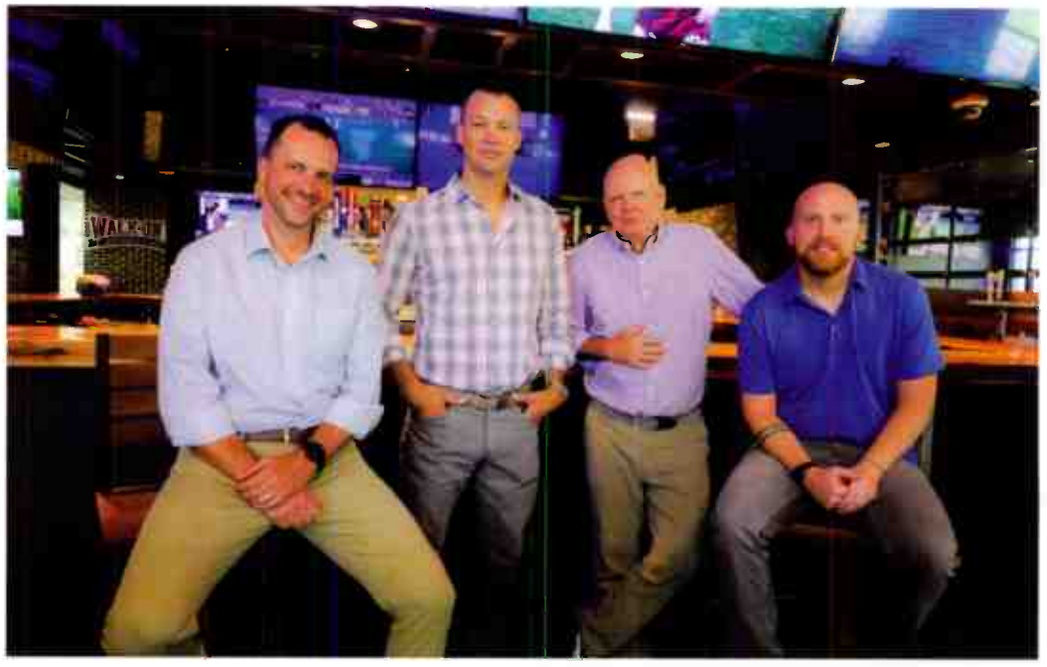
the sales, execution, billing and reporting of advertising.

They use the system as a traditional radio station would, but things are only live for those four hours. On holidays or other breaks from the show, they don't have to do anything special. Lunceford and others can enter orders and collect the necessary information for fulfillment, continuity, invoicing and reporting. The traffic system also integrates with their automation system.

One of the biggest differentiators for Lunceford was access. The system is cloud-based, as opposed to many platforms that are only on-premises. "It's easy to make changes on the fly from anywhere," he said.

The integrated system helps with billing, too. "We have no problems with end-of-month reconciliation and can send electronic invoices to customers."

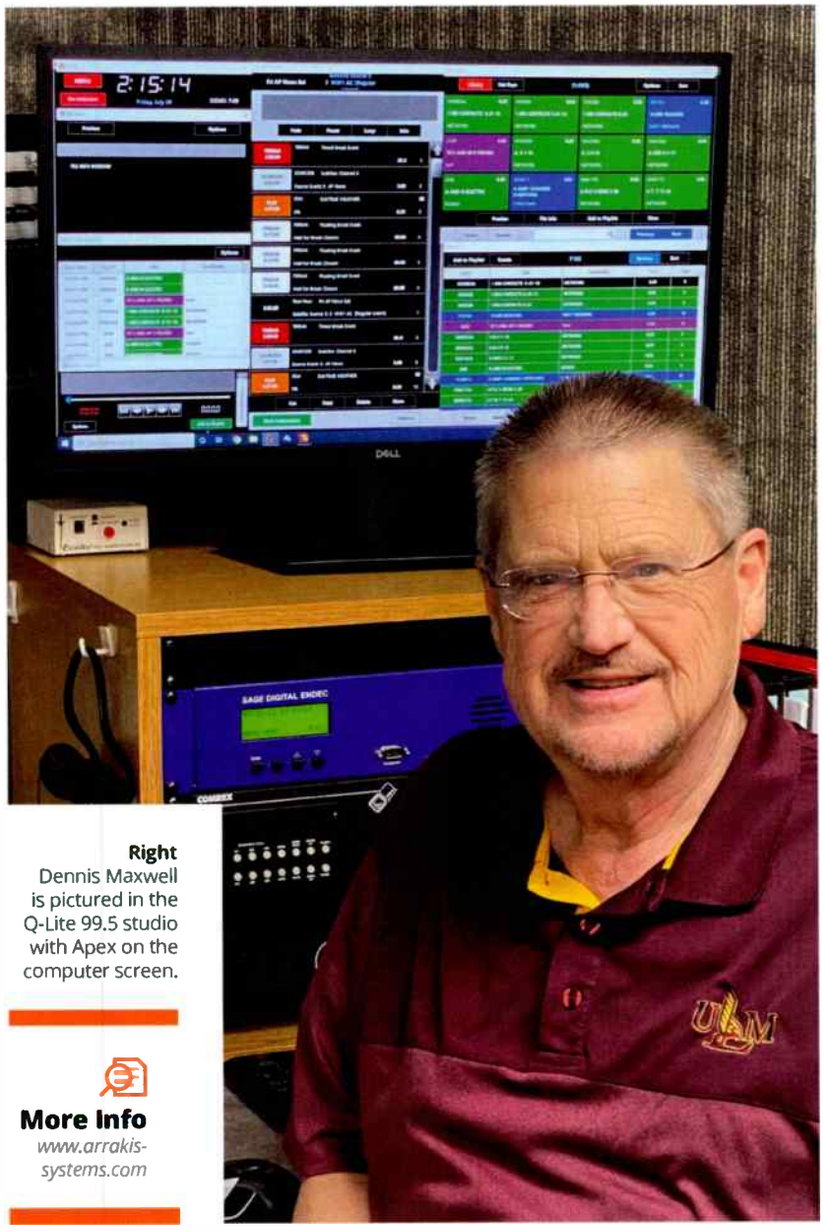
The implementation was accelerated to meet the August debut. It was ready to go in 15 days, thanks to a determined onboarding team and Lunceford's traffic system knowledge. He reports that the operation was profitable in only 90 days and that "The Next Round" podcast continues to grow and gain more advertisers beyond its metro area.



Above
From left: Ryan Brown, Lance Taylor, Jim Dunaway and Rockstar.

R&M Broadcasting chooses Arrakis

Dennis Maxwell and team will use Apex at all four stations



Right
Dennis Maxwell is pictured in the Q-Lite 99.5 studio with Apex on the computer screen.

More Info
www.arrakis-systems.com

It was in the mid-1990s when the radio station that Dennis Maxwell was working for decided it was time to transition from turntables, cart machines and live deejays, to satellite automation.

"Management at the station chose the Arrakis Digilink II system," he recalled.

"It was quite an adjustment for all of us, especially for those who had been spinning records since the early 1960s. Prior to starting college in 1971, I had worked a couple of years at this same station while still in high school in 1969. So I was pretty set in my ways as well. However, I was eager to try something new."

He found the Digilink II easy to learn and dependable. "Plus, it allowed us to be on the air 24 hours a day."

Fast-forward to 1999 when Maxwell helped form R&M Broadcasting. It hit the air Sept. 1 that year with a Lite Rock station, Q-Lite 99.5/KHMB(FM).

> **"It was an easy decision to go with their flagship automation system, Apex."**

"We never considered any automation system other than Arrakis. We started out the Digilink IV, and transitioned to Digilink-Xtreme in 2006," he said.

"This system worked like a charm. We seldom ever had any issues with Xtreme, but if we did, the customer support staff was always quick to respond to help resolve the problem."

A few years ago Maxwell began operating the other three stations in town, which were using another automation system.

"Earlier this year my staff and I decided it was time to upgrade all four stations to the same system. Based on my almost 25 years of experience with Arrakis, it was an easy decision to go with their flagship automation system, Apex."

The stations are in the process of transitioning to the new system. "I can tell we are going to love it. Arrakis Customer Success Specialist Melissa Freeman has gone above and beyond to help us install the system, and train us to use it."

DCL helps Leavens serve jazz fans

ENCO DAD is deployed at WZUM and at PubMusic

Pubcasting industry veteran Chuck Leavens uses multiple ENCO DAD systems to run jazz-formatted WZUM in Pittsburgh and, separately, the nation's largest nationally syndicated 24x7 jazz "white label" music service.

DAD's database architecture along with its DAD Command Language, or DCL, has allowed him to write scripts to automate various aspects of his nationally distributed continuous radio service, building a virtual footprint of contributing hosts from around the country.

The host shares their content files via the internet, which are then curated by Leavens in Pittsburgh and automated out of the NOC at NPR headquarters in Washington. ENCO says coast-to-coast "virtual operations" were part of this user's plan well before the pandemic began.

Leavens says he is impressed by the automation system's reliability; outside of a failed hard drive, he said, only the local power company has had an adverse impact on his programming.

According to ENCO, "What's amazing about PubMusic's programming is how they enable local stations to brand the music as their own. At precise times, PubMusic inserts proper DAD-generated logic commands to alert location stations downstream when to automatically insert their own promos, underwriting, lead-ins and so forth, all backed by internationally recognized content curated by PubMusic."

Local WZUM in Pittsburgh also is a customer, with its own local-interest stories, program and host voiceovers.

More Info
www.enco.com

"Another key piece of ENCO's DCL is how it enables Chuck to program DAD to shift time across four time zones by stacking playlists, such that each local station gets the right content, every time," the company says,

Then he built a custom checking routing to ensure branches are reset properly to their timeframes, and to make playlists self-correcting.

Tech Update

BE Goes to Eleven

Broadcast Electronics describes the new AudioVault 11 as "the most progressive version of our automation system to date." 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," BE wrote.

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 audio assets via the cloud to all your locations as needed. And AudioVault now offers integration with BE's music and traffic system partners.

AudioVault 11 is available starting with a single workstation software package of $4,000.

Info: www.bdcast.com

Tech Update

SABC Deploys **CGI** Platform

Earlier this year, CGI announced the rollout of its dira! solution across eight of the South African Broadcasting Corp.'s 19 radio stations, with the rest to follow this year.

"The contract, won via a competitive tender process, has seen the SABC invest in CGI's full dira! Solution Suite, including Onair Player, Highlander, Scheduler, Startrack, Orion and Broadcast Report," it wrote.

"The proof of concept and subsequent implementation by CGI has achieved the SABC's goal to enable dira's use throughout the company's radio environment, from sales, sport, news and current affairs to education and drama."

Nada Wotshela, group executive for SABC Radio, was quoted saying that a particular benefit was the installation of a Commercial Player, which plays radio ads within a specified window of the booked time.

"This will assist with accurate reporting and also ensure that skipping of advertisements which leads to revenue losses is a thing of the past," Wotshela said.

Info: www.cgi.com/mediasolutions

BROADCAST EQUIPMENT EXCHANGE

Writer

Gary Begin
Sound Advantage Media

Adopt the right mindset for radio

Thoughts on nourishing a successful radio workplace

I've been lucky to work with some of the most talented people, on and off air, over 40 years. I have been managed by and have managed people with widely different personalities and styles of communication. Yet they share a goal: to create great radio, ratings and revenue, making a real difference to society while making lots of money in the process.

Yet there's something radio needs that is crucial to its success: teamwork. I'm not just talking about bonding with the boss on the weekend by climbing a mountain together. That has its benefits, but I'm referring to the attitude of the staff of a successful station — "the mindset on the road to successes." This mentality is fascinating — to watch in action, and to be part of.

Create a positive mood

Don't assume stations succeed simply because they have the most expensive music research, most controversial breakfast show or most spectacular prize giveaways. Their key attribute is that staff members treat each other well.

If you walk through the studio as a guest, do you feel a positive vibe? Are people smiling and laughing?

Are they saying "thank you" for help? Are they saying "yes" rather than "no"?

Are they making noise rather than being quiet? Are they moving around rather than sitting still? Are they talking about anything other than work?

Being treated well generates "happiness" and is one of the greatest inspirations for creating great content.

However, there can be issues within departments. Sometimes things don't go according to plan. Tensions do rise and tempers do flare. Resolving these depends on the ability to get through it and live to fight another day.

Staff attitude is something to watch out for. Listen for the phrase "It's not my job." This is essentially territorial — a person doesn't want to encroach on another's area of expertise or department, afraid that the boss may notice and make the other person's job redundant.

Several issues arise from such thinking.

If you promote unity only through words like "we're a team, working together to achieve the same goal," you're encouraging each staff member to think, "When I take care of my personal responsibilities, the rest will take care of itself. Our team will unite and work smoothly."

But when people focus primarily on their own work, they're avoiding conflict and interaction, stifling the sharing of ideas. Radio cannot function without a healthy form of conflict that promotes innovation through compromise. This does not mean arguing or yelling.

Some managers fail to realize that because of this mindset, their staff doesn't look after "the remaining 5%" anymore. That last 5% can make all the difference, as in a factory where the final step is for someone to put the price on the box, pack it and post it to the customer.

But the person who's doing the packaging may make an occasional mistake. We need to look after the last step too.

Define your terms

Radio staff should be allowed to say what they think, even when another's department is involved.

When something doesn't go as planned, colleagues should feel free to say something in a constructive way. Team members should not be afraid to speak up when they see a mistake committed or about to happen.

As a radio manager in such situations, I would ask: "Why didn't you say something before? Then we could have avoided this." Often, the reply would be: "It's not my job."

Can you imagine if everyone, including surgeons or pilots, thought this way? Society would collapse. So eliminate this mindset. Encourage team members to speak out without fear of encroaching on someone's territory.

This helps to define the true meaning of unity and teamwork, and is easy to implement and monitor. This open approach can be the basis of a truly successful radio station.

The author is founder and president of Sound Advantage Media, a radio/podcasting consulting firm. He has more than 40 years of professional radio broadcasting and voiceover experience. Email garybegin10@gmail.com.

Earl Manus/Getty Images

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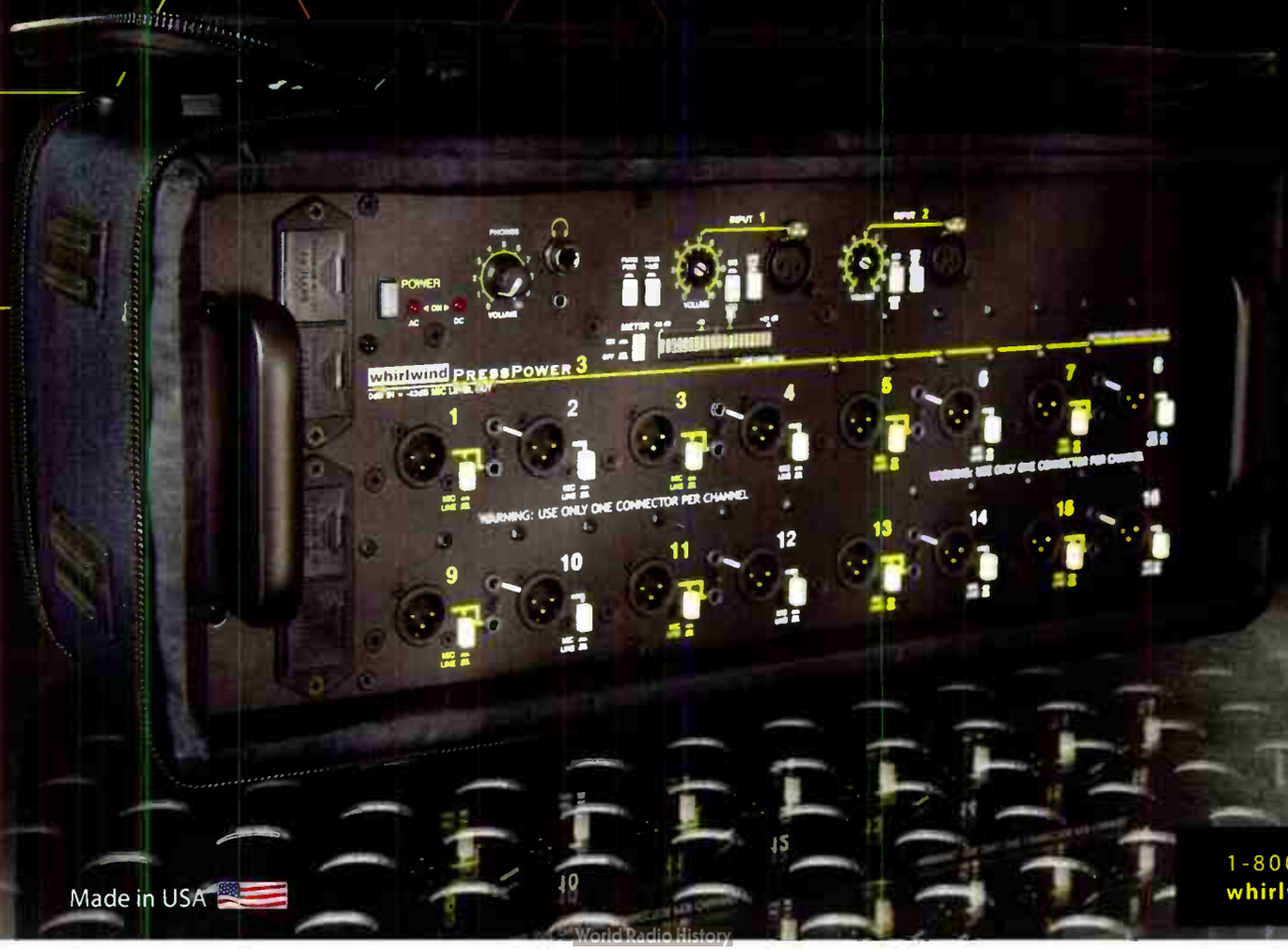

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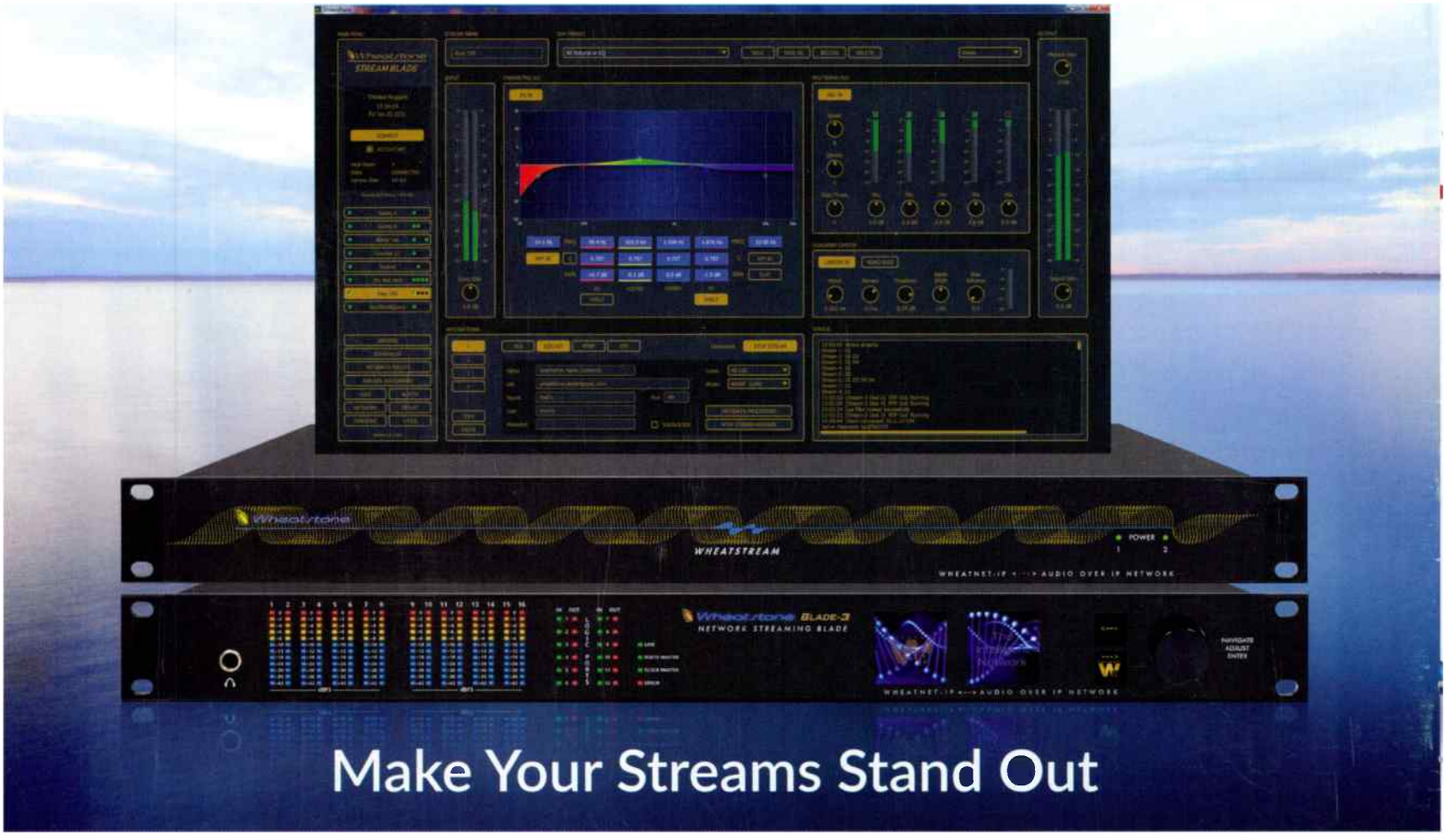

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