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For Cathy Hughes, Information Is Power

She will be honored with induction into the NAB Broadcasting Hall of Fame

BY RANDY J. STINE

At the outset, Cathy Hughes didn't envision a storied broadcast career, yet there were early signs of her notable determination.

For example, as a single mother and first-time station owner, she slept on the floor of a studio with her young son until the station turned a profit.

Hughes now is widely recognized as a media pioneer, and she will be honored by the National Association of

Broadcasters with induction into its Hall of Fame during the NAB Show in Las Vegas in April.

"I've never thought much about awards. I've never done anything hoping to be recognized for it," Hughes said. "But it's certainly a blessing to be honored by your peers."

Hughes founded Radio One, now known as Urban One Inc., and built the broadcast group with properties that mainly target African-Americans via radio, television and digital platforms.

(continued on page 5)



The State of the Radio ID Jingle

Though not the cultural icons they once were, jingles and "production aids" remain a staple

BY KEN DEUTSCH



Dave Bethell of TM Studios, shown at his work area in Los Angeles.

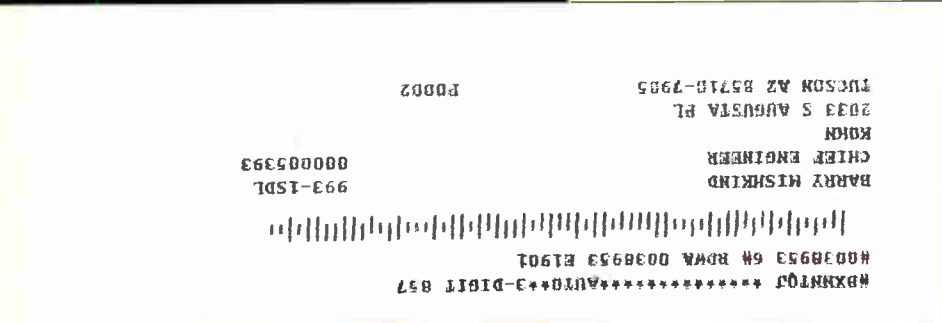
If a program director from the 1970s or '80s were dropped into a radio station in 2019, he or she would not recognize the sound of today's jingles, nor even the process of buying them.

Long gone from most jingle studios are large vocal groups, analog mixers and razor blades, not to mention the necessity of sending reels of tape through the mail.

"There is a definite change from the big 'wall of sound' vocal groups," said Los Angeles-based Dave Bethell, creative director as well as a jingle writer/producer for TM Studios in Dallas. "We use smaller groups, younger groups and often just solos or duets."

Another big change in jingle production is where the vocal and instrumental

(continued on page 8)

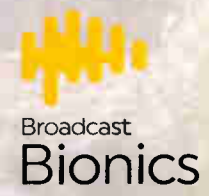


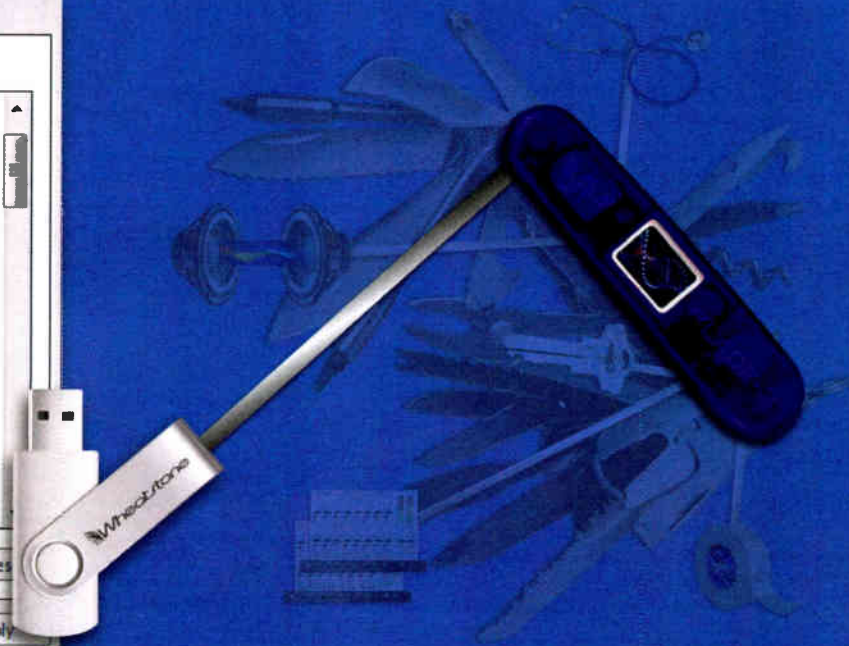
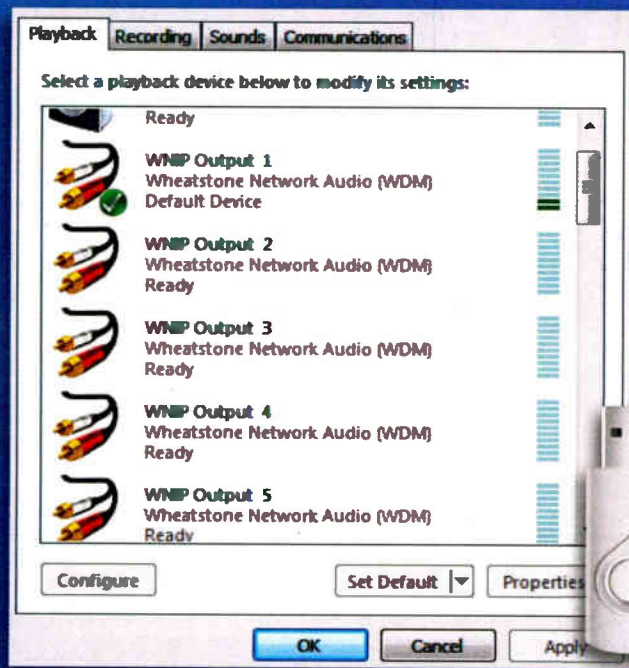
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Why Training and Mentorship Matter

Chris Tarr returns to the SBE board and takes on the industry's recruitment challenges

BY SUSAN ASHWORTH

Chris Tarr was influenced at a young age by watching his older brother working as a radio morning host. Now Tarr, who opted for a technical career path, is stepping up to serve on the board of the Society of Broadcast Engineers.

The seat opened when Kim Sacks, CBT, resigned her position on the board for personal reasons. Tarr will also succeed her as the chair of the SBE Mentor Committee.

Known as an engineer with "boundless energy for broadcast engineering" (so said SBE President Jim Leifer), Tarr, who by day is director of technical operations for Entercom Milwaukee/Madison, Wis., will bring a string of certification acronyms to the position — among them CSRE, AMD, DRB and CBNE — as well as a list of new priorities for the SBE Mentorship Program.

Tarr spoke with Radio World about the recruitment challenges the industry faces in 2019, as well as his own beginning in radio.

Radio World: How did you get started in broadcasting? What do you find appealing about this community?

Chris Tarr: I actually got "bit" by the radio bug when I was nine years old. My older brother was a morning show host and I went to visit him. As soon as I stepped into the studio, I was hooked!

I started working in radio on the air at 16, but at the same time I learned all I could about the technology and spent lots of time helping out the engineers.

Not only do I love being able to work with such creative people, I also love that I can use technology to remove the barriers that exist when these people try to create compelling content for their audiences.

I also very much enjoy the camaraderie that exists between broadcast technicians. I've yet to meet someone who wasn't willing to drop everything to help a peer when needed.

RW: What are you most looking forward to when it comes to participating as a member of the board?

Tarr: This is actually my second time around on the board. I was elected to a term on the board in 2006 and chaired the Technology Committee. Just like then, I look forward to representing the many hardworking technology professionals in the field.

We often fight an uphill battle trying to get stakeholders to understand the challenges in bringing new technicians into the field, and how well trained technical professionals can do more than just fix what's broken. We can do many things to improve operational efficiencies as well as the bottom line.

RW: What is the SBE Mentorship program? How will you be involved?

Tarr: The Mentorship Program was developed by the SBE to address the decline in numbers of technical

professionals. There really isn't much in the way of training or education for new professionals, especially in the broadcast disciplines. There are a lot of great IT people out there who are starting to look at a career in broadcast, but there isn't a real obvious educational track. Just as the SBE took the lead in professional certification, the society looks to take the lead in education and training.

Kim Sacks was the chair tasked with creating the Mentor Committee and has done a spectacular job in launching the program. I signed up from the start to be a mentor, and have two mentees that I am teaching. With Kim leaving the board, I will take over as chair and work on growing and improving the program.

RW: What steps are you planning on taking to help further the Mentorship program success?

Tarr: One of the things I'm working on right away is personally presenting the next webinar for the mentees on proper business conduct. I'm also working with the committee on creating a more formal training program with the mentors and mentees when they join the program to make sure that this excellent benefit is used to its fullest potential.

Not only do I love being able to work with such creative people, I also love that I can use technology to remove the barriers that exist when these people try to create compelling content for their audiences.

It's important that the mentees know how to ask the right questions, and for the mentors to be sure that they're forming a relationship that hopefully lasts a lifetime. I also want to create opportunities for "skill-set" mentors — people who may not want to take on a full mentorship role but could be a resource for mentors and mentees on specific topics.

RW: What do you think are one or two of the biggest issues that SBE should be tackling as we head into 2019?

Tarr: Spectrum management is always on the radar. The cellular and ISP industries have a voracious appetite for RF spectrum. The SBE has been an excellent voice for the broadcast industry in front of the FCC and other organizations, making sure that we're heard. That is only going to become more important.

I also think that we have a very real looming crisis in terms of the workforce. Technicians are leaving the industry faster than they can be replaced. It won't be long before we're going to see jobs unfilled across the country.

(continued on page 4)

NAB Will Shift Exhibit Schedule in 2020

Association changes a big part of its show structure for the first time in decades

BY PAUL McLANE

In 2020, the National Association of Broadcasters will change the basic schedule pattern of its annual spring show. The exhibit floor will be open Sunday through Wednesday, with booths opening at noon on the first day. The final show date is Wednesday.

The schedule of this year's show is not affected.

It is a tweak likely to create a lot of buzz among the attendee and exhibitor community at next month's show. It's a big operational change, the first modification in the show's basic weekly structure in years if not decades, and will have impact on both show planners and those who attend.

Attendance has been in the range of 90,000 to 100,000 in recent years, and there are many thousands of people more who build staff plans, travel costs, meetings, shipping arrangements and other major decisions on assumptions about a basic Monday to Thursday format.

As the show has evolved, observers say, the weekend prior has become a much more popular time to hold both official and non-official affiliated events. A number of technical and other sessions take place over the weekend, for instance; and a few non-NAB events (for instance, in radio, the Public Radio

Engineering Conference) are held as early as the prior week; meanwhile, the final Thursday of the show saw apparently slower booth traffic.

On the session side, the only current Thursday programming is for the Broadcast Engineering and IT Conference. Plans for the BEITC schedule next year have not been finalized, an official said.

NAB Executive Vice President of Conventions and Business Operations Chris Brown said the decision to change the show schedule was based on feedback from the NAB Show "community at large."

"As the industry continues to undergo enormous change and disruption, we remain committed to evolving along with it to deliver the best value for exhibitors, attendees and partners," he stated in an announcement. He said the change provides people an opportunity to attend outside of the work week, and aligns exhibits with the show's existing education programs.

2020 NAB SHOW FLOOR HOURS

Sunday, April 19: 12 p.m.–6 p.m.

Monday, April 20: 9 a.m.–6 p.m.

Tuesday, April 21: 9 a.m.–6 p.m.

Wednesday, April 22: 9 a.m.–4 p.m.

The show will still be in its longtime home in the Las Vegas Convention Center in 2020.



TARR

(continued from page 3)

RW: What is it about the SBE that makes it a vital component in the broadcasting industry?

Tarr: As I mentioned, there is no organization more active in protecting our interests with the FCC than the SBE. So many times threats to our spectrum have popped up and the SBE was there speaking up.

I'm also a deep believer in the SBE certification program, especially with the FCC no longer having a licensing requirement. It's a fantastic way for non-technical people to immediately know that they're dealing with a knowledgeable technical professional when they see those certifications.

RW: Do you have any other key goals you'd like to share?

Tarr: Being appointed to the board is a bit different than being elected. I really appreciate the confidence that SBE President Jim Leifer and the executive committee have shown in me by their appointment. I plan to show them and our members how passionate I am for our industry and the professionals in it, and what the future holds for us.

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HUGHES*(continued from page 1)*

"Cathy Hughes is a truly remarkable broadcaster and entrepreneur whose contributions continue to greatly influence and drive our industry," said Gordon Smith, NAB president and CEO.

"REPRESENTING BLACK CULTURE"

Now age 71 and the chairperson of Urban One, Hughes adds the award to a list of noteworthy accomplishments.

She was the first woman to own a radio station that ranked number one in a major market, and the first female vice president and general manager of a station in the nation's capital. She was the first African-American woman to head a publicly traded company, when Radio One went public in 1999.

She is the first radio station owner inducted to the NAB Broadcasting Hall of Fame. In addition, Hughes won the NAB's Distinguished Service Award in 2001; it is given to broadcasters who have made a significant and lasting contribution to the American system of broadcasting.

Hughes has helped shape black entertainment in the United States. Urban One, based in a Silver Spring, Md., is today the country's largest distributor of urban content. Its maxim is "representing black culture." Hughes' son, Alfred Liggins III, is CEO. The company operates 43 FM stations, 12 AMs and 13 FM translators in 15 urban markets.

Urban One also owns TV One, a television network serving more than 59 million households, along with Cleo TV. In addition, the company provides social content and entertainment through digi-

NEWS

tal platform iOneDigital; and it has a controlling interest in Reach Media Inc., which operates syndicated programming including "The Tom Joyner Morning Show."

"When I envisioned a career in radio, I was only hoping for a chance to reach people with a message of self-determination, enlightenment and inspiration. My motto has always been information is power. I've tried my best to set a good example and inspire others to achieve whatever it is they dream of," Hughes said.

business and have responsibility for its success. Thankfully they were kind enough to pay back my entire investment in full when I left."

In the early 1970s she moved to Washington after accepting a post as lecturer at the School of Communications at Howard University. Several radio jobs followed, including a long stint as general manager at the school's WHUR(FM), where she helped pioneer the smooth jazz Quiet Storm format that, in NAB's words, "revolutionized" urban radio.

The beginnings of Radio One can

When I envisioned a career in radio, I was only hoping for a chance to reach people with a message of self-determination, enlightenment and inspiration.

— Cathy Hughes

Born Catherine Elizabeth Woods and raised in Nebraska, she began her broadcast career in 1969 at KOWH(AM) in Omaha, the first black radio station in the city, as a 21-year-old "gofer" — but one with a special interest in the property. She invested \$10,000 in the radio station from an inheritance.

"I had this money after my father passed away," she recalled. "The radio station owners at the time were not looking for investors, but I volunteered the investment and figured having a stake in the company would afford me more opportunities to learn the radio

be traced to the purchase of WOL(AM) in Washington in 1979 for nearly a million dollars. There is an infamous story that she and her husband Dewey Hughes were turned down by 32 lending institutions before securing a loan. She confirmed that it happened.

"Quite frankly, at the time the lending institutions didn't recognizing the value of radio properties and the potential of the media industry. The banks were more interested in whether I planned to have more children, which had nothing to do with my ability to pay back a loan.

(continued on page 6)

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HUGHES

(continued from page 5)

So it was difficult to find the money," Hughes said. Soon thereafter the couple divorced, with Cathy Hughes buying out her second husband's share of WOL. Difficult financial times ensued, with Hughes at one point losing her home and being forced to live at the station.

"I was young, black and female. Being a woman of color, I didn't have any role models to consult with," she said.

Hughes hosted a morning show on the radio station and pioneered another innovative format known as "24-hour Talk From a Black Perspective." The company added its first FM radio station, WMMJ(FM), in Washington in 1987.

Urban One grew dramatically in the span of several years after going public in 1999, adding 35 radio stations from 10 owners in markets like Los Angeles, Atlanta, Dallas, Houston and Philadelphia.

"It was a very frightening time. We went from family owned to being a public company with a new set of criteria and shareholders to answer to," she said. "It was also a daunting time in radio. You had to grow or go. There was so much consolidation when the FCC lifted the number of stations a single group could own. We learned so much during that time. It was the launching of a whole new era in radio."

FINANCING CHALLENGES

Hughes laments the lack of minority radio owners, which she blames partly on lending practices.

"Things have changed now. If you come in looking for financing and you don't have major markets included, it's hard to get financed," Hughes said.

"If you want financing for a station in Slippery Rock, Ark., you'll have a hard time finding it, unless you have a station in Alabama and Georgia to go along with it. Lending policies and philosophies have changed dramatically because of new media and the change in listening habits.

"When I started in radio, we competed against other radio stations; and now we have multiple platforms competing against streaming services, all the apps out there and satellite radio. There are so many other choices."

The current pool of African-American entrepreneurs looking to enter broadcast is shallow, she says, thanks to two major obstacles: "Securing the money to get in and then securing the advertising to stay in."

An FCC incubator program, designed to support new and diverse entrants in radio by encouraging larger, experienced broadcasters to assist small, aspiring or struggling ones, is helping, but more can be done.

"At one time, there were more advocates for diversification at the FCC," she said. "There has to be a commitment and it has to be a priority. It's tough right now. When I talk to people there is a growing skepticism about radio. That's a deterrent for lenders, who are now very sophisticated with their practices. And folks question the opportunities

out there now."

Hughes, who also serves on the BMI board of directors, is still a big believer in radio and remains optimistic about the future of Urban One.

"The industry is changing for sure. But change makes us all adjust and grow. Black radio in this country is especially strong. We did extensive research a few years back, and black radio ranked only second to the black church when it comes to credibility in the news and entertainment we distribute. I know we are very responsive to the needs of the communities we serve."

Urban One will keep adding stations to its ranks — it purchased WTEM(AM) in Washington in 2018 — when opportunities arise, she said.



"The Cathy Hughes Morning Show," WOL(AM) in 1986

Jason Micoic Johnson

FAMILY BLESSING

Hughes said the most fulfilling experience in her 50-year career to date has been seeing her son, Alfred, follow in the business. He was named president in 1989 and is now CEO.

"I look at the Mays family and the Beasley family, and really see it as a blessing when the next generation embraces your dream and then take it to a higher level," she said, referring to two other notable American broadcast clans.

"It's gratifying to see him have the same vision and be even more excited than me about growing the company. I only have one child but I'm so very proud of him," she said. "I kiddingly tell people that Alfred runs the company, and I run Alfred, and my job is 10 times harder than his."

Hughes is a philanthropist and supportive of black causes. The Catherine L. Hughes and Alfred C. Liggins III Foundation gave a multi-million dollar gift to Howard University recently. She continues her family's work and legacy at The Piney Woods School in Piney Woods, Miss., which was established by her grandfather in 1909 and is the largest of only four African-American boarding schools in the country.

She states in a profile on the company website, "I am a champion for the hungry and homeless, a mentor to countless women and a staunch advocate to empowering minority communities."

Hughes still resides in Washington, where she advocates for gaining statehood rights for the district. She also is chairperson of the Congressional Black Caucus Foundation.

Comment on this or any story to [radioworld@futurenet.com](#) with "Letter to the Editor" in the subject field.

RADIO MEMBERS OF THE NAB BROADCAST HALL OF FAME

2019	Cathy Hughes	
2018	Elvis Duran	
2017	Delilah	
2016	Mike and Mike	
2015	Kevin & Bean	
2014	Steve Harvey	
2013	Dave Ramsey	
2012	Bob Uecker	
2011	Gerry House	
2010	Ron Chapman	
2009	Vin Scully	
2008	Larry Lujack	
2007	Rick Dees	
2006	Dick Purtan	
2005	Jack Buck	
2004	Mormon Tabernacle Choir, "Music and the Spoken Word"	
2003	Scott Shannon	
2002	Dick Orkin	
2001	"Cousin Brucie" Morrow	
2000	Tom Joyner	
1999	Wolfman Jack	
1998	Rush Limbaugh	
1997	Wally Phillips	
1996	Don Imus	
1995	Gary Owens	
1994	Harry Caray	
1993	"Grand Ole Opry"	
1992	Larry King	
1991	Douglas Edwards	
1990	Charles Osgood, Hal Jackson	
1989	Red Barber, Nathan Safir	
1988	Roy Acuff, William B. Williams	
1987	Robert Trout, Gordon B. McLendon, Robert Todd Storz	
1986	Mel Allen, Earl Nightingale	
1985	Casey Kasem, Fred Palmer	
1984	Red Skelton, Bob Elliot and Ray Goulding	
1983	Chester Lauck and Norris Goff (Lum & Abner), Benny Goodman	
1982	Edgar Bergen, Don McNeill	
1981	Ronald Reagan, Kate Smith	
1980	Bing Crosby, George Burns	
1979	Paul Harvey, Orson Welles	
1978	Guglielmo Marconi	
1977	Jack Benny	

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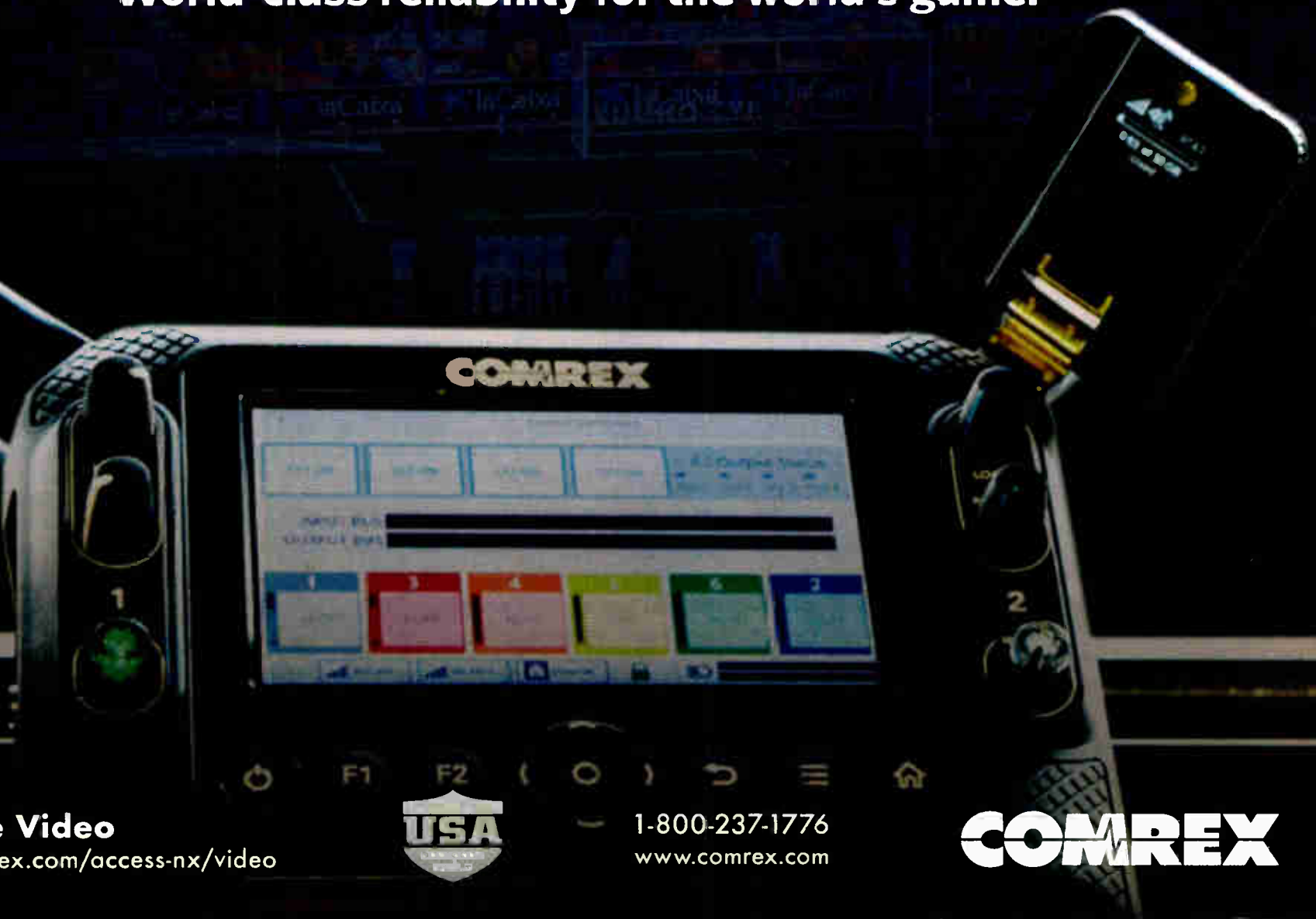
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Engineering the Future of Broadcasting

FCC chairman provides an update on several key broadcast technical initiatives

FCC Chairman Ajit Pai spoke in late February to a meeting of the Association of Federal Communications Consulting Engineers. He updated its members on the transition to ATSC 3.0, the post-incentive auction repack and interference involving FM translators. The following is excerpted from his remarks as released by his office.

It's great to be with the AFCCE. It hasn't even been three months since I was last with many of you. In late November, I was honored to join you at the National Press Club for the presentation of the E. Noel Luddy Award to the FCC's Hossein Hashemzadeh.

Hossein is just one example of the great engineers who work at the commission. And that group of engineering talent is critical to the FCC's success on a bunch of issues. That's why, under my leadership, the commission has taken steps to ensure that it will have the engineers it needs to confront the technological challenges of the future.

For years, the FCC has had an Honors Attorney Program to attract top young legal talent. But it didn't have an equivalent for engineers. That's now changed. To ensure that our engineering resources are regularly restocked, and to attract the best and brightest, we've established an Honors Engineering Program. This program brings recent engineering graduates to the commission. It got off the ground last year, and I'm pleased to report that we have just finished hiring a new class of Honors Engineers who will start later this year.

Replenishing the ranks of the FCC's engineers will only grow in importance

as the technologies that we regulate become more complex. So if you know of any engineers looking to get into public service, send them our way!

UNSUNG HEROES

Of course, I can't recognize the importance of the commission's engineering talent without thanking AFCCE for its sponsorship of the Luddy Award. When it was given to Hossein Hashemzadeh last year, we were also joined by the FCC's Rudy Bonacci, who won the 2017 Luddy Award, and, of course, FCC legend and Luddy recipient John Reiser, who is still active with AFCCE and coordinated today's luncheon.

Hossein and Rudy and John and people like Julie Knapp may not be household names, but people in all corners of this country have benefitted from their public service. So, thank you for all AFCCE has done over the years to make sure that the unsung heroes of the commission get some well-deserved and long-overdue recognition.

Of course, AFCCE's relationship with the commission goes beyond the E. Noel Luddy Award. We value your expertise on the engineering challenges that underlay many items we consider.

For example, back in 2012, when I was a commissioner in the minority, I called for the FCC to launch an AM Radio Revitalization Initiative. We issued a Notice of Proposed Rulemaking the following year, and AFCCE submit-



Chairman Ajit Pai is shown at the meeting of the Association of Federal Communications Consulting Engineers with John Lyons, its president.

of performance rules and Methods of Moments proofs that AFCCE members are among the few to understand. Your efforts make a real difference, as I see and hear about whenever I visit an AM radio station in this country.

Your work as consultants also contributes to more efficient operations at the commission, as you help to make sure that applications and waiver requests to the commission are in order. To borrow a line from Rudy Bonacci: "We help you, so you can help us." Sort of a digital variation on the Jerry Maguire-Rod Tidwell relationship.

INTERACTIVE EXPERIENCE

This afternoon, I'd like to briefly walk through the latest developments on three key issues where our interests overlap: the transition to ATSC 3.0, the next-generation broadcast television standard; the post-incentive auction repack; and interference involving FM translators.

You'll notice that each of these topics involves broadcasting. During my

Under my leadership, the commission has taken steps to ensure that it will have the engineers it needs to confront the technological challenges of the future.

— Ajit Pai

ted both comments and reply comments regarding our proposals. I very much appreciated your feedback, which helped us develop the initial set of AM radio reforms that the FCC unanimously adopted in 2015.

And in 2017, we made further changes to our AM radio technical rules, addressing topics such as partial proof

more than six-and-a-half years on the commission, my passion for a vibrant broadcast business has been no secret. And a successful broadcasting business requires both technical innovation and commission rules that are based on sound engineering principles.

In November 2017, the commission first authorized broadcasters to use ATSC 3.0. I recognize that many of you in this room worked directly on the ATSC 3.0 standard, so you already know better than anyone the great promise of this new technology. Notably, ATSC 3.0 is the first transmission standard to combine the advantages of broadcasting and the internet. And it enables enhanced and innovative new features to consumers, such as Ultra HD picture and immersive audio, enhanced emergency alerting, and improved accessibility options, to name a few advances.

Now, the rules took effect in July 2018, and the FCC has been working hard to ready itself to accept Next Gen TV license applications. Some IT work still needs to be done in terms of designing a new form in our Licensing and Management System, but our Media Bureau expects that the database chang-

(continued on page 12)

JINGLES

(continued from page 8)

also continue to use jingles. "They find that jingles are still the best way to insert imaging between two songs, because a spoken voice is often perceived by the listener as an interruption, whereas flowing from one musical element to another isn't, even if the element is a jingle."

Some stations, he said, do now prefer smaller vocal groups with occasional solo lines.

"This does mean that we've added several 'new' solo voices to our talent roster," he said. Also, "Many jingle packages now include special effects on the vocals to emphasize certain words, and emulate the production values heard in much of the contemporary music. The music tracks are less orchestrated than they were 10 or 20 years ago, and the messaging is now more concise with lyrics such as 'more music all day at work' instead of the much longer lines of the past like 'the best variety of the '80s, '90s and today.'" (Hear

examples at www.jingles.com/jam/radioids/StreamLine2.)

Wolfert noted that a new flavor of soft-AC called The Breeze has emerged on stations such as Entercom's WDZH in Detroit. "For that format, they have selected jingles that do have more traditional orchestration and the larger vocal group sound because it fits best with the music and soft image of the station."

Whether using a large vocal group or a small one, jingles are labor-intensive. So why do studios persist in making them, despite the economic conditions?

Perhaps it is because they know that while most people can remember the lyrics to an ID jingle they heard decades ago, how many can remember what the announcer liner said?

Visit TM on the web: <https://tmstudios.com>. JAM Creative Productions can be found at www.jingles.com. In preparation for this article, we also contacted ReelWorld in Seattle, another producer of radio ID jingles, which declined to comment.

Ken Deutsch has written several books about the radio and jingle industries, primarily focusing on the 1960s and '70s. They're available on Amazon.

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PAI*(continued from page 10)*

es will be completed in the second quarter of this year.

Currently, the bureau is drafting another order in the ATSC 3.0 proceeding to address a few remaining open issues, such as how to handle the commission's local simulcasting requirement if a station doesn't have a viable simulcasting partner. The bureau is also drafting an order to resolve issues that were raised in petitions for reconsideration.

In the meantime, the commission has authorized five experimental Next Gen TV licenses to start ATSC 3.0 market trials in Chicago, Dallas and Phoenix as well as Lansing, Mich. and Santa Barbara, Calif. This past August, I had the chance to check out the market trial in Phoenix, which is at the local Univision station. I experienced a full-on interactive experience that would have been unimaginable back when this speaker was a child holding the rabbit ears just to enable the Pai family to get better reception of "The Jeffersons" on broadcast TV.

The fact that I was in Arizona in August and my memories were of the demo and not the heat tells you everything about how impressed I was and encouraged I am about the potential of this new standard. Movin' on up, indeed.

Thank you for your advice throughout the ATSC 3.0 proceeding. Please continue to keep us informed on market trials, station upgrade experiences, and unexpected issues that pop up along the way so that we can best facilitate the advances that you're working so hard to bring to life.

AHEAD OF SCHEDULE

Let me shift now to the TV repack.

The broadcast incentive auction was one of the most challenging undertakings in FCC history. I think the most common perception of the auction is that the big challenge was creating a two-sided auction — taking spectrum used for broadcast TV and repurposing

Repacked stations have been assigned to one of 10 transition phases, during which they have to move to their post-auction channels. At the end of Phase 1, which ended on Nov. 30 of last year, 143 repacked stations had already moved off their pre-auction channels. By contrast, according to our original plan, only 90 stations were supposed to be repacked

I look forward to the full commission taking action this spring to make translator interference resolution a faster and less contentious process.

it for wireless services. But some people fail to think about what came next — namely, that about half of our nation's broadcast TV stations are in the process of changing their transmission frequencies to clear part of the spectrum for wireless use.

We're talking about a channel and/or location change for almost 1,000 full power and Class A television broadcasters and about 2,000 low power and television translator stations. Now, that's a challenge. Fortunately, we're relying on engineers like you to work through this process.

I'm pleased to report we've made great progress since the close of the incentive auction and the start of the transition period in April 2017.

As you're likely aware, the FCC established a phased transition schedule.

by the end of Phase 1. That's good news; we're ahead of schedule. Right now, we're in the middle of Phase 2, which ends on April 12, 2019. Thus far, over 20 of the approximately 115 stations assigned to Phase 2 have moved to their new channel. So the next two months will be busy ones for tower crews, broadcast stations and engineers.

Not only are we ahead of schedule, we have the resources to help stations do the job. Thanks to the additional \$1 billion provided by Congress last year, we now have a total of \$2.75 billion available to reimburse broadcasters for repack costs and conduct consumer education. And the fund administrator has already approved over \$350 million in reimbursements.

We know that there's still a lot of hard work left to do. Successfully com-

pleting the repack on schedule will require continued coordination among government officials, tower companies, equipment manufacturers, broadcasters and consultants. The FCC's terrific staff is in daily contact with stakeholders, including AFCCE members who are fully engaged in helping stations navigate the transition. We're working to make sure that stations are on pace to move by their phase completion dates, and to help stations find flexible solutions to transition problems in ways that don't harm other repack stations.

TRANSLATOR UPDATE

Turning the dial from television to radio, I'd like to update you on our FM translator proceeding. Our efforts to revitalize AM radio have been going well. Most notably, we've held four windows through which AM broadcasters have been able to obtain FM translators. This can help them improve their programming, expand their listenership and stabilize their financial position, as broadcasters have told me everywhere from big cities to small-town Marysville, Kansas.

But with the success of these windows has come an uptick in interference complaints from primary FM stations due to the increasing number of translators on the air.

To address this concern, last May, we launched a rulemaking to streamline and expedite our current process for resolving interference complaints. Our goal is simple: to make them fewer and easier to resolve.

In response to a broad consensus from the broadcast industry, we proposed to allow translators to change to any available channel to avoid interference. We also set out to establish clear expectations for what has to be included in each interference claim and how we expect interference issues to be resolved. For example, we proposed to establish a minimum number of listener statements as well as clarify the technical data to be submitted with each interference claim.

We also proposed to establish an outer contour limit within which interference complaints will be considered actionable. By doing so, we seek to strike a balance between providing certainty for translator operators while preserving the secondary status of translators and protecting the bulk of the listening audience of full service stations.

The engineering community gave us a lot of thoughtful feedback on the various proposals in the NPRM, particularly individual engineers who took their own time to relate their experiences with translator interference issues. We really appreciate that expert advice. Our Media Bureau is currently drafting

(continued on page 13)

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Sulik Dishes on Beasley's Foray Into the World of Esports

Esports are hot. Does radio care? Beasley Media Group does. The company announced that Jennifer Sulik will have a leadership role at its new esports division, Beasley XP, as vice president of strategic partnerships.

Radio World recently asked Sulik about her new gig. Here's a sampling; read the rest of the interview at <https://tinyurl.com/rw-sulik>.

Radio World: How are you defining esports — just computer games or peripheral tech sports events such as drone races?

Jennifer Sulik: At this point, Beasley XP's primary involvement in the space is with professional, competitive gaming. Beasley XP was launched at the Esports Business Summit in Las Vegas in late September 2018. At that time we introduced our newly acquired show called "Checkpoint XP." "Checkpoint

(continued from page 12)

an order resolving these issues, and I look forward to the full commission taking action this spring to make translator interference resolution a faster and less contentious process.

Before I say goodbye, I'd like to make one more point. In addition to being George Washington's birthday, today marks a special anniversary in U.S. history. It was 39 years ago today in Lake Placid that a plucky band of American college kids shocked the mighty Soviet hockey team and ultimately shocked the world.

The Miracle on Ice offers a powerful lesson about how teamwork can overcome talent. But for me, the lesson that seems most relevant is not about overcoming the odds and adversity, but dealing with success. Many people forget that the Miracle on Ice wasn't the gold-medal game. The United States team still had to turn around two days later and play Finland to win the gold. They were actually down 2-1 going into the third period before pulling out a 4-2 victory.

The point being: We've made a lot of progress of late and accomplished many successes together. But there's still work to do on each front before we can claim victory. So let's keep our eyes on the prize and keep working together to seize these opportunities for the American people.

Comment on this or any story. Email radioworld@futurenet.com with "Letter to the Editor" in the subject field.

XP," airing in 67 markets, is the first internationally syndicated sports talk radio show dedicated 100 percent to esports and gaming.

Beasley XP's future (XP standing for "experiential") will surely encompass additional tech lifestyle content and events. These experiences will likely include drone racing in addition to other AR and VR experiences, as well as

a video game music concert series and more.

RW: Esports is highly visual — as I understand it, they mostly happen on a screen — how can that be translated onto radio



Jennifer Sulik

or made into radio programming?

Sulik: Yes, Beasley Media Group owns radio stations; however, we are very much a media company. Many of our interactions with our listeners actually take place on our websites, within our podcast network and our social media outlets. We view ourselves, and all of our platforms, as a way to deliver desirable, valuable content to our audiences.

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Guess What's Special About This Hat

Also, here's a unique way to rack equipment

WORKBENCH

by John Bisset

Email Workbench tips to johnpbisset@gmail.com

You may remember Jefferson Davis "Boss" Hogg from the television show "The Dukes of Hazzard." As you look at Fig. 1, tell me this doesn't remind you of Boss' white hat! (Google "Boss Hogg photo" to see what I mean, if you're unfamiliar with the program.)

Well, the hat in Fig. 1 belongs to Morgan Grammer, radio chief engineer for Griffin Communications in Tulsa, Okla., and it wasn't until Morgan turned it over that I saw what made it unique. The hat is not made out of leather, cloth or felt — it's actually a composite polymer of some sort, turning the hat into a legitimate hard hat, as you'll see in Fig. 2.

Want one? Google "custom cowboy hard hats" or head to Discount Safety Gear online (www.discount-safetygear.com).

Dale "Squeak" Porray, AD7K, is the former manager of AES Las Vegas — that was Amateur Electronic Supply, not the "other" AES!

He suggests a different approach for mounting gear into a rack.

As a planning exercise, procure mounting screws of the appropriate size to fit your rack but make sure they are long enough to go through the rack rails, through the panel of your equipment and protrude somewhat beyond that.

Fig. 1: This white hat is reminiscent of the one worn by Boss Hogg in "The Dukes of Hazzard" TV show.



Fig. 2: But it's actually a hard hat!

Next, procure cap nuts, also known as acorn nuts. If you want to be fancy, grab some matching paint for those nuts to go with the panel of the equipment you want to mount.

From the back side of the rack rails, install the rackmount screws to fit into each of the mounting holes (or slots) for the panel of the equipment you are mounting, and tighten them down well. The trick is to screw these in from the back of the rack rail.

Then it's an easy exercise to lift the equipment into place and slide it onto the installed screws, which are protruding from the front of the rack rail. At this point, it usually only takes one hand to hold the equipment into place while you screw the acorn nuts onto the top and bottom screws on each side. Then you can let go of the panel, install the other acorn nuts on any remaining empty screws, center up the equipment and tighten the nuts.

Squeak has been doing it this way for years and it has always worked well, he says. I can see why it would, and especially if you are doing this by yourself.

One thing to keep in mind: Some front panels differ in thickness. So when you buy rack screws, make sure they are long enough to take the varying panel thicknesses into consideration. Usually, the acorn nuts that Squeak suggests have enough threads to accommodate the various thicknesses of panels.

Engineering consultant Frank Hertel is always coming up with some interesting finds. Fig. 3 is a good example. Do you know what the clamp pictured on page 16 is?

(continued on page 16)

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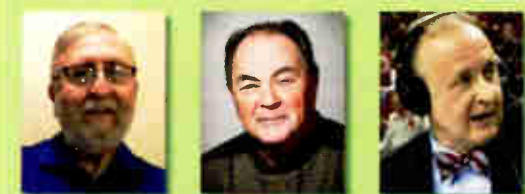
PEOPLE NEWS



Justin Taylor
Cumulus Media
 Appointed operations manager for Cumulus Oxnard-Ventura, Calif., and program director of KHAY(FM)

Joel Miller
 FCC

Joins Commissioner O’Rielly’s office as chief of staff, press contact and media advisor



Steve Altmaier, Ken Fouts and Kent Pavelka
Nebraska Broadcasters Association
 Will be inducted into the Nebraska Broadcasters Association Hall of Fame



Marc Sherman
iHeartMedia
 Tapped to serve as regional senior vice president of programming for New Orleans and Baton Rouge

Harvey Wells

GeoBroadcast Solutions
 Appointed director of sales development and marketing



Bill Clark

Broadcasters Foundation of America

Named recipient of the 2019 Lowry Mays Excellence in Broadcasting Award



Ted Nahil
Nautel
 named eastern USA sales manager

Paul Jacobs

Jacobs Media & jacapps
 President will receive the 2019 Rockwell Award from The Conclave



The Broadcasters Foundation of America
 Announces 2019 Leadership Award recipients

Bobby Caldwell, owner & CEO, East Arkansas Broadcasters, Inc.

Jean Dietze, president, affiliate relations, NBC Broadcasting

Richard A. Foreman, president, Richard A. Foreman Associates Inc.

Mark Gray, CEO, Katz Media Group

Paul McTear, former president & CEO, Raycom Media

David Poltrack, chief research officer, CBS Corporation; president, CBS Vision

CORRECTION

In the RW March 1 article “Graham McNamee: Radio’s First Superstar Announcer,” we incorrectly printed that McNamee was born in 1988. He was born in 1888.



Library of Congress

WORKBENCH

(continued from page 14)

It’s known as an “ion trap,” and the clamp houses a permanent magnet.

It was used on older monochrome picture tubes. Mounted on the neck of a picture tube, near the base, it is located in the vicinity of the electron gun. The magnet of the “ion trap” was used with picture tubes that have a non-precisely attached or bent electron gun.

This generally happened because of the lack of precision in attaching the glass neck of the electron gun, to the glass neck of the picture tube. It is still needed on older picture tubes to “trap” any ions that may impact the phosphor, on the face of the picture tube.

When the electron gun of the picture tube became weak, the picture tube could be rebuilt. The electron gun would be cut from the picture tube body and a new gun would be attached. After re-drawing a vacuum, the tube could be sold as a rebuilt picture tube for



Fig. 3: Any idea what this clamp does?

a fraction of the cost of a new picture tube.

The lack of precision in attaching the two glass necks caused a misalignment of the electron gun’s beam — aiming it toward one of the sides, top or bottom of the phosphor coating. The magnet on the ion trap was

capable of redirecting the ion stream and the electron stream, so as to make it possible for the electron beam’s stream to be properly directed as it scanned across the phosphor coating on the face of the picture tube.

When the magnet in the ion trap is not adjusted properly, the picture will only be partially displayed. Over time, as the ions strike the phosphor coating on the face of the picture tube, they will burn a brown spot on the face of the tube, hence the name “ion spot” or “ion burn.”



Who would have guessed that a small magnet would play such an important role in early television?

Contribute to Workbench. You’ll help fellow engineers and qualify for SBE recertification credit. Send tips and photos to johnpbisset@gmail.com.

Author John Bisset has spent 49 years in the broadcasting industry and is still learning. He handles western U.S. radio sales for the Telos Alliance. He is SBE certified and is a past recipient of the SBE’s Educator of the Year Award.

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World Radio History

Radio Sputnik Delivers Polished Sound

Russian government station ditches stiff "Radio Moscow" style

BY JAMES CARELESS

WASHINGTON — During the height of the Cold War, international shortwave station Radio Moscow broadcast news, views and programming to the West, all reflecting the views of the Soviet government that funded its operations.

To Western ears, Radio Moscow's presentation style sounded stiff and stage-managed, with a hollow, sharp audio quality that was unique to this station. Audio from the globally popular Radio Moscow program "Moscow Mailbag," recorded in 1979, can be found at <https://tinyurl.com/moscowmailbag>.

MODERNIZATION

This distinctive style and sound quality made it easy for shortwave radio listeners scanning the bands to identify Radio Moscow's English service.

It is 2019, and Radio Moscow has morphed into Radio Sputnik. And although the Kremlin is still paying the bills, Radio Sputnik's presentation is as polished as that of any Western radio station.

In Washington, Radio Sputnik produces its content in a K Street office — the same street that is home to many American lobbying firms — and broadcasts it locally via 105.5 MHz FM and 1390 kHz AM. Radio Sputnik also has broadcast studios in



Radio Sputnik's Lee Stranahan hosts the "Fault Lines" morning show in its Washington studios.

Edinburgh and Moscow.

"I hope you are right and we are a long way from Radio Moscow in terms of our technical capabilities and echoing sound as well," said Mindia Gavasheli, editor-in-chief of Sputnik US, in response to emailed questions from Radio World International. "This is why it was so important for us to be heard in Washington, D.C., on an FM station."

Another difference between the

two Kremlin-funded broadcasters is that "Radio Moscow was created from Moscow by Russians who had very little understanding of what life in the U.S. is like," Gavasheli noted. "In our Washington, D.C., office, radio is done by Americans and mostly for Americans, even though we broadcast internationally."

Radio Sputnik is also modern: Beyond being on air in Washington on AM and FM radio, Radio Sputnik offers multimedia content online at <https://sputniknews.com/radio>. There's even a free "Sputnik app" available for both Android and Apple smartphones.

To deliver this high level of radio production, Radio Sputnik employs a top-quality radio production infrastructure. It includes Wheatstone's LX-24 and L-12 audio mixers, ip88-3m analog input/output Blade with mic-level inputs; M4IP-USB four-channel mic processor; digital



Above: Sputnik's control room in Washington.

Left: Sputnik radio engineer Andrej Lopuchev sits at a board in the station's Washington control room.

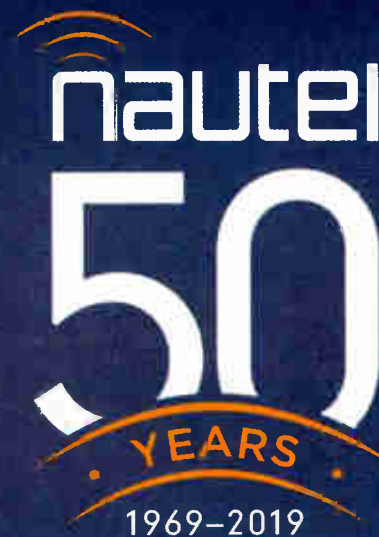


engine: Neumann BCM 104 cardioid broadcast mics; Pro Tools and Magix Samplitude digital audio workstations; Trakt DJin broadcast software; an RME Fireface 802 sound card and Genelec studio monitors.

The sophistication of Radio Sputnik's IP-enabled system has raised the bar on its production capabilities and its ability to do out-of-office remotes. For instance, "When Fidel Castro died, we thought that offered a rare opportunity for us to tell people around the world more about Cuba based on first-hand experience," said Gavasheli. "So we packed and flew to Havana to cover the country as it was mourning its former leader."

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Radio's Digital Sales on the Rise

RAB/Borrell study shows the radio industry is embracing digital and loving the results

RADIOBUSINESS

BY DAVE BEASING

Gordon Borrell has seen a lot of changes in radio over the past seven years, and he's pleasantly surprised. Not that long ago, he was reporting that the industry was slow to embrace digital media. "Then, all of a sud-

den, they did! I wouldn't say it was a smart move, but actually very lucky. The internet first threatened print media more than broadcast, so radio has had time to observe, learn, adapt and now make the right moves."

And radio is moving into digital. The Borrell Associates CEO recently released the seventh annual Benchmarking Report for the Radio Advertising Bureau. The survey of radio buyers and managers about ad expenditures revealed that local stations generated \$804 million in digital ad revenue last year, up 15 percent since 2017.

There is probably no one happier about this than RAB President Erica Farber.

"There was a time when, if an ad buyer told their radio rep that they're spending more on digital ads, the



IF YOU GO

What: 2019 NAB show

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Where: Las Vegas Convention Center

When: April 6-11

How: www.nabshow.com

How Much: A variety of registration options are offered, including a Conference Flex Pass for \$855 and a free exhibits pass with exhibitor code.

reaction was, 'Oh well, we're losing our money.' Now, radio has a strong story to tell about digital," Farber says.

According to the report, the average radio station brought in about \$256,000 in digital revenue in 2018, and the average market cluster \$1.15 million. Digital revenue represented 8.8 percent of total ad revenue and is forecast to reach 10.7 percent in 2019. The top performing station groups are generating three to five times the average digital revenue for their markets.

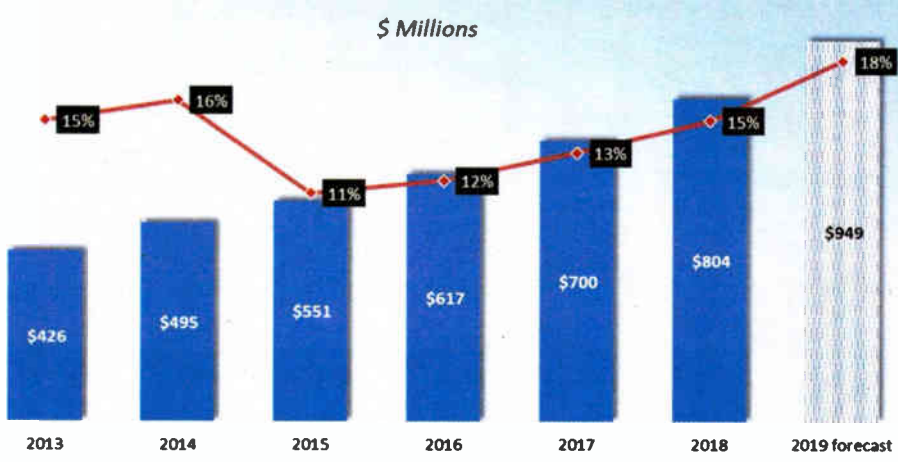
While bigger radio companies with stations in major markets had the means to invest in digital earlier, much of the new growth is now in smaller and medium markets. Borrell cites the stations owned by Mid-West Family Broadcasting as an example.

"They're all on board with a positive attitude about digital," Borrell says. "They're dyed-in-the-wool radio people, and you might think they'd pay lip service, then hit some obstacles, and go back to just selling radio."

(continued on page 22)



Digital Ad Revenue For Local Radio



Copyright Borrell 2018

The portion of U.S. radio revenue attributable to digital ads continues to grow, as shown in this chart from Borrell Associates.

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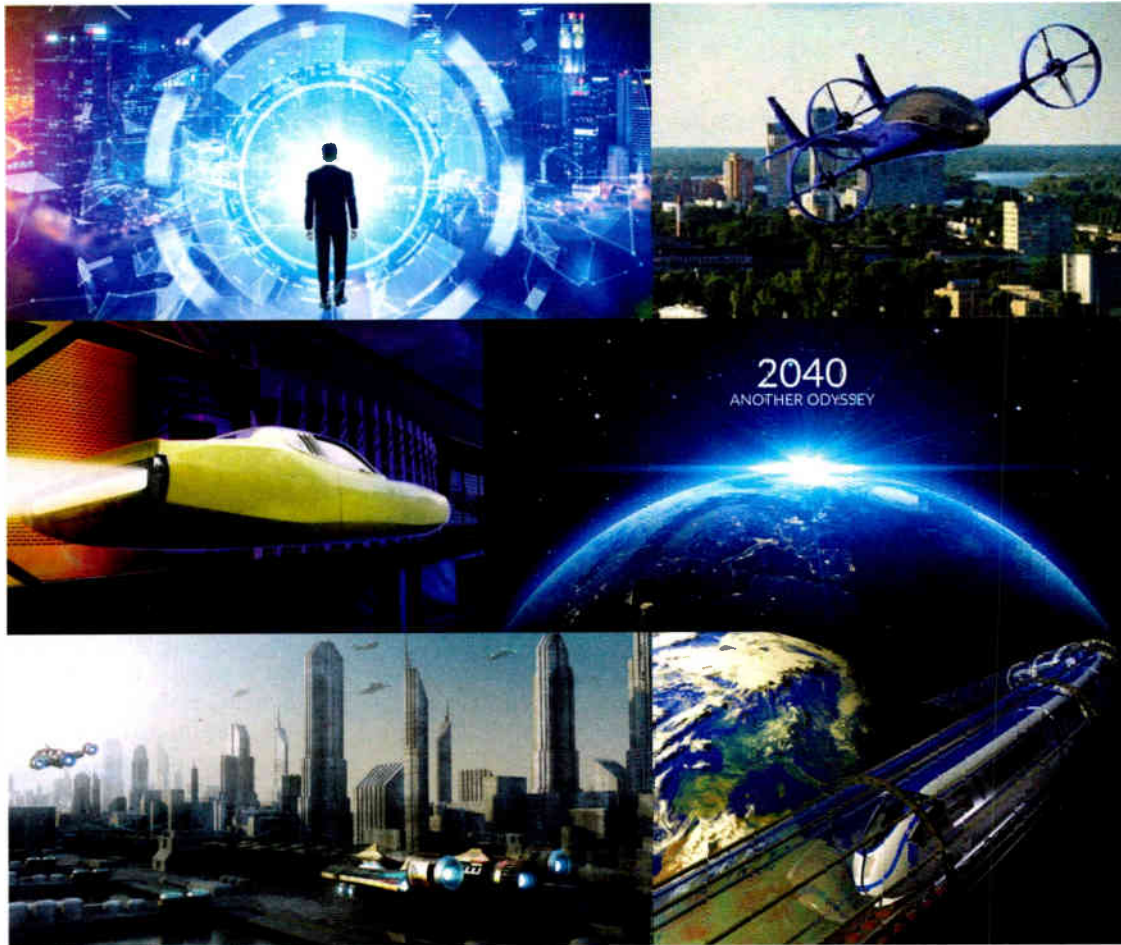
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World Radio History

DIGITAL SALES

(continued from page 20)

No, not the case. They've said, "This is our future."

THE SECRET TO SUCCESSFUL SALES

What's the single most important factor for success in selling digital advertising at radio? During separate interviews, Borrell and Farber both answered without hesitation, "It's training."

Farber explains, "It's hard in this day and age to know everything, right? Digital can be anything from running some kind of audio and/or video spot, SEO or a social campaign or website design. It's a different language. Different metrics, different data, and there are different ways to analyze it than traditional media."

Borrell believes the whole sales staff should be trained in digital, even though "a good salesperson that is knocking their radio sales goal out of the water shouldn't be distracted to force them to sell a smidgen of digital just to meet a digital goal."

"There are some stations who have digital specialists," says Farber. "There are other stations where everyone does everything."

More important than a station's internal structure is tailoring your approach to each client's needs.

"The most successful stations go after 'share of wallet,'" says Borrell. "They stop and strategize about individual advertisers, and they're very surgical with vertical categories like automotive or QSR's or health."

SOCIAL MEDIA & PODCAST IMPLICATIONS

While most sub-categories of digital advertising sales are growing, subscribers to the report will see that social media is leading the way, along with database email, search engine marketing, streaming and video ads. Farber sees social media's increase as good news for air personalities.

"The public is recognizing that big name national influencers are hugely compensated to endorse brands online," she says. By contrast, "local influencers, the people they listen to every day on the radio, have a relationship with their audiences, and they're highly trusted. They're people who live and work in the same community."



Gordon Borrell and Borrell Associates regularly check radio's digital forecast of local online business. "Radio has had time to observe, learn, adapt and now make the right moves."

Borrell also predicts significant revenue growth from podcasting ahead. "It's really lit a fire under radio because it's something that they finally understand. What the hell does the average radio manager know about search advertising or social media? They recognize the opportunity with podcasting, because it's audio."

The study found that 25 percent of radio's customers are buying digital advertising from them, "which means 75

percent aren't using radio's digital assets. That's a huge opportunity," says Farber.

There's even a small but growing portion of radio clients who are *only* buying digital from them, not radio. Farber says, "The days of saying, 'I'm going to go out and sell radio spots' don't exist anymore. We are partners who understand what the client is trying to accomplish, and we now have all these tools to deliver customers to the advertiser."

As a longtime advocate urging tra-



Erica Farber. "Radio has a strong story to tell about digital," she says.

ditional media to incorporate digital in their offerings, Borrell says these survey results "are a delight to see. At first, digital is threatening, it's scary, it's confusing, but people are getting past that initial reaction. More and more people love digital equally with radio. They're taking that positivity into the marketplace, and good things are happening."

Borrell and Farber will participate in a session at the NAB Show on Tuesday April 9 called "Digital and Data: From Disruption to Acceleration," along with executives from Univision, Hubbard and Townsquare Media.

NAB SHOW MANAGEMENT SAMPLER

Here are more events of interest to radio managers at the NAB Show. In the next issue, we'll focus on technical sessions and topics.

ASK THE FCC: A Monday afternoon session promises "one-on-one conversations" with FCC and congressional staff who work on broadcast policy and enforcement. Planners said the session will take an open mic format but based on audience interest it could feature topics like media ownership, AM revitalization, FM translators, pirate radio and EAS. Among the several speakers are Michele Carey, chief of the FCC Media Bureau, and Al Shuldiner, chief of the bureau's Audio Division.

NEW FORUM: NAB has launched a Sunday forum and networking event for its small and medium-market radio members. It promises info "from NAB's government relations, legal and technology experts" plus round-table discussions about non-traditional revenue, recruiting for on and off-air, and software as a solution. This is for NAB members only and is free with paid registration packages, or a ticket can be purchased for \$199.

WHITE HOUSE INSIGHTS: Likely to be well-attended will be "Beyond the Briefing Room: Tales From the

White House Beat." Correspondents from ABC, CBS, NBC and PBS participate in a discussion about covering the presidency Tuesday on the show's Main Stage. Panelists include PBS NewsHour's Yamiche Alcindor, NBC News' Hallie Jackson, CBS News' Steven Portnoy and ABC News' Cecilia Vega.

PODCASTS GALORE: Podcasting gets special attention, including a string of sessions on Wednesday as part of the show's Content Strategies track. As a session description put it, "Podcasting had a fantastic 2018 and the exponential, supernova of growth continues. Hear from some of the largest companies in the space as they discuss what's fueling the growth, where they're focusing their efforts and how partnerships factor in as the medium expands."

There also are other sessions that touch on podcasting that can be found via keyword search on the show website. On the exhibit floor there will be a Podcasting Pavilion, and the NAB itself has its own podcast.

HONORS FOR BILL CLARK: The former president of Shamrock Broadcasting and chairman of Chancellor Broadcasting will receive the 2019 Lowry Mays Excellence in Broadcasting Award. It will be presented at the Broadcasters Foundation of America's annual breakfast on Wednesday April 10 at the Encore Hotel.

The foundation noted that as president of Shamrock Broadcasting's radio division, Clark created one of the first "super groups" well before consolidation.



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THE INTELLIGENT NETWORK

Radio Raconteur Brings His Stories to a Close

NAB will present its Spirit of Broadcasting Award to industry trade journalist Tom Taylor

NEWSMAKER

BY JAMES CARELESS

The National Association of Broadcasters' Spirit of Broadcasting Award recognizes general excellence and leadership and is given to individuals or organizations that have made lasting contributions to over-the-air broadcasting.

RTK Media with partners Robert Unmacht and Kristy Scott. Prior, he was editor of Inside Radio, M Street Journal/M Street Daily and the TRI newsletter from Radio-Info.com.

Before becoming a radio industry reporter, Taylor built a base of industry knowledge as vice president of programming and operations for Nassau Broadcasting's WPST/WHWH in Princeton, N.J., and a programmer for

I had the freedom to call 'em as I saw 'em. Nobody tried to tell me what to write or how to write it.

— Tom Taylor

Only 12 people or organizations have won the prestigious award since its first presentation in 1984 including Lowell "Bud" Paxson, Paul Harvey, Stanley E. Hubbard, Dawson B. "Tack" Nail, Margita White and Don Hewitt.

Veteran radio industry reporter Tom Taylor joins the list when he receives the award at the NAB Show.

He most recently was editor of the daily Tom Taylor NOW e-newsletter, launched in 2012 and published through

stations in Kentucky and North Carolina. His father Bill Taylor had been a radio/TV personality in Orlando and radio general manager in Charlotte.

Contacted by Radio World for his reaction, Taylor wrote to say that he was "surprised, humbled and embarrassed" to win the Spirit of Broadcasting award.

"Trade journalists don't usually get awards, and don't expect them," Taylor said. "Speaking of 'embarrassed,' the NAB has asked me for embarrassing



Tom Taylor

early photos, as part of the introduction at the NAB Show in April. That's been humbling, by itself."

FIRST DRAFT OF RADIO HISTORY

As a graduate from UNC-Chapel Hill ("a long, long time ago") who majored in English, writing came easily. But he also attributes his success to supportive managers.

"I was very lucky," Taylor told RW. "Using the familiar baseball analogy, I had the freedom to call 'em as I saw 'em. Nobody tried to tell me what to write or how to write it.

"There's a saying that daily journalism is the first draft of history. It was energizing, getting a first crack at unfolding stories like digital audio broadcasting, back to the early 1990s, and ownership consolidation, triggered by FCC rule changes in 1992 and especially the 1996 Telecom Act."

When reporting on the industry, Taylor said he followed three rules:

1. Get the facts right.
2. Be fair.
3. Always try to be interesting.

"In every station sale story, there's at least one angle or nugget that stands out — about the owner, the history of the station or its potential new facility," he said. "The same for technical filings, pirate radio notices of violation, FCC call sign change lists and — one of the latest phenomena — squabbles between full-power stations, low-power FM's and translators.

"The real estate disputes over FM band spectrum are really something, though it often takes digging through multiple FCC filings," he said. To get to the bottom of these contentious stories, he spent a lot of time prowling through the commission's online database, as

well as court-filing sites and resources like [sec.gov](#).

"Practicing daily journalism is a lot like what engineers and managers face — you deal with the day-to-day situations as they arise. What journalists hope to provide along with covering those specific events is context: Is that sale or format change or FCC action part of a pattern? What might it mean for other operators, and what can we all learn from it?"

He said a favorite theme has been emergency preparedness, from backup equipment and sites to regular training and staff "think" sessions about what might go wrong.

"At NASA, astronauts constantly game-plan for 'What the next thing that could kill us?'"

STORIES FROM THE FIELD

As for Tom Taylor's favorite stories during his 30-year career? "That's easy — all the reader-supplied true stories," he replied.

"Many of them were engineering-related, like the late-2018 stories about a rookie engineer being ordered to 'trim the carpet.'" That anecdote appeared in a section of his newsletter called "You Can't Make This Up." (It may sound like hazing, but Taylor quoted engineer Rob Bertrand recalling a general manager who really wanted him to crawl on the floor and cut loose threads until his chief engineer intervened.)

"Or the CE who fumed because a pile of household garbage blocked access to his transmitter site during a late-night emergency," Taylor continued. "When the immediate job was done, he then deposited the trash on the front lawn of the person whose address he found in the mess. He appended this note: 'It appears someone has stolen your garbage and dumped it at my driveway. I was able to retrieve it all for you and would be happy to assist you and law enforcement in determining the culprit.' Truly, you can't make that up."

TOM'S TAKE

Now that he has retired from the daily news grind, Taylor has time to reflect upon Big Picture questions about radio's circumstances and prospects.

"Radio World readers could probably reel off many of the same worrisome issues I see," he said. "Proliferation of signals in the FM band. The changes in AM, including an ominously rising noise floor and bargain-basement receiver circuits. The explosion in audio choices, from satellite radio to streaming and podcasting. And the inexorable pressure on engineering, talent and

(continued on page 26)

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World Radio History



KFOR works closely with the Nebraska Community Blood Bank, which here is shown honoring Duncan Aviation as its Corporate Blood Drive Sponsor of the Year for 2018.

KFOR(AM) Leads by Example in Lincoln

Alpha Media station is named to the Heritage class of the NAB Crystal Awards

BY **KEN DEUTSCH**

The NAB's Crystal Award recognizes community service, and many stations have received it through their hard work. But only seven have been honored with the Crystal Heritage Award, given to those that received the regular Crystal five times previously.

On April 9, KFOR(AM), owned by Alpha Media, will become the eighth. The recognition ceremony will

take place in Las Vegas at the 2019 NAB Show "We Are Broadcasters" Celebration.

Radio World spoke with KFOR News Director Dale Johnson to learn about the station. When we reached him, his community of Lincoln, Neb., was in the midst of a polar vortex and temperatures were hovering around minus 20 degrees. Naturally, we asked how the station was dealing with the severe weather.

"We work closely with the Nebraska



Community Blood Bank all year," Johnson said. "But we have been stepping up our efforts to encourage people to donate blood. There's been a shortage because many folks who have appointments to donate can't get out due to the icy weather

RADIO HERITAGE

Past recipients of the NAB Crystal Heritage Award are listed below; each earned five Crystals in prior years, the earliest dating to 1987.

2018 — WTOP(FM), Washington

2016 — WTMX(FM), Chicago

2015 — WLEN(FM), Adrian, Mich.

2013 — KNOM(AM/FM), Nome, Alaska

2012 — KUZZ(AM/FM) Bakersfield, Calif.

2011 — KBHP(FM) Bemidji, Minn.

2008 — WUSL(FM), Philadelphia

"Scott Young, a former KFOR employee, has been the director at the blood bank for 15 years, so we have a good working relationship. And on a regular basis, we also invite someone from the Humane Society to join us on the air, and we get a lot of information out there about how to care for pets when the temperatures get this low."

OUTREACH GOES BOTH WAYS

In today's world of shrinking staffs, radio managers often are asked to do "more with less." Johnson feels this is not possible.

"Actually, what you end up doing is less with less," he said. "Sometimes you need to ask for help to bridge that gap. When I was young, my dad always

(continued on page 28)

TAYLOR

(continued from page 24)

other budgets.

"As for the latter, an engineer I worked with early in my life burned a proverb into my brain: 'How come there's never time to do it right, but there's always time to do it over?'"

Hovering over everything else is the continuing impact of consolidation on U.S. radio. "When Wall Street spied the radio paragraph in the 1996 Telecom Act and began shoveling money toward companies like Clear Channel, that forever transformed our business," he said. "We became more akin to other businesses in America, more attuned to monthly and quarterly expectations and results — and more focused on the short term"

Unfortunately, some feel that paying more attention to the bottom line caused many broadcasters to pay less attention to making great radio. But Taylor rejects the notion that U.S. radio in general has lost its way.

"I do think we underestimate the number of operators who still understand the critical importance of being local and serving the community," he said.

"That language is still there on the FCC license, and the bond between local stations and their listeners is what can make radio special."

As for keeping radio viable in the years to come, especially among millennials whose earphones are plugged into streaming audio? "We need imagination, business smarts and the willingness to protect the existing platform of OTA broadcasting, while exploring new areas such as digital — in various forms, live events and other promising avenues," Taylor said.

"At the first station I programmed, Village Broadcasting's WCHL Chapel Hill, N.C., 1360, they understood that radio was a springboard for all kinds of other revenue-producing activities. Two examples: They published the local weekly free 'shopper' publication out of the station's basement. And they rented out a local theater for late-night 'WCHL Movies.' Very entrepreneurial."

Covering such stories are now the responsibility of others. Taylor has disconnected his computer keyboard and gone home.

"Just about every day, I get an email with this header, 'Are you bored yet?'" Taylor told RW. "The answer is 'No,' though I treasure the relationships with readers over the past 31 years. Also the relationships with people I worked with in my 16 years

before that, as a programmer and jock."

He expressed thanks to the many engineers he has worked with, and mentioned Rick Edwards, Jeff Detweiler and Rick Eby. "Engineers like them wrought daily miracles, then patiently explained them to us laypeople. And a strong shoutout to my Hickory, N.C.-hometown friend Carl Davis, now a regional sales manager at ERI. Last year, Carl became the first engineer ever inducted into the North Carolina Association of Broadcasters Hall of Fame."

NAB will present its award to Taylor at the NAB Show Opening on April 8. Executive Vice President of Communications Dennis Wharton called Taylor "a beloved friend of radio broadcasters and ... daily chronicler of the industry for decades."

Tom Taylor may have hung up his mouse, but he clearly still feels the love for this business.

"There's something unique about the radio industry, you know? You could run into somebody at an airport or grocery store line who's worked in radio and strike up an impromptu conversation about situations you've both encountered," he said.

"Hey," they might say, "the first station I worked at was based at a former funeral home." We're storytellers in radio, whether or not we were ever on-air. And engineers have some of the best stories."

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HERITAGE

(continued from page 26)

taught me that asking for help was a sign of weakness; I've learned it's not."

Johnson himself needed help about three years ago, when a motorcycle accident cost him his left leg.

"I asked for help and I got it," he said. "Many people gave me support and encouragement during my recuperation, in fact one of the cards I received from a listener said, 'You're the best friend I've never met.' And when we need help for a project here at KFOR, we just ask people, and they show up. Often, they bring their friends, and soon we have enough to get the job done."

"Many people in Lincoln come from smaller towns, and they have great hearts," he continued. "They bake pies for people. They send you a card on your birthday. So we have become a station that isn't afraid to ask for help. We do it in a soft, Midwestern way, and people respond to that. We are seldom disappointed in our listeners, and we hope that they are seldom disappointed in us."

Annually, since 1947, KFOR has run Operation Santa Claus, during which charitable agencies in the city are asked to find out which specific toys their kids want.

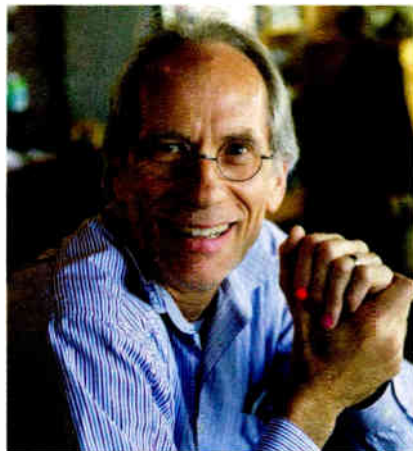
"We don't just go buy some toys and hope they like them," said Johnson. "Our staff goes to Target or another store to buy toys the children choose, and then we bring the gifts back, and the Nebraska National Guard helps us wrap them. The Guard delivers these to the agencies, and the agencies give them to the kids. If little Joey wants a particular dump truck, that's what he gets."

POINTERS FROM A PRO

Radio World asked Johnson if he could offer any tips to managers who want to make a more meaningful contribution to their communities.

"The KFOR website is vital to our operation, and we are always posting announcements and photos there. Our owner is Alpha Media, and they remind us how important it is from a legal standpoint to make sure we have permission for every image we use online," he said.

"But there's no training for what we do on a daily basis," Johnson said. "We lead by example, a quiet kind of leadership. We have three employees



News Director Dale Johnson. Recuperating from a serious accident, he received a card from a listener that read, "You're the best friend I've never met."

here, including myself, who have been at KFOR more than 30 years, and we just work to instill our ideals in the minds of the rest of our staff.

"Potential employees who share our views gravitate to us. The ones that don't have a service heart usually move on because the station is not a good match for them."

It's possible to touch a community even with a partial live schedule. Parts of the station day are syndicated talk (Dave Ramsey, Ben Shapiro, Chad Benson), but topics from these programs, as well as a daily community interview feature hosted by Johnson called "Lincoln Live," provide further

DOING WELL BY DOING GOOD

A partial list of public service campaigns run by KFOR each year:

- Future Recognition Day — honors teachers
- Tails and Trails Walk and Festival — raises money to help animal causes
- Sportscasters Club — award banquet for local high school athletes, awards scholarships
- Veterans' Freedom Music Festival
- Dine Out to Help Out — benefiting the local food bank
- The Walk to End Alzheimer's
- Student Vote — citywide mock election in which students learn about citizenship and government

ideas for the station's public service efforts.

Cluster manager Julie Gade is involved in all aspects of these activities. She was quoted in the NAB's award announcement noting that KFOR(AM/FM) have served the region for more than 94 years. "Our commitment to the community has never wavered. We are so proud of our team's accomplishments both on and off the air."

Says Dale Johnson, "Doing what we do is a privilege every day. We give back because people give back to us, and they trust us," Johnson said. "We have a big stone to push up the hill every year, and every year we get it there."

KFOR is a Class C AM property, 1 kW by day and night, with an FM translator to expand its coverage. The station will celebrate its 100th birthday in 2024. Its website is www.kfornow.com.

Ken Deutsch is a former broadcaster



Julie Gade is market manager/general manager.

but says it was so long ago that the statute of limitations on that claim has just about run out.

THESE ARE THE CRYSTAL RADIO AWARD FINALISTS

NAB released the list of finalists its annual NAB Crystal Radio Awards, which honor stations for outstanding commitment to community service. Five-time recipient KFOR(AM) will receive the NAB Crystal Heritage Award.

KBFB(FM) Dallas, Texas
 KBHP(FM) Bemidji, Minn.
 KCLY(FM) Clay Center, Kansas
 KCVN(FM) Cedar Falls, Iowa
 KEEY(FM) Minneapolis
 KHKS(FM) Dallas, Texas
 KMVP(FM) Phoenix
 KNDE(FM) College Station, Texas
 KNIX(FM) Phoenix, Ariz.
 KRMG(FM) Tulsa, Okla.

KRWM(FM) Seattle
 KSL(AM) Salt Lake City

KSNE(FM) Las Vegas, Nev.
 KSTP(FM) St. Paul, Minn.
 KTCZ(FM) Minneapolis
 KTMV(FM) St. Paul, Minn.
 KUPL(FM) Portland, Ore.
 KWBG(AM) Boone, Iowa
 WBLS(FM) New York
 WCCO(AM) Minneapolis

WCFB(FM) Orlando, Fla.
 WDNS(FM) Bowling Green, Ky.
 WDSY(FM) Pittsburgh
 WDVE(FM) Pittsburgh

WGTS(FM) Washington
 WHO(AM) Des Moines, Iowa
 WHUB(AM) Cookeville, Tenn.
 WHUR(FM) Washington
 WHYI(FM) Miami
 WIL(FM) St. Louis, Mo.

WJYY(FM) Baxter, Minn.
 WKRQ(FM) Cincinnati, Ohio
 WKST(FM) Pittsburgh
 WKXD(FM) Cookeville, Tenn.
 WMBX(FM) West Palm Beach, Fla.
 WMGK(FM) Philadelphia
 WOWI(FM) Norfolk, Va.
 WPHT(AM) Philadelphia
 WQHT(FM) New York
 WRAL(FM) Raleigh, N.C.

WRLT(FM) Nashville, Tenn.
 WTAM(AM) Cleveland
 WTKX(FM) Mobile, Ala.
 WTMJ(AM) Milwaukee, Wis.
 WVLI(FM) Bourbonnais, Ill.
 WWOZ(FM) New Orleans
 WWPR(FM) New York
 WXXL(FM) Orlando, Fla.
 WYCT(FM) Pensacola, Fla.
 WZTU(FM) Miami

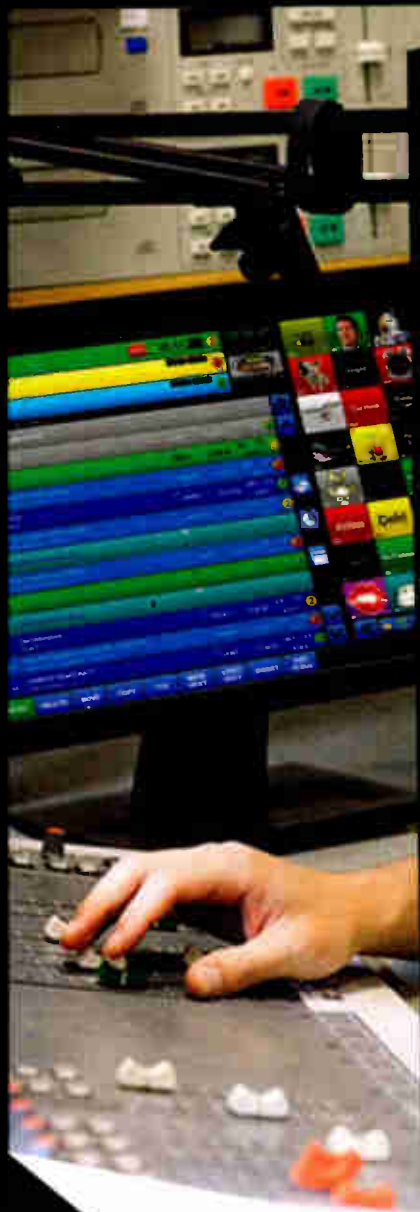


Ten winners will be announced during the show in Las Vegas. Last year's are shown here.

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USERREPORT

BY STEVEN YOUNGBLOOD
Chief Engineer
WKGC 90.7 FM

PANAMA CITY, FLA. — WKGC is a student-operated, 100 kW, NPR member station broadcasting from Gulf Coast State College in the Florida panhandle. We play NPR in the morning and the afternoon, and air student shows in the evenings and on weekends.

WKGC operates three HD Radio channels in addition to its main FM signal, with the option to set up a fourth HD Radio service in the future. Two years ago, we evaluated transmitters that would provide the headroom we required to accommodate HD Radio multicasts and other digital services. We also wanted a transmitter that would reduce the maintenance requirements of our aging tube transmitter from another vendor. The higher efficiency of a modern solid-state transmitter was certainly on our minds.

Our evaluations led us to a GatesAir Flexiva FAX30 transmitter. The 30 kW transmitter has certainly provided the headroom and the maintenance reductions we sought. Our signals are also clearer and more robust, extending our FM coverage north to the Alabama line and blanketing the well-traveled Interstate 10 with our HD Radio signals.

Reliability has been the most important benefit — a benefit proven by its performance during Hurricane Michael in October 2018. The HD Radio processing and distribution architecture can be delicate, yet the GatesAir Flexiva importer and exporter have proven highly stable



with no dropouts. This is an especially impressive feat with four audio channels and visual art moving over the E2X (exporter-to-exciter) connection.

The FAX30 design has paid divi-

dends on efficiency, particularly from the footprint and maintenance perspective. The transmitter is much smaller than our tube unit, freeing space for a new UPS unit that otherwise would not

have fit inside the building. The compact build also accelerated the installation process, with an easy lift and quick connections to the existing conduit.

The interior of the transmitter is clean and open, with plenty of room to work inside. The filter boards are accessible, and power amplifier modules and power supplies are removed and replaced with ease. Maintenance is limited to keeping the air filters clean, and keeping an eye on the air conditioners.

SURVIVING HURRICANE MICHAEL

When power or phase changes happen, the FAX30 automatically adjusts and stays on the air. This reliability proved instrumental to our station and surrounding communities as Hurricane Michael came ashore. This was the worst storm to ever hit our region, with wind gusts exceeding 200 miles per hour. We made our final checks at the transmitter site and our studio, which is located in our Emergency Operations Center, as the storm made landfall. We fully expected, reasonably so, to lose our signal.

Our generator tripped 30 minutes into the storm, which was an ominous sign. The generator wouldn't phase correctly, and we immediately went off the air. Although we were only a quarter mile away, we had to cut our way through downed trees to reach the generator. The FAX30 was back on the air immediately after hitting the reset button.

The FAX30 operated as usual from that point forward. The transmitter adjusted its power up and down as the phases went lower and higher. We were live on the air from the EOC during the first part of the storm, and delivered important news and information to our listeners through the entire storm and beyond. We were the only station on the air for the majority of the storm, and a critical lifeline for many listeners.

We are looking at ways to further reduce our operating and energy costs. We have certainly reduced the time and money associated with changing tubes and other maintenance requirements that solid-state technology eliminates. Looking forward, we intend to purchase a GatesAir Flexiva FLX30 liquid-cooled transmitter, which will substantially reduce our current cooling loads at high power. We also plan to install another FAX10 transmitter on our backup tower for additional on-air redundancy.

For more information, contact GatesAir in Ohio at 1-513-459-3447 or visit www.gatesair.com.

 <p>Studio Items Inc.</p>   <p>Mic Booms On-Air Lights Speaker Mounts www.studioitems.com</p>	 <p>TORPEY TIME <i>(The Good Time People)</i></p>   <p>Clocks Up/Down Timers www.ram68.com</p>	 <p>Dixon Systems</p>   <p>News Mixers Line Matchers USB Audio Codecs www.ram68.com</p>	 <p>RAM Systems</p>   <p>Broadcast Furniture Systems Integration Sound Absorption Panels www.ram68.com</p>
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Transmitters

TECHUPDATES

DB ELETTRONICA HIGHLIGHTS NEW MOZART NEXT LINE

DB Elettronica Telecomunicazioni Spa says its Mozart Next line of FM transmitters offers low maintenance, maximum redundancy and high efficiency.

The Mozart Next transmitter benefits from Green RF technology and is characterized by hot-swappable power supply units as well as the new Automatic Current Sharing system, which the company claims ensures "the best load distribution in all power supply operating conditions."

This compact line is optimized to an efficiency of up to 75 percent. It can be remotely controlled from Apple or Android mobile apps and from a PC without any proprietary software.

For more information, contact DB Elettronica Telecomunicazioni Spa in Italy at +39-049-870-0588 or visit www.dbbroadcast.com.



RFE INTRODUCES NEW HOT-PLUG LIQUID-COOLED TECHNOLOGY

Italian firm RFE has developed a new liquid-cooled system with hot-swappable power amplifier modules that allows users to easily replace the modules of a high-power (10 kW and more) transmitter during operation.

Designed for use in both air and liquid-cooled transmitters, the system can be made up of either 6 kW or 3 kW amplifier modules.

The hot-swappable and redundant amplifier modules can be easily removed from the front of the transmitter without interfering with the unit's operation. This, says RFE, affords the user a high level of efficiency and functionality.

For information, contact RFE in Italy at +39-049-738674 or visit www.rfebroadcast.com.

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Nautel Serves Austin's Oldest Radio Station

And brings it into the future of radio with AM HD Radio

USERREPORT

BY DARYL O'NEAL
Founder and Executive Director
Sun Radio

AUSTIN, TEXAS — Sun Radio is a community-funded organization operating 11 noncommercial solar-powered radio stations (soon to be 13) in the Austin and San Antonio areas. We are also online with more than 132,000 weekly listeners all over the world, of which over 35,000 use the Sun Radio smartphone app and/or smart speakers.

Our primary mission is to save community radio, and our secondary focus is on being environmentally friendly in the process. There have been a lot of non-commercial stations in the San Antonio and Austin areas over the years, and with the exception of the two 50,000 watt FMs we are implementing this year, every one of the radio stations in our group was either off the air or slated for destruction at the time of our acquisition. All have been saved for the communities we serve.

Our mission also involves supporting the Austin music culture and supporting Texas artists. In addition, our operation is friendly to the environment by relying on solar power, hence the name Sun Radio. The San Antonio and Austin areas are among the fastest growing in the country, and we wanted to give these communities a real local voice without the burden of long commercial stop sets.

REHABILITATING KTSN

We're really excited about our first AM station, KTSN 1490 in Austin. It was originally called KNOW and was put on the air in the 1920s. This was Austin's first radio station and one of the first stations in Texas. When Sun Radio acquired KTSN, it was on the air but using an old 1 kW transmitter, limping along at about 60–70 percent power. Our first goal was to replace the transmitter with something modern, so we talked with Nautel at the NAB Show in Las Vegas to see what was available. Both Nautel and Xperi suggested we try an HD Radio-enabled transmitter.

When our new Nautel J1000 arrived, we couldn't



Sun Radio Music Director Ben Bethea, Director Affiliate Relations Ryan Schuh and Engineer/Operations Manager Denver O'Neal with the Nautel J1000.

believe its size — it's about the size of a microwave, a huge contrast to our old transmitter, which occupied pretty much the entire transmitter building.

Our engineers established a plan to get the Nautel ready to go on-air, and then quickly remove enough of the old transmitter to get the J1000 in place and on the air. This was accomplished with only four to five hours of down time, and we were back to our full licensed power!

IMPLEMENTING HD RADIO

Our next step was to implement the HD part of our signal. For this, we deferred to Nautel and their expertise. This part went very smoothly and with Nautel's assistance, we got the J1000 fully set up and working correctly with our Inovonics processor.

When the HD Radio signal was first turned on, it took a few seconds to lock in — and our reaction was "Holy

cow!" Our AM station sounds great in analog mode, and in HD it sounds like beautiful stereo. It's great for our music format featuring local artists!

I was thrilled, and when Cole McClellan, our AM engineer, gets excited, you know it's good. After our set-up and tuning process, McClellan said "I've never heard AM sound like that."

Now that we have KTSN on the air with an amazing sound, we're moving on to our next challenge.

We don't own the land it's on — we are just leasing it for now. We are working on getting historical protection for the station since it's been there for about 90 years, but for now, the plan is to locate a new piece of land that meets our license requirements. We have seven years to get this done, and it's going to be a challenge because our licensed coverage area is so small.

When our new Nautel J1000 arrived, we couldn't believe its size — it's about the size of a microwave, a huge contrast to our old transmitter, which occupied pretty much the entire transmitter building.

Once we have found a new spot for our transmitter, we'll convert it to solar operation like our other properties. Our ultimate goal for KTSN(AM/HD) is to continue our focus on community based radio and for KTSN to be our flagship network station, feeding both our owned and operated translators via analog and HD Radio and to affiliated noncommercial stations soon to be fed off satellite. It will be a 100-percent solar-powered noncommercial network anchored by an AM built in the 1920s and an AM HD built in 2018.

Pretty cool, huh? That's the plan.

For more information, contact Nautel in Nova Scotia at 1-877-662-8835 or visit www.nautel.com.

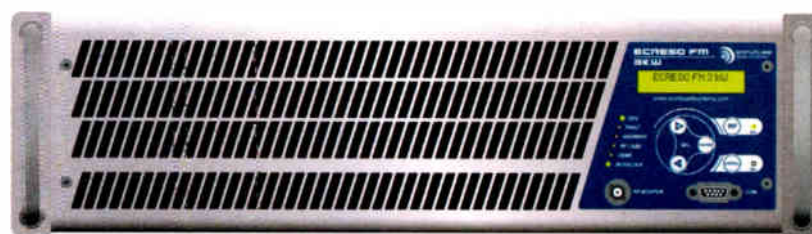
TECHUPDATE

ECRESO FM 3 KW LOWERS OPERATING COSTS THROUGH AI

WorldCast Systems says its new Eceso FM 3 kW transmitter offers users an advanced broadcasting solution.

The Eceso FM 3 kW compact transmitter, housed in a 3U chassis, includes built-in redundancy on the system's power supplies and power amplifiers. In the case of power supply or amplifier module loss, the unit will continue broadcasting with >1500 W on air for unlimited time. Also designed for easy maintenance, the Eceso FM 3 kW transmitter features hot-swappable power supplies and fans.

The company says the system offers an efficiency of 76 percent thanks to sixth generation MOSFET and a new planar design. Furthermore, SmartFM, the onboard Artificial Intelligence technology, adds an additional 10 to 40 percent



energy savings, reducing costs and CO2 emissions.

In addition to SmartFM, the Eceso FM 3 kW transmitter incorporates a direct-to-channel digital modulator, dynamic RDS encoder, digital stereo encoder, five-band audio processor, MPX/composite over AES input, GPIO, and single frequency network.

The unit comes with a standard three-year warranty and up to 10 years as an option.

For information, contact WorldCast Systems/Eceso in Florida at 1-305-249-3110 or visit www.worldcastsystems.com.

Minnesota Broadcaster Upgrades With BE

Broadcast Electronics STX HP 10 inspires loyalty for one broadcaster in the North Star State

USERREPORT

BY JIM OFFERDAHL
Chief Engineer
Offerdahl Broadcast Service

FOSSTON, MINN. — Broadcast Electronics transmitters make up a large part of the base of transmitters installed around the country. We know them as well built, reliable and easy to maintain. Factory support has always been available to assist with troubleshooting when needed.

When one of my clients expanded by purchasing eight additional stations in central and northern Minnesota, he decided it was time to upgrade some of the transmitters.

He owned a number of BE transmitters and asked if I thought the new ones should come from BE. In turn, I asked if he was happy with the ones he already had. His reply was that over the 20 or so years he'd owned these transmitters, problems were far between and few. My experience has been the same with many other clients.

He then tasked me with getting proposals from BE and other manufacturers, and when all was said and done, we ordered five new transmitters, two AMs and three FM's; BE got the deal.

READY TO GO

One of the transmitters was an STX HP 10 kW. This transmitter can be ordered in a rack cabinet or without. We ordered it with the cabinet, which enabled the factory to pre-assemble it and test it in its final configuration.



When it arrived, all we had to do with it was get it into the building — a relatively easy task, given that its total weight is only about 300 pounds in the rack — and then install the power supply and RF modules. It was basically ready to go.

Since the site had three-phase power, this transmitter was ordered for such a setup. Had the site only had single-phase, it could have been ordered from the factory to accommodate that.

We had an electrician on site when the transmitter was delivered, and he made quick work of getting it power, while I made the RF connections and connected the remote control. The current remote control was a dial-up POTS-type, but the STX HP 10 kW has SNMP capability, and the plan is to upgrade to a remote that allows interfacing with SNMP, as soon as internet service can be installed. SNMP allows command control and GPIO logic interfacing with compatible remote controls over a single Ethernet cable. The site is fed audio by 950 MHz STL, so audio connection was a simple BNC cable to composite in.

Now it was time to power up! Since the factory had configured the transmitter, all I had to do was select "TX ON." Up came the power, and since this station's TPO requirement is about 8 kW, the STX HP 10 kW is well suited, and it just hums along.

This STX 10 kW has been in service for nearly two years. As you can imagine, having replaced a 40-year-old transmitter that ran on three tubes, the new STX HP 10 kW sounds better, and the costs of operating and maintaining have been reduced dramatically.

My client has been so pleased with this purchase and the four others he made then that an STX HP 10 is being shipped to another site as I write this.

For information, contact Broadcast Electronics in Illinois at 1-217-224-9600 or visit <https://www.bdcast.com>.

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TECHUPDATES**BEXT PACKS POWER INTO XL 6000**

Bext's XL 6000 is a compact FM solid-state transmitter from the company's XL Series line of broadcast equipment. In a height of four rack-spaces it offers 6 kW of power and many features for today's broadcasters.

The company says that reliability even in challenging environments is ensured by use of the latest generation or rugged MOSFETS. Like the Bext transmitters, the XL Series offers energy efficiency, with minimal heat generated by the unit. The onboard exciter is frequency agile and locally or remotely controllable.

The transmitter's menu can be navigated through the touch-screen on the front panel or remotely through a LAN/web IP connection. Standard contact closures for older style remote control systems are provided.

In addition to standard analog audio inputs and AES-EBU digital audio inputs, streaming audio can be fed to the unit. The firmware can switch to a secondary, alternate audio source if the primary incoming audio feed fails. The transmitter can be powered by single-phase or three-phase AC power.



The user manual is stored in digital format inside the transmitter, and can be accessed using a laptop connected to the transmitter through a USB port on the front panel. This function is active even when the transmitter is not operating and/or completely disconnected from the power line.

Available options include digital direct-to-channel FM carrier generation, built-in stereo generator and RDS generator.

For information, contact Bext in California at 1-888-239-8462 or visit www.bext.com.

ABOUT BUYER'S GUIDE

Radio World publishes User Reports on products in various equipment classes throughout the year to help potential buyers understand why colleagues chose the equipment they did. A User Report is an unpaid testimonial by a user who has already purchased the gear. A Radio World Product Evaluation, by contrast, is a freelance article by a paid reviewer who typically receives a demo loaner. Do you have a story to tell? Write to brett.moss@futurenet.com.

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ROHDE & SCHWARZ COOLS WITH LIQUID

Rohde & Schwarz says that its THR9 transmitter has features that make it unique among FM transmitters. The company says that is reflective of a single corporate philosophy, which dates back over 70 years to when the first FM transmitter in Europe signed on the air. It was also manufactured by Rohde & Schwarz.

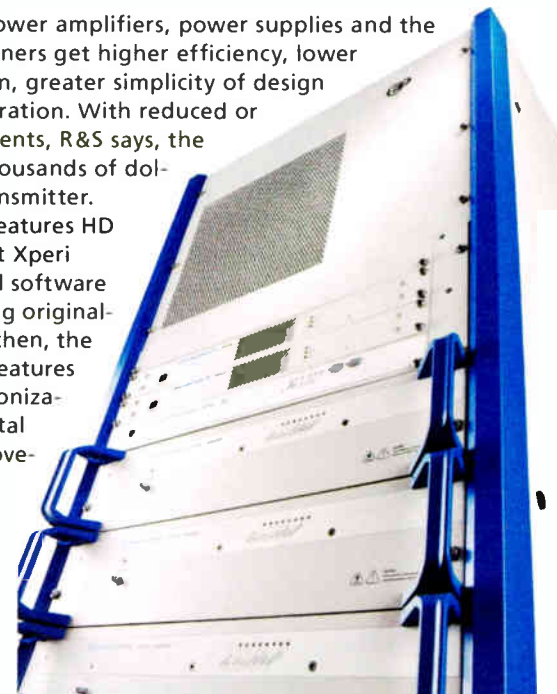
It calls the THR9 is one of the most compact high-power transmitters available, with up to 40 kW analog power in a standard rack configuration. It's an efficient FM transmitter with analog efficiency in excess of 74 percent. A key contributing factor to this performance is liquid cooling, the company says.

With liquid cooling, R&S says, transmitters are more efficient, smaller and more reliable with fewer moving parts. Liquid cooling is a closed loop design, so owners don't have to refill the system or worry about contaminants getting into the system. In addition, it uses redundant pumps and heat exchangers so a single failure, however unlikely, won't keep stations from broadcasting at full power.

The THR9 liquid cools power amplifiers, power supplies and the combiner, so, R&S says, owners get higher efficiency, lower electric power consumption, greater simplicity of design and more flexibility in operation. With reduced or eliminated HVAC requirements, R&S says, the THR9 saves hundreds of thousands of dollars over the life of the transmitter.

Beyond that, the THR9 features HD Radio support with the first Xperi Generation 4 hardware and software reference platform, shipping originally in August of 2017. Since then, the HDR900 continues to add features including automatic synchronization of the analog and digital HD1 signal and other improvements.

For information, contact Rohde & Schwarz at 1-616-206-0301 or visit www.rohde-schwarz.com.



WHO'S BUYING WHAT

DELTA MECCANICA DELIVERS COMBINER SYSTEMS TO RAI

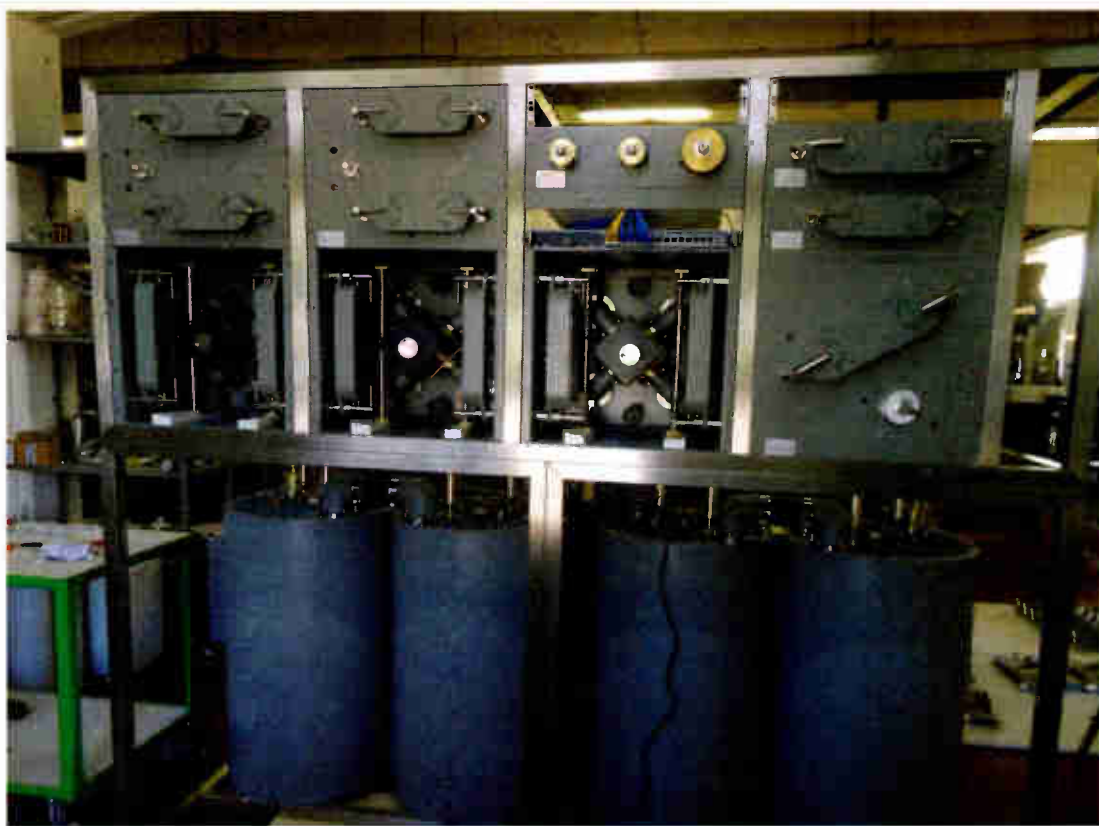
Delta Meccanica has delivered three FM combiner systems to Italian national public broadcaster Rai's three stations in Sardinia. The solutions combine three and four 10 kW channels in passive reserve.

In addition, the systems include input manual patch panels able to bypass the combiner and send the channel directly to the antenna, an output patch panel to commutate the entire signal on the antenna system or to the dummy load.

All input channels feature an automated commutating function that uses a motorized coaxial switch mounted on Delta Meccanica's Extra Safety System. Designed by the company, the system consists of a motorized coaxial switch mounted on a frame, allowing for easy disconnection and extraction in the case of coaxial switch failure. It permits users to restore the transmission chain quickly by replacing the damaged coaxial switch with a manual U-link.

Thermal analysis monitors and logs all cavities in real time. The information is stored both locally and remotely and shows operating temperature as well as power at input and output probes.

For information, contact Delta Meccanica in Italy at +39-07-6331-6222 or visit www.deltameccanica.com.



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RADIO WORLD March 13, 2019

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WANT TO BUY

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MISCELLANEOUS

WANT TO SELL

I'm selling between 150 and 200 cassette tapes that consist of old-time radio shows, sports shows, some local New York radio talk shows, etc... Must take entire collection and the price is negotiable. Please call me for details and my phone number is 925-284-5428.

Radio broadcasts of Major League Baseball, NFL, and some college football games that are on cassette tapes, approx 100 to 125 games, time period of entire collection os from the 1950's - 1970's, BO. Must purchase entire collection Contact Ron, 925-284-5428 or ronwtamm@yahoo.com

WYBG 1050, Messina, NY, now off the air is selling: 250' tower w/building on 4 acres; 12' satellite dish on concrete base; prices drastically slashed or make offer. 315-287-1753 or 315-528-6040

RADIO WORLD

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WANT TO BUY

Collector wants to buy: old vintage pro gears, compressor/limiter, microphone, mixing consoles, amplifiers, mic preamps, speakers, turntables, EQ working or not, working transformers (UTC Western Electric), Fairchild, Western Electric, Langevin, RCA, Gates, Urei, Altec, Pultec, Collins. Cash - pickup 773-339-9035 or itg821@aol.com.

2" plastic "spot" reels 6.5 or 8" diameter, as used for quad video. Wayne, Audio Village, 760-320-0728 or audiovig@gte.net.

Equipment Wanted: obsolete, or out of service broadcast and recording gear, amplifiers, processing, radio or mixing consoles, microphones, etc. Large lots preferred. Pickup or shipping can be discussed. 443-854-0725 or ajkivi@gmail.com.

I'm looking for KTIM, AM,FM radio shows from 1971-1988. The stations were located in San Rafael, Ca. Ron, 925-284-5428.

I'm looking for KFRC radio special of Elvis Presley which aired on January 8, 1978. I'd be willing to pay for a digital copy. Ron, 925-284-5428.

I'm looking for San Francisco radio recordings from the 1920's through the 1980's. For example newscast, talk shows, music shows, live band remotes, etc. Stations like KGO, KFRC, KSFO, KTAB, KDIA, KWBR, KSFX, KOBY, KCBS, KQW, KRE, KTIM, KYA, etc, I will pay for copies... Feel free to call me at 925-284-5428 or you can email me at ronwtamm@yahoo.com.

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MISCELLANEOUS

WANT TO BUY

I'm looking for the Ed Brady radio show in which he did a tribute to Duke Ellington, the station was KNBR, I'd be willing to pay for a digital copy. Ron, 925-284-5428.

Looking for a broadcast excerpt of a San Francisco Giant's taped off of KSFO radio from 1959, interviews with Willie Mays, Dusty Rhodes & some play by play excerpts, also features a home-run by Willie Mays and Felipe Alou stealing second base, running time is 18:02, also looking for SF Giants games and/or highlights from 1958-1978 also taped off KSFO Radio. Ron, 925-284-5428 or ronwtamm@yahoo.com.

Looking for KFRC signoff radio broadcast from 1930 Andy Potter, running time is 0:22 & also the KLX kitchen the program guest is Susanne Caygill, a discussion of women's affairs with a long promotion for Caygill's appearance at a local store. Anne Truax, Susanne Caygill, running time

is 13:44. Ron, 925-284-5428 or email ronwtamm@yahoo.com.

Looking for KTIM FM radio shows from 1981-1984 if possible unscoped. R Tamm, 925-284-5428 or ronwtamm@yahoo.com.

Looking for K5FX radio shows, Disco 104 FM, 1975-1978. R Tamm, 925-284-5428.

RECEIVERS/ TRANSCEIVERS

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Johnson Electronic SCA880 module, 67/92 Khz, 417-881-1846.

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Schnader telecriptions 16 mm musical films produced in the early 50s. Bill Cook, 719-684-6010.

Large or small collections of 16" transcriptions or 12" transcriptions, not commercial LPs. Bill Cook, 719-684-6010.

Standard Short-tune series. Bill Cook, 719-684-6010.

(2) LPFM radio stations for sale, located in the NW part of central Florida on the gulf coast, covers the county, get out of the cold weather, come to Florida, call or write for particulars, 352-613-2289 or email boceey@hotmail.com or Bob, PO Box 1121, Crystal River, FL 34423.

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Where Things Stand for FM Class C4: the Waiver Route

A 12 kW power option for some Class A FMs may be within reach, station owner predicts

COMMENTARY

BY MATTHEW WESOLOWSKI

The author is CEO of SSR Communications, owner of WYAB(FM) in central Mississippi.

A 12 kW power option for eligible Class A FM stations may be close at hand.

Just four months after the Federal Communications Commission wrapped up formal comments in the MB 18-184/FCC 18-69 FM Class C4 proceeding, sitting Commerce Committee Chairman Sen. Roger Wicker (R-Miss.) shared his thoughts about the proposal with Chairman Ajit Pai in a December 2018 letter. To put it succinctly, he approves:

"I welcome the Commission's June Notice of Inquiry to examine proposals for a new FM radio broadcast class," Sen. Wicker wrote. He went on to say that the FM Class C4 plan "could also help small and rural radio stations, in particular, to enhance their listening areas and better serve the public interest."

Chairman Pai answered, "As some have advocated, this reform could allow many Class A FM stations to broadcast with increased power, which could be especially important for small, minority-owned stations that currently cannot serve their entire communities. ... I look forward to working with you and my colleagues to improve the quality of radio service throughout the United States."

SSR Communications and the Multicultural Media, Telecom and Internet Council originally submitted the FM Class C4 petition for rulemaking to the commission in January 2013. Five years later, in June 2018, the FCC issued a Notice of Inquiry related to the proposal in order to gauge interest, to which over 100 small broadcasters filed letters in



Matthew Wesolowski

full support.

If the MB 18-184 / FCC 18-69 proceeding were to be approved in full, hundreds of eligible Zone II Class A FM stations would be able to increase in maximum effective radiated power level from 6 kW to 12 kW and to the proposed FM Class C4 designation. Associated FCC Section 73.215 rule changes would permit greater tower siting flexibility for small stations.

Backers of the FM Class C4 initiative seem to have reason to celebrate. The current FCC chairman has expressed his support of the idea on several occasions now. Other proponents include MMTC, hundreds of small broadcasters, and now Sen. Wicker, whose Senate Commerce Committee is in charge of FCC oversight.

Many small broadcasters are asking the commission to formalize the FM Class C4 idea with a Notice of Proposed Rulemaking. If, however, a NPRM is not forthcoming, an alternative procedure for Class A FM stations seeking service improvements may exist. Like many nascent broadcast proposals in the

past, a waiver-based option could represent the elusive "path forward" in the FM Class C4 initiative.

THE WAIVER ALTERNATIVE

In July 2018, Commander Communications filed a waiver-based application for a 12 kW facility for WRTM(FM) in Sharon, Miss. The WRTM waiver potentially offers two key advantages over a formal NPRM:

1. The waiver guarantees no disruptions to FM translator or low-power FM facilities.
2. The waiver could serve as a model for other stations seeking to apply for such changes and would offer immediate relief for those Class A FM stations in need.

At present, however, the WRTM Waiver application remains in the commission's processing queue, not yet granted nor dismissed.

Although some have suggested that a waiver-based model could short-circuit the traditional rulemaking process, there have been plenty of far-reaching proposals that began life as a simple waiver request. Just ask any of the thousands of AM station licensees that broadcast on a cross-service FM translator, for instance.

As always, work is ongoing in the FM Class C4 effort. Over the course of two separate visits in February 2019, representatives of MMTC and SSR



Communications visited commission advisors and Media Bureau staff and discussed the status of the MB 18-184/FCC 18-69 FM Class C4 proceeding. Although commission representatives could not provide a definitive timetable as to when the proposal would come to fruition, the tone of the meetings was very positive. It seems there may be enough of an appetite at the commission for the proposal to proceed.

If either of the FM Class C4 NPRM or WRTM(FM) waiver-based avenues were to crystallize this year, many small and independent broadcasters would be beyond ecstatic. Firm support in key places is higher now than at any other point in the proposal's history; 2019 could very well be the year in which FM Class C4 becomes a reality.

Comment on this or any story. Email radioworld@futurenet.com with "Letter to the Editor" in the subject field.

READER'S FORUM

REVIVING THIELE'S AM CURVE SUGGESTION

Thanks to Larry Langford for trying the AM curve suggested by Nevelle Thiele.

I sent a letter to Radio World that was published in the Feb. 16, 2005, issue promoting Nevelle's idea. Over 30 years ago, I questioned the wisdom of the NRSC curve. Towers and transmitters are asked to handle a difficult load because of NRSC preemphasis, and the MW band is hurt by the severe curve and brickwall filtering.

Larry, with less distortion, I bet your station sounds great and the other stations in your market appreciate a good neighbor.

Larry Ray
Springfield, Ill.



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READER'S FORUM

NRSC REAFFIRMED THE AM CURVE

As the chairman of the NRSC AM and FM Analog Broadcasting Subcommittee's Document Management Working Group, which recently reviewed the NRSC-1-B Standard and reaffirmed its specification of an AM preemphasis/deemphasis system, I feel it is necessary to respond to Larry Langford's commentary "AM Preemphasis — Time for a New Curve?" [read that at <https://tinyurl.com/rw-langford>; also see reader reactions in the Feb. 1 issue Opinion section].

Mr. Langford misinterprets the purpose of preemphasis and the DMWG's intent, and he misinforms readers on some technical points.

Larry should have participated in our review and updating of the NRSC-1 Standard last year: he would know that the DMWG spent considerable time discussing the preemphasis curve prescribed NRSC-1-B. In the update process, the DMWG needed a contour that could be used with the fixed response of receivers, so that engineers could test overall system performance. We understand that AM receivers have evolved with a severe rolloff in response, but we agreed the amount of high-frequency boost to compensate for this rolloff is impractical (as explained below), and importantly, would be reinforcing what we considered the poor condition of receiver audio fidelity.

Preemphasis in transmission is intended to be a complementary process with receivers. The Oxford Dictionary defines it this way: "A systematic distortion applied to an audio or video signal prior to transmission or recording, usually in order to improve signal-to-noise ratio, involving an increase in the relative strength of certain frequencies in anticipation of a corresponding decrease (deemphasis) made during reception or playback."

Nevertheless, the amount of preemphasis has its limits, as noted in an RCA Review article by Murray Crosby, in January 1940: "... the use of preemphasis circuit at

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AM Preemphasis — Time for a New Curve?

Larry Langford insists that AM can sound better and without additional regulations or specifications.

LARRY LANGFORD — JAN 11, 2019

Read Larry Langford's original article at: <https://tinyurl.com/ycmbok26>.

Larry Langford, chairman of WGTO(AM) and W244ds in Cassopolis, Mich. He has been in radio since 1965. His commentaries on radio issues such as those facing AM owners are a recurring feature. Read his past articles by searching for "Langford."

the transmitter and a deemphasis circuit at the receiver produces an overall gain in signal-to-noise ratio. This gain depends upon the fact that the higher modulation frequencies of voice and program material are of such a small amplitude that their accentuation does not increase the peak voltage of the applied modulating wave as much as the restoring circuit at the receiver reduces the noise."

It is beyond the scope of this reply, but I think we all agree that modern program energy does not roll off by 9 dB at 4 kHz, which would allow the "boost" suggested by Larry without a high "peak voltage." The amplitude of these high-frequency peaks must be decreased by dynamic compression, with a cost to fidelity. Of course, we preemphasize in FM with a 75 microsecond curve having a boost of approximately 8 dB at 5 kHz, and we know this boost requires fairly aggressive limiting and clipping to tame modulation. (The NRSC's AM preemphasis uses a "modified 75 μ s AM Standard Preemphasis Curve" having a second time constant that reduces boost to 10 dB at 10 kHz.)

NRSC G-100-A, which the DMWG also reviewed and updated (to be released soon as NRSC-G100-B), includes a measurement of 30 consumer AM receivers in 2005 (carried out by this writer, at NPR Labs), for all receiver categories. The median audio frequency response of the test population had a -10 dB point of 4100 Hz, relative to 1 kHz. However, the median response at 10 kHz was approximately -31 dB, and no practical amount of preemphasis can correct this loss.

The DMWG members understand that most broadcasters override a program's spectral characteristics with modern audio processing devices. This continuously changes the frequency response of the content at the expense of a loss of spectral balance and dynamics. That is the result of Larry's promoting a large "bell curve boost" at 4 kHz: to avoid reducing the overall level to handle the excess peaks (as Crosby noted in 1940), one uses aggressive compression to tame the overshoots, which is okay for communications but I believe is not improving the fidelity of AM.

The rolloff above 4 kHz that Larry proposes would make AM no more than a 4 kHz system — in all receivers. Even testing with recent, rolled-off AM radios, listeners in the NPR Labs study showed a preference for full 10 kHz transmission bandwidth, with decreasing scores as the bandwidth was reduced. (However, Larry's heart seemed to be in the right place, noting in a June 15, 2018, Radio World commentary: "... we must stop beating the modulation to death or we will chase away ALL of our listeners to FM. The radios sound bad enough by themselves; we don't need to increase distortion and muddiness with bad tuning.")

With today's technology, I believe an optimal solution is to use the NRSC preemphasis and leverage digital signal processing in AM receivers to lower noise and improve audio bandwidth. The AFAB Subcommittee recently approved an initiative by its the AM Improvement Working Group to study the effectiveness of DSP in AM receivers, as well as a closer look at electrical and electronic noise affecting the AM broadcast band. The DSP study, expected to be completed within a year, may provide both technical and audio demonstrations of the potential listener experience. With that, I hope we can adhere to some of the psychoacoustic principles that were known 80 years ago.

John Kean
Kean Consultants
Falls Church, Va.

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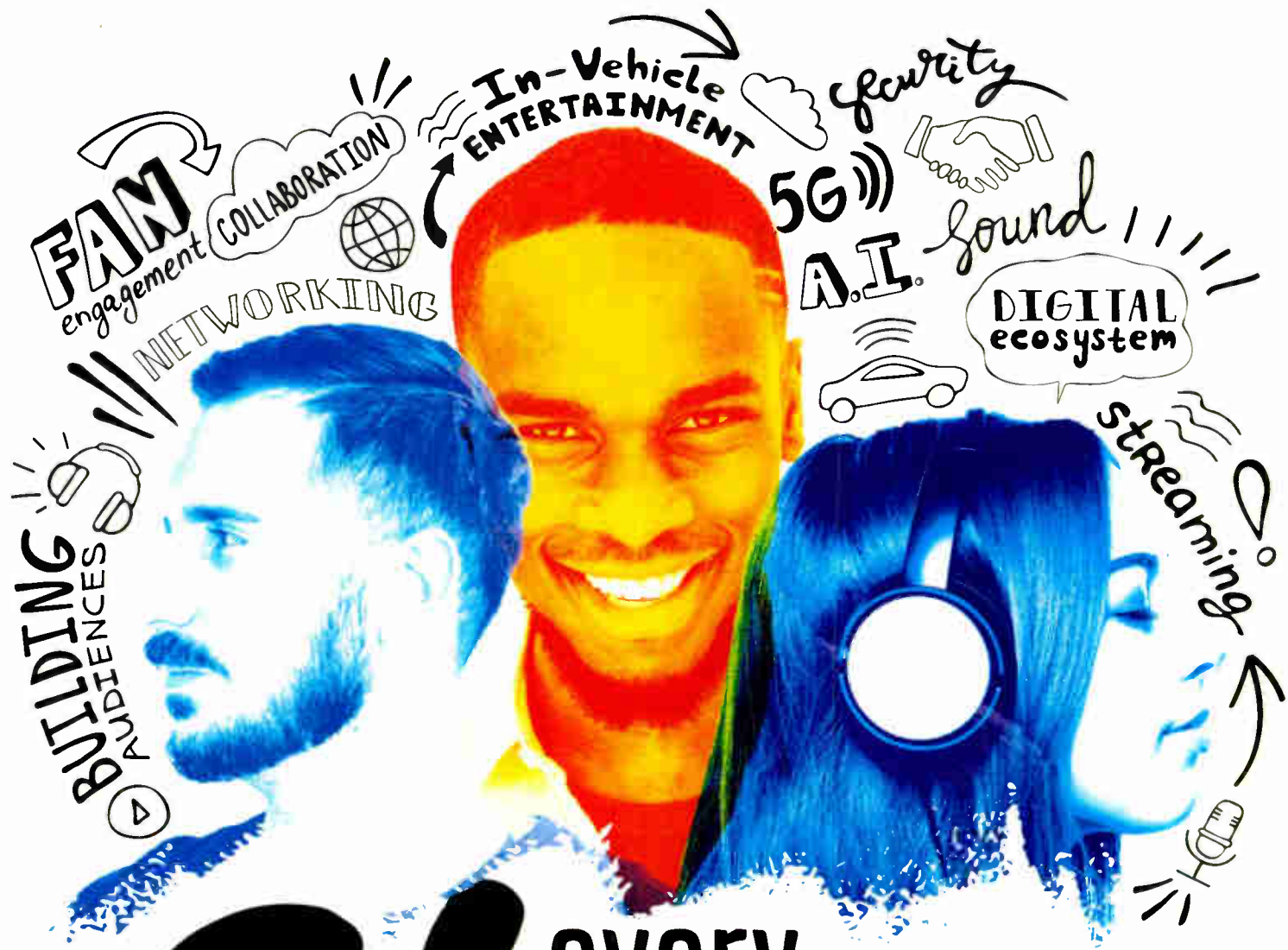
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