RADIOWORLD

RADIOWORLD.COM

A NEW RADIO WORLD EBOOK

Recipes for visual display

How to add zest to your radio station's dashboard flavor

Sponsored by

Nautel • Quu • Xperi

FUTURE

OCTOBER 2024

Monetize the dashboard

Increase Revenues & Ratings

HD Digital Radio Test Drive

Sell and Inform with Graphics | Get More Listeners | Make Profit

Learn more at nautel.com/hdtestdrive

Enabling Technologies:

Quu®

RAPID
POWERING VISUAL RADIO

HD Radio®
Digital AM & FM

nautel
AM/FM Radio Transmitters

RADIOWORLD

October 2024 eBook
www.radioworld.com

FOLLOW US
www.x.com/radioworld_news
www.facebook.com/RadioWorldMagazine
www.linkedin.com/company/radio-world-futureplc

CONTENT
Managing Director, Content & Editor in Chief Paul J. McLane, paul.mclane@futurenet.com, 845-414-6105
Assistant Editor & SmartBrief Editor Elle Kehres, elle.kehres@futurenet.com
Technical Advisors Thomas R. McGinley, Doug Irwin, W.C. "Cris" Alexander

Contributors: David Bialik, John Bisset, Edwin Bukont, James Careless, Ken Deutsch, Mark Durenberger, Charles Fitch, Donna Halper, Alan Jurison, Paul Kaminski, John Kean, Nick Langan, Larry Langford, Mark Lapidus, Michael LeClair, Frank McCoy, Jim Peck, Mark Persons, Stephen M. Poole, James O'Neal, T. Carter Ross, John Schneider, Gregg Skall, Dan Slentz, Dennis Sloatman, Randy Stine, Tom Vernon, Jennifer Waits, Steve Walker, Chris Wygal

Production Manager Nicole Schilling
Art Editors Rob Crossland

ADVERTISING SALES
Senior Business Director & Publisher, Radio World
John Casey, john.casey@futurenet.com, 845-678-3839
Advertising EMEA
Raffaella Calabrese, raffaella.calabrese@futurenet.com, +39-320-891-1938

SUBSCRIBER CUSTOMER SERVICE
To subscribe, change your address, or check on your current account status, go to www.radioworld.com and click on Subscribe, email futureplc@computerfulfillment.com, call 888-266-5828, or write P.O. Box 1051, Lowell, MA 01853.

LICENSING/REPRINTS/PERMISSIONS
Radio World is available for licensing. Contact the Licensing team to discuss partnership opportunities. Head of Print Licensing Rachel Shaw licensing@futurenet.com

MANAGEMENT
SVP, MD, B2B Amanda Darman-Allen
VP, Global Head of Content, B2B Carmel King
MD, Content, Broadcast Tech Paul J. McLane
VP, Head of US Sales, B2B Tom Sikes
Managing VP of Sales, B2B Tech Adam Goldstein
VP, Global Head of Strategy & Ops, B2B Allison Markert
VP, Product & Marketing, B2B Andrew Buchholz
Head of Production US & UK Mark Constance
Head of Design, B2B Nicole Cobban

FUTURE US, INC.
130 West 42nd Street, 7th Floor, New York, NY 10036

Connectiv The Business Information Association, a division of SIIA IPSO Regulated

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

Connected car cookbook

A recipe for getting the most out of your station's visual displays

Paul McLane
Editor in Chief

Our intent in this ebook is to provide ways to make your stations more competitive and engaging on the car dashboard, with a particular focus on on how broadcasters in North America can make graphics happen.

The topic was suggested by Nautel, our lead sponsor. I asked John Whyte, its head of marketing and product strategy, why.

"We're very passionate about what is happening on the automobile dashboard. We see the potential for digital radio to make a station's presence gain equal footing vs. Spotify and other streaming services that have become prominent on car displays," he said.

"It's about letting stations put their best foot forward and create a compelling experience for the listener/viewer, and then go beyond that to find new value propositions for advertisers and donors."

John told me he heard a story recently about a listener who for several months thought they were experiencing a Spotify feed, only to realize it was a local station's HD channel. "I think that's the experience and parity on the dashboard we need to be shooting for."

He concurs with those who feel radio has plenty of room to improve in this area.

"Implementing graphics makes radio more 'digital,' which is appealing to advertisers who are spending a significant portion of their dollars on digital media. We encourage broadcast engineers to have discussions with their sales and programming teams to consider if enhanced metadata could have an impact on their station and what it might take to implement it. As a company we're doing what we can to make harnessing graphics album art and advertising easier for broadcasters by lowering costs, getting rid of boxes and creating 'test drive' options so stations can more readily put the power of graphics and advertising to work in their markets."

In this ebook you'll read updates about platforms like DTS AutoStage, Rapid, Quu, RCS AudioDisplay and RadioDNS, and how they work together, including useful resources. You'll hear opinions from expert observers like David Layer of the NAB, Alan Jurison of iHeartMedia, consultant Fred Jacobs and Megan Amoss of Baltimore Public Media. And don't miss our sampler from the recent research project done by Quu demonstrating how much variety there is in how radio shows up, as well as what happens when metadata isn't present or managed well.

THIS ISSUE

Getting the most from metadata is a mindset issue

"Most PDs have not been trained or taught to even consider the dynamics of metadata"

Above
Fred Jacobs says: "Here's an example of using metadata to remind listeners everywhere of one of the most important people in their lives. I think this type of universal messaging has the power to resonate with consumers in ways other media aren't using — yet."

Fred Jacobs founded Jacobs Media in 1983. He created the classic rock radio format and was the first radio consultant inducted into the National Radio Hall of Fame. In 2022 he and his brother Paul received the NAB National Radio Award.

Have broadcasters gotten the message that you've been preaching for years about visual display?

Fred Jacobs: There are times while I'm in a car where I get buoyed by how some stations are using their metadata. It can be comparable or even better than how SiriusXM or Spotify displays their channels or music.

But there are other cases where I scratch my head. It can be a case where a station is supporting their audio with a lot of sales graphics and text at the exclusion of programming content. There are other situations where nothing is being done. In these latter examples, all I can assume is that no one in management drives a late-model vehicle with a nice infotainment system, they don't realize they can affect the way their station looks on car dashboards, or they just don't think it's a big deal.

What's a feature or capability that metadata makes possible but that broadcasters may not be taking advantage of?

Jacobs: Displaying the artist and title of a song is now table stakes in the car. In vehicles equipped with HD Radio with the Artist Experience feature, so is the thumbnail picture of the album artwork. Where the metadata gets interesting is in conceiving other ways to display programming features — pictures of personalities and shows, graphics for station features, emergency information, etc.

While programmers have to guard against "over display," the fact is that for many stations, metadata that attractively shows content is a plus. On a spoken-word station featuring a strong guest, letting the audience know who is being interviewed can be additive, too.

A key is that programmers need to start proactively thinking about how and where metadata can support and enhance what is on the air. It is a mindset issue — most PDs have not been trained or taught to

even consider the dynamics of metadata. It's a huge opportunity, especially given the attention most drivers pay to their dashboard screen. And at this time in radio when marketing dollars are at a premium — or nonexistent — metadata can be attention-getting, top-of-mind, and even occasion-setting.

What resources would you recommend to readers?

Jacobs: The first edition of the NAB's "Digital Dashboard Best Practices Report" was put together by me, my brother Paul and engineering guru Glynn Walden. It's been updated a number of times, most recently in October 2023. You don't have to be a member of NAB to download a free copy here.

It's a simple but comprehensive DIY guide to aligning your radio station's metadata in a consistent and attractive way. Many people who work in radio don't realize how much control they have when it comes to dashboard messaging. I would recommend that broadcasters start with this guide and go from there.

The second piece is to conduct your own audit in your metro. Sit in a well-equipped vehicle — or two — and scan from 88 to 108. When the radio lands on a local station (or HD2), stop the scan and wait for the metadata to populate; it may take several seconds. Make note of who's displaying what, how it looks and works, and is it something you want to emulate or improve upon. In a typical market, there will be a wide range of metadata and quality display from the sharp to the abysmal. How does your own display match up, and where and how can it be better?

Another idea is to line up five or so vehicles in the station parking lot that can all display artist and title. One or two should be late-model cars. Then wait for an element on your station to air (like a song) and compare how that looks on all five dashboards. They will likely vary by make and model, giving you (and your engineer) a better understanding of the challenges and opportunities with metadata.

What's the most common mistake or error broadcasters make in managing metadata?

Jacobs: It's important to keep metadata messaging simple and short. Anybody who spent time with Twitter during the early years came to understand the challenge of crafting a tweet less than 120 characters. It requires practice and repeated editing.

It's the same with metadata. Dashboard "real estate" is highly limited, and there's very little to no standardization across the various auto companies. It's similar to designing a billboard, where you quickly come to realize the fewer words (and the shorter words), the better. It takes discipline, clarity and editing to communicate effectively on the screens in most vehicles on the road today.

> **Conduct your own audit in your metro. Sit in a well-equipped vehicle — or two — and scan from 88 to 108.**

Do you have a best practice that you'd like to call attention to?

Jacobs: I like to use metadata that is in the moment, that can even drive an emotion. When programmers look at opportunities to tap into shared experiences, perhaps around holidays, during weather emergencies or even the changing of the seasons, the right message on a dashboard can be almost communal. Yes, it's great to display album artwork or a sponsor's logo, but connecting with drivers when they're listening to radio in the intimacy of their cars is special.

Below
Fred Jacobs

Visual display is a cost of doing business

It costs little to get started, and the upside is high

Above
Radio managers often have strong relationships with local car dealers. Car lots are a great source of free market research into how your station looks to your listeners.

Alan Jurison is senior operations engineer for the Technical Operations group at iHeartMedia.

RW We've been hearing for some time — from NAB's David Layer, consultant Fred Jacobs, yourself and others — that managing a station's visual presence on the car dash is critical. Why aren't more stations paying attention?

Alan Jurison: Actually there has been major uptake on this from the major incumbents, the largest radio groups, which collectively have thousands of stations. Their executive teams understand metadata and consider the car dashboard as a priority. But smaller broadcasters often don't have a lot of money and understandably are guarding their expenses.

Yet I think it's to their own long-term detriment, as well as that of the industry, not to invest in this. For one thing, as David Layer points out elsewhere in this ebook, new cars now present a listener with a list of stations, and it becomes very apparent which stations are not managing metadata carefully or at all.

When today's consumers open a modern audio product with a large display, they expect that it will show information about your station when they're tuned to it. And when they're selecting stations from a guide, they expect that your station will show up. When was the last time you looked at a listing on a video channel or cable TV without seeing information about what you were going to watch?

Radio has never really taken this seriously, and even in large markets there are still scores of stations missing the mark. To not even have their station name and logo up there ... When a listener can't even see the name of a channel, just a number, why would they select that station?

So even if you are a smaller broadcaster, you should investigate this. And there are cost-effective ways to participate. You could start with just static information. RDS encoders aren't that expensive, and they'll last you 20 years — the encoders that I put into service in 2002 are still running. Getting started with HD Radio will require more of an investment. But the new connected platforms like RadioDNS and DTS AutoStage are free to participate with static information. It will cost you nothing but a little time.

So at the very least, you should be sending static information in RDS, RadioDNS and DTS AutoStage. Sign up for those platforms and publish something, so your station appears in the directory with a basic message — what your station is, why someone should listen to it and a logo. At least you'll be present, not just a random number on the dial.

Then seriously consider taking it to the next step by participating with dynamic metadata. Learn about

XPERI®

XPERI BROADCAST TECHNOLOGIES

The Competitive Response to Big Tech

Solutions for a Multi-Device World

TiVo — Music Metadata for Broadcasters
tivo.com

aim all in media — Smartphone Apps for Radio Stations
thisisaim.com

dts AutoStage — Next-Gen In-Car Infotainment for Broadcasters
dts.com/autostage

RAPID — Powering Visual Radio
aimrapid.com

HD Radio® — Digital AM and FM Technology
hdradio.com

XPERI.COM

Photo by Jim Peck

> **When a listener can't even see the name of a channel, just a number, why would they select that station?**

Above
Alan Jurison

solutions like Xperi Rapid, Quu and RCS AudioDisplay. Find a metadata solution that works for you and your automation system.

Is it reasonable for a broadcaster to expect these solutions to pay for themselves through generating revenue?

Jurison: Certainly some stations have done it. And revenue uptake is important. By the same token I look at good metadata as a cost of doing business in radio today.

It's like having a website or participating in social media. The industry has figured out how to do those, with rare exception. And we're talking about tools that provide free or inexpensive ways for stations to interact with users in the place where most people consume radio: in their car. So you want to make sure you're present, you're visible, that the information is accurate and compelling, and ideally that it is dynamic — always something new is being presented for the listener to follow along with.

On the carmaker side there's a lot of disparity in how metadata is presented.

Jurison: RadioDNS and DTS AutoStage do provide guidelines and suggestions for the OEMs; but automotive companies have a lot of creative license in how they take the information and display it. You'll see a wide variety from automaker to automaker. Even within one car company, even within the same model year, there might be five or 10 ways a station will display depending on the model.

I think it would be good in the long term if automotive companies develop a more common look and feel for how stations display. And if they're going to go develop their own user interfaces, why not use guidelines like those from DTS, which are very well researched as far as what stations are publishing and what listeners want to see?

Is it your perception that broadcasters in other parts of the world are doing a better job of managing the metadata issue?

Jurison: Yes and no. In Europe the metadata is really good; but because that ecosystem is well refined, carmakers there tend to think it's how the rest of the world works, so they make design decisions based on their experiences in Europe. If you're a nationwide provider in Europe, you can have consistent metadata and branding across your 18 stations with a particular brand. Radio in North America and much of the rest of the world is very different. We don't have monolithic brands with nationwide signals; we have local or regional stations, which is a big difference.

The challenge for the automotive maker is to make it look good across all these types of markets. This is another area where DTS AutoStage is helping. They're filling in gaps for broadcasters by populating information about stations that aren't reporting their own metadata, using live and dynamic directory lookups. Then later, if the station decides to sign up for DTS AutoStage and provides their own dynamic metadata, that new information just flows automatically to the head unit.

I've also seen some older OEM implementations that rely on old relational databases that may display the wrong branding or the wrong station name or logo because they were baked into the software preloaded in the car and can't be updated. We discourage that.

Above
The display on a 2024 Subaru Outback, with FM, AM, HD Radio, SiriusXM, Apple CarPlay and Android Auto. From Quu's "2024 In-Vehicle Visuals Report."

What would you like radio people to do differently when it comes to car displays?

Jurison: Many in our industry lack insight into how their stations appear on the dashboard because they only experience it through the prism of the cars they own. A radio manager might have one car and drive it for five or 10 years, probably without a software update; they think everyone is having the same experience.

Jeff Detweiler at Xperi encourages radio managers to make friends with their automotive clients, go to the showroom and experience how their stations look in different vehicles. Go to one of those mega car dealer locations. There are hundreds of vehicles on these lots. Even in a smaller town, you're bound to find dealers with many different vehicles to experience.

Sales managers and general managers usually have great business relationships with local dealers, but many don't take an extra half hour to learn these insights. They'll visit the dealer and then hop back into their own car, which doesn't have these features, and drive away. Yet the dealer may have delivered several vehicles that afternoon to customers — our listeners — with all these new features. It's fascinating, but there are people who work in this industry who will buy a vehicle without using the radio and be surprised later on about what they do or do not see. My advice is to spend more time in a variety of different vehicles.

I visit car dealers in my region. I also try out various rental cars when I travel across the country. And I go to auto shows. In Syracuse we have a regional show where most of the inventory is from local and regional dealers, the actual vehicles being delivered to customers daily. I jump in every car and try to find an HD station and an RDS station. I might spend five or 10 minutes in each car. Try it. You can see what your station looks like and what your competitors look like. Don't forget to see how satellite and streaming products look. Look at the broader spectrum of what your listeners are seeing. The radio industry has a lot of work to do to achieve parity in the modern dashboard.

More Jurison

Read more on this topic in our profile of Alan Jurison, recipient of the Radio World Excellence in Engineering Award for 2024.

Quu refines its visual message offerings

Content Partnership program extends the benefits of sponsored metadata

Above
Steve Newberry

Quu provides software and services that allow stations to publish dynamic visual programming and sales messages on vehicle dashboards. Ad content can be synched to appear as a client's audio ad plays. Quu also now offers a Content Partnership program in which advertisers' visual messages appear for 30 seconds while songs or other content plays, without interrupting that audio.

CEO Steve Newberry joined Quu in 2020. He is also a station owner, former chairman of the board of the National Association of Broadcasters and past president of the Kentucky Broadcasters Association.

RW For someone not yet familiar with it, how does Quu fit into radio's metadata ecosystem?

Steve Newberry: A station's automation system generally provides metadata in a basic, manageable form — you put in the name of the song and artist, and perhaps the name of the commercial, and for many years that simply went to your RDS encoder, and its job was to convert that to display in the dashboard of the car.

Today RDS and the more advanced HD Radio platform are the delivery mechanisms. But what Quu does is add content management. The content goes to the cloud, where we say, "Okay, this ad coming out of the automation system is for McDonald's Mid Atlantic Co-op. The ISCI code for the co-op is 83-12-428." But you don't want that showing up on the dashboard of the car, so we give the station an easy way to replace that with the message "McDonald's Big Macs are back, $1.99" or "Buy one, get one free sausage biscuit." And we send that to your RDS encoder or HD system.

With our AdSync product, a station can add messages to a specific spot. So when they're in a commercial break, if they've sold a commercial through AdSync, you would see a message pop up. But if a commercial is playing and the client didn't buy the visual, Quu just shows the station brand.

But more than replacing the data, we're allowing you to manage it. Which message plays when? Do you want a message about your morning show to appear for 30 seconds? Do you want it to rotate with a message about your studio sponsor? Rotate it with a message about news coming up, or with the station's branding? Maybe you want to change it for middays instead of what you display in the mornings. Or you want to put up a tornado warning or a ball score for the big team.

One of our sports talk clients is the flagship station for Ohio State Buckeyes football. When the team announced the starting quarterback for this year, the station put that on the dashboard of the car. These tools give you the ability to provide a visual dimension to your audio relationship with the listeners.

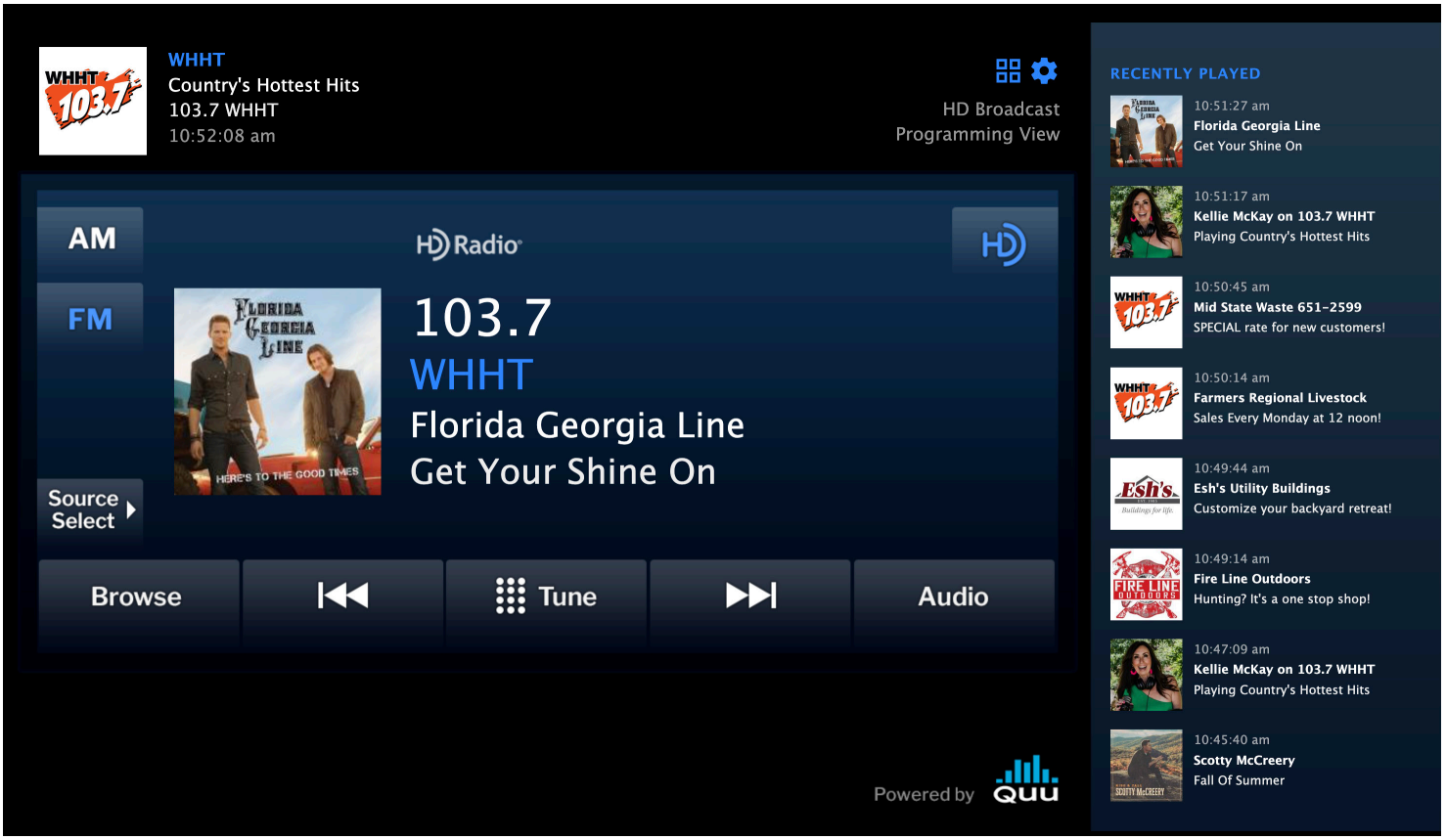
I've said it before, but our industry doesn't have a metadata problem; nobody wakes up every day saying "Oh my gosh, my metadata is terrible." We have a listener experience challenge. Metadata provides a solution to that, but you have to manage it.

RW What does the Quu display look like?

Newberry: Let me call up a monitor to show you one of my stations in Glasgow, Ky. (Fig. 1 on the next page).

We provide this back-channel confidence monitor view to clients. It's the equivalent of a program feed at a radio station, so they can have a real-time view of what's happening on their digital displays. At my own stations I put these screens up in our studios so the air talent can see it.

Now I want to tell you about our Content Partnership program. In the past, if stations sold a visual ad to an advertiser, because of a lack of ability to manage content



Above
Fig. 1: Song title, artist and album art display for WHHT in Glasgow, Ky., provided by Quu, as seen in a station confidence monitor view that includes a log of recent visual events at right.

they just ran it over the top of the entire commercial break. A listener would be hearing ads for McDonald's, Lowe's, Kohl's and Newberry Chevrolet, but they'd see an ad for a law firm the entire time.

Jacobs Media did research on this and found that listeners thought the station had made a mistake, or they realized this was intentional but they hated it; they felt it was pushy.

I told you about AdSync and how it displays messages just during the client's spot. But with the Content Partnership program, a station can sell two premium sponsorships that will display ads outside the commercial break, during songs or other content. When a given song comes on, the screen first will show song information and album art for 90 seconds. Then a message from one of those two premium sponsors will display. In this example, The People's Bank is a Content Partner (see Fig. 2, page 14).

The visual ad runs for 30 seconds and then goes away.

You've seen a station in Glasgow in Kentucky. Now here's Audacy's WYCD in Detroit, Michigan. The technology works great and just the same regardless of market size (see Fig. 3, page 21).

During songs, after 90 seconds of song title and artist, the listener will see 30 seconds of an ad from one of their two content partners, which are National Coney Island and the Sam Bernstein Law Firm.

There are only two premium sponsors because we can't inundate listeners. I don't want your radio station looking like the outfield fence at a little league ballpark.

We're also beta-testing a feature that will display "Next Up" information as the end of a song approaches. Programmers have asked for that.

You provide verification that visual ads actually ran?

Newberry: We follow the cart number in the automation system. When cart number 8380 comes up, we display the message that the station wants displayed. Then when it's time for them to go back and bill McDonald's, they print out their usual affidavit showing the precise run times of their audio ads, and they can go to Quu and print out the display times for McDonald's cart number 8380 and put those on top of each other. The station sends that to the client: "Here are your audio verifications, and here are your visual verifications, and they match up."

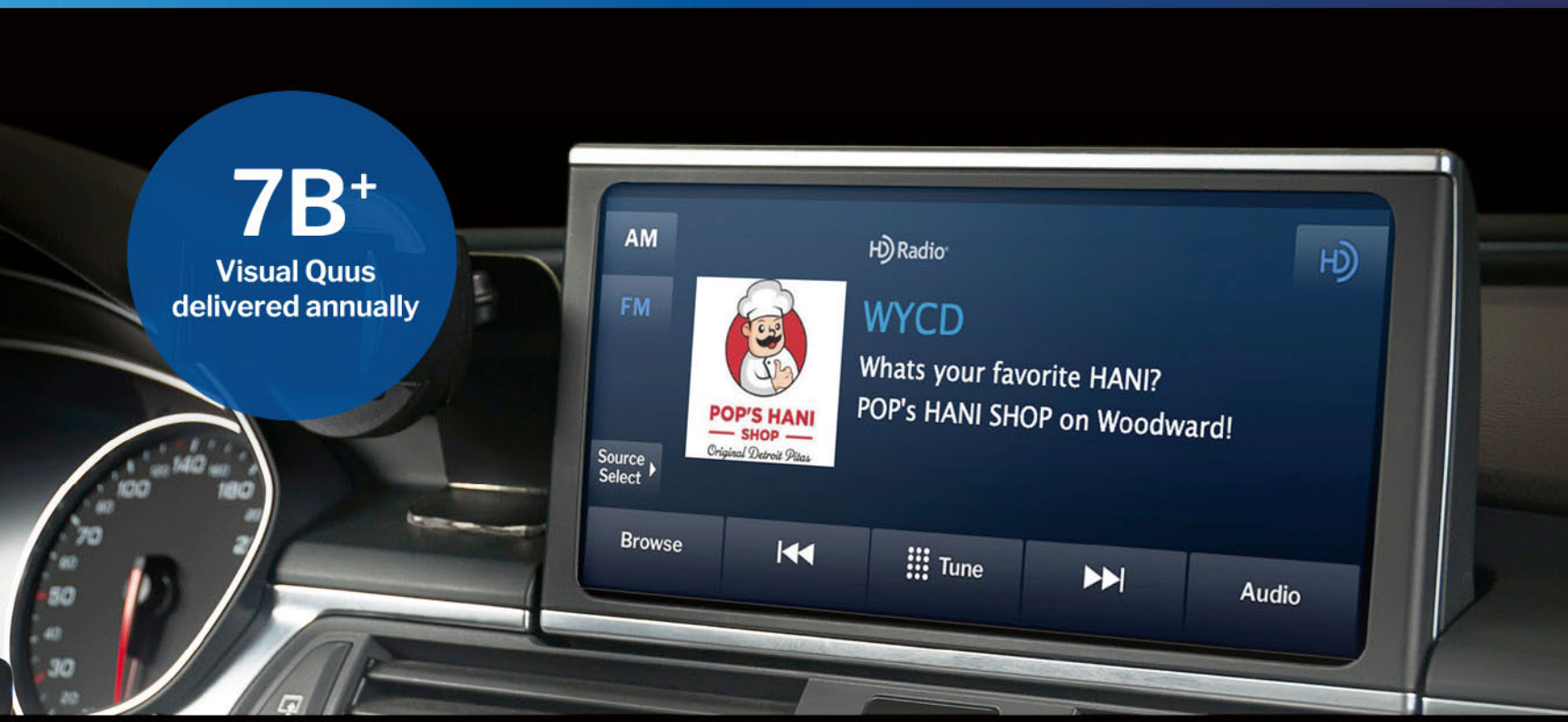
We hear a lot of names of platforms. How does Quu interact with those?

Newberry: Our content delivery management system is built on the foundation of the Rapid system from All In Media, a division of Xperi.

You'll remember when we first began to talk in the industry about "middleware," which you needed to get a message from the output of the automation system to the input at the transmitter site — names like Arctic Palm,

Quu®

Redefining how we see radio.



Easy deployment of visual content for radio is here.

Quu's web-based software is used to display programming and sales content on vehicle dashboards.

- ✓ Update from anywhere 24/7
- ✓ Connects to automation systems
- ✓ Integrates with vCreative

Scan to learn more!

Learn what Quu can do for you at MyQuu.net

Drive ratings and revenue

Brand your station

Reinforce your station name, positioning, schedule, social media, and personality with text and images.

Boost TSL

Use programming Quus to tease upcoming content, events, promotions, and contests.

Sync radio spots

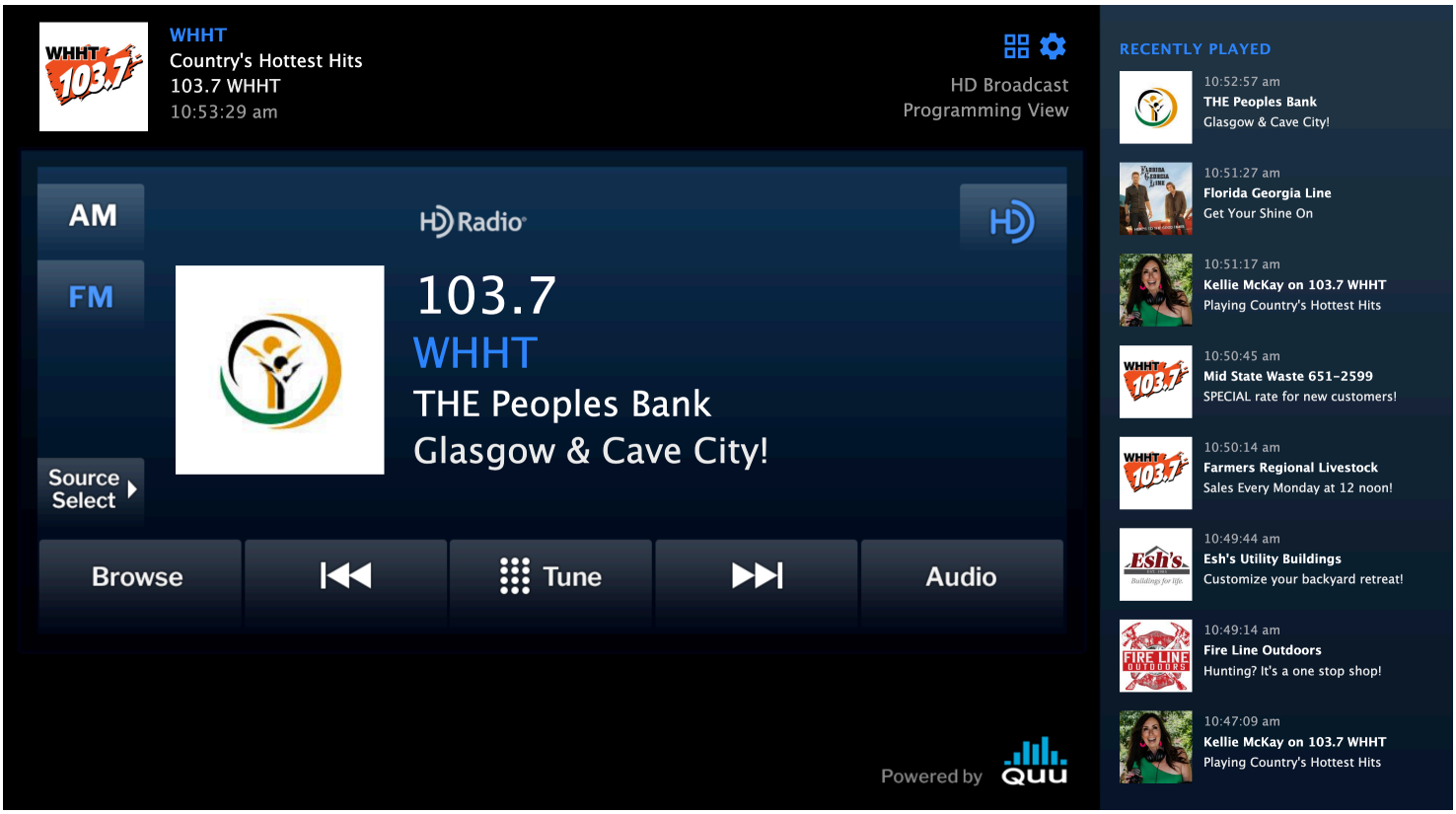
AdSync Quus are a visual “echo” of a radio commercial. As your client’s ad airs, a brief message appears.

Sell new sponsorships

For the first time, ad messages can be displayed in-dash thousands* of times during songs and talk content.

**Content Partnership on average per month*

Schedule a Demo: Info@MyQuu.com | 425.400.UQUU



Above
Fig. 2: During a song, a 30-second visual ad displays for The People's Bank, one of the station's two premium sponsors. Other recently displayed elements, logged at right, include logos for clients like Esh's Utility Buildings who bought the AdSync program and whose logos display when their spots are aired.

JumpGate and The Radio Experience. Arctic Palm became part of DTS eight years ago. Quu owns JumpGate. TRE is still around, owned by Broadcast Electronics. But we were really impressed with Rapid, and Xperi liked our content management system.

Joe D'Angelo of Xperi and I are very collaborative. We asked each other, "How can we make this process simpler for the radio broadcaster instead of getting everyone lost in an alphabet soup of all these different companies out there?"

In 2022 we rolled out an integrated solution to sync programming and sales messages on vehicle dashboards. Before that, stations would go to Xperi to deploy its Rapid technology and then to Quu for content management, monetization and reporting. Now, Quu is a one-stop shop for both. If you subscribe to Quu, it comes with the Rapid platform software. We help you get it installed, then we put Quu content management on top, and you get the best of both worlds.

We're also easily integrated into the DTS AutoStage platform, since Rapid is a part of Xperi. DTS is a great platform, and Xperi doesn't charge broadcasters for it. So if you're a Quu customer on this Rapid platform, you're getting an even more dynamic integration than what you get with DTS AutoStage by itself.

But to be clear, a station doesn't need one to use the other?

Newberry: A station doesn't have to have Quu to take advantage of DTS AutoStage, nor do they have to have DTS AutoState to take advantage of Quu. But they sure work really well together.

With Quu, you put your information in once, and we send it automatically to whatever your distribution channels might be — your translator, your FM station, your HD signal, your DTS AutoStage, all through the Rapid software.

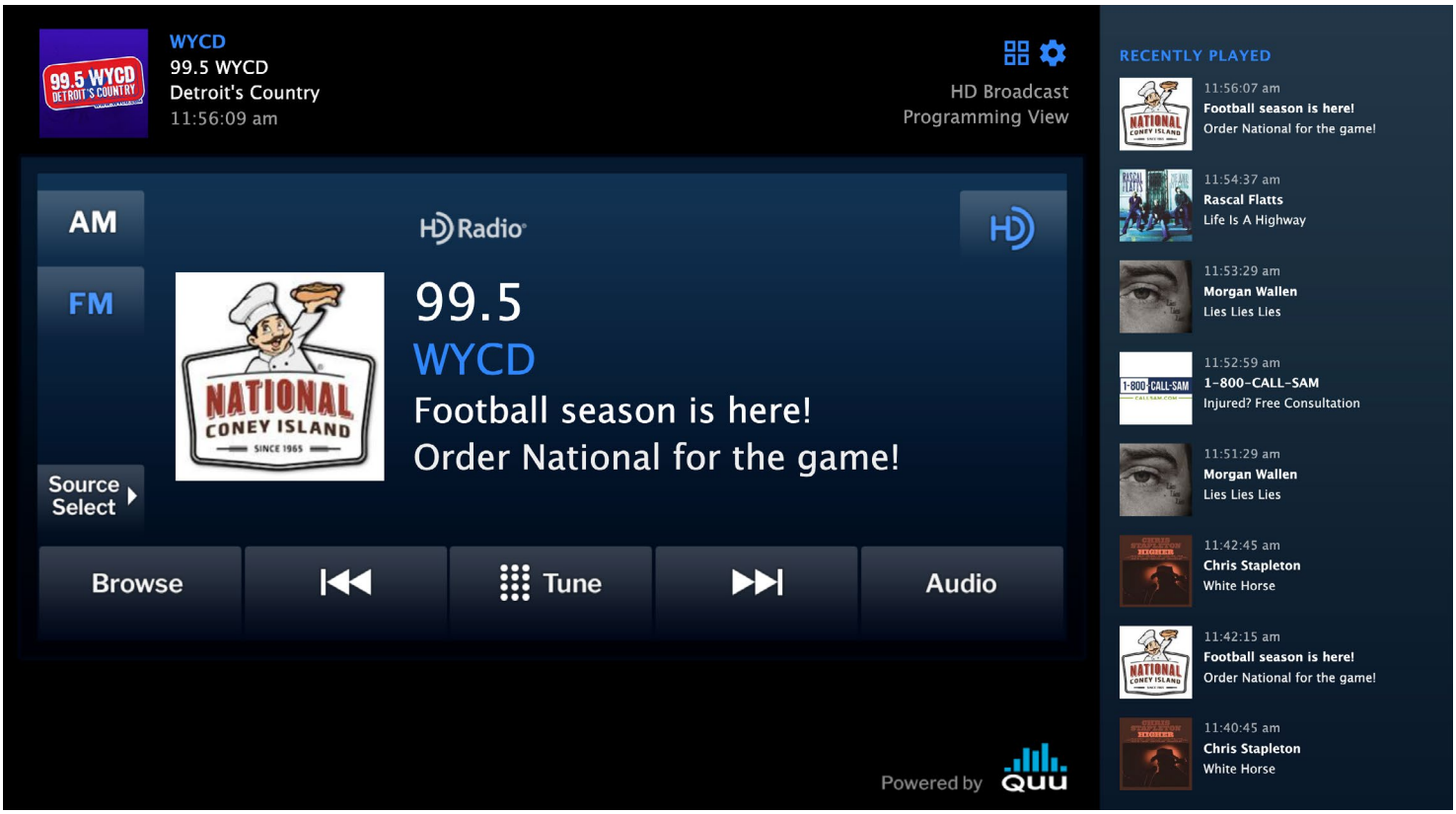
Think of DTS AutoStage as another delivery platform, building on AM, FM and HD Radio. Each of those provides more bandwidth and capability than the one before it. So if you're managing for the connected car and getting the hybrid radio back-channel feed that DTS AutoStage gives you, it's the state of the art.

Is there a type of user who would use Rapid but not Quu?

Newberry: Predominantly non-commercial stations. Quu's business model is helping stations look good and make money, which works well when you're selling commercials, sponsoring dayparts and things of that nature. Noncommercial stations are not as commercially driven, for obvious reasons. The Quu platform has enabled people to start making some significant money.

I suspect you'd say that a station should seek consistency across platforms, including its streams, in how it displays.

Newberry: The challenge with streaming is visual content usually is generated by the streaming provider, not the



station. Triton takes the audio and says, "Oh, you're playing 'Small Town' by John Mellencamp. We know what album art goes with that." They put the image up and stations don't have to worry about it. But now we're working with streaming companies to figure out how stations can regain control of that editorial content and manage it in an integrated way.

The NAB has done "radio audits" in a few markets and concluded that not enough broadcasters are yet paying attention to visual display, especially in small and medium-sized markets.

Newberry: Yet we're a long way from where we used to be, and that's reflected in our client base. Quu now is the provider for so many major radio groups including Cox, Hubbard, Salem, Urban One, Audacy and Beasley, which is one of our investors.

I think the industry is looking much, much better today. In some ways we just haven't simplified the message for people enough. I believe there is a much higher awareness of the issue in markets of all sizes and I believe the industry is making really good progress — finally.

Any other thoughts?

Newberry: When a station contacts us, we send an initial assessment that asks: "Do you have internet at the transmitter site? What automation system do you have? Are you currently displaying images? If you're HD, are you sending text-only, or do you display images?"

Then we can make recommendations. We might say, "You can do this, but be aware that your current RDS encoder is static, not dynamic, so it's just going to sit there and display your positioning statement." I can charge someone $200 a month for our services, but if they also have to go buy a $4,000 piece of equipment, that's a bigger problem. We don't have a shoe that fits every foot; but we're here to help. I want Quu to be a partner, a collaborator who helps you solve the problem.

Above
Fig. 3: The Content Partnership program runs on Audacy station WYCD in Detroit. This ad for National Coney Island appears for 30 seconds while the station is playing a song. The second Content Partner is Sam Bernstein, Attorney at Law (listed in the station's event log at right as 1-800-CALL-SAM).

"I think the industry is looking much, much better today. In some ways we just haven't simplified the message for people enough."

A sampler of Quu deployments

Renda Media, Jacksonville

"Automakers have come a long way in making the dashboard display screens much larger and more interactive," said Bill Berry, general manager for Renda Media properties in Jacksonville, Fla., where Quu is used on FM stations WEJZ and WGNE.

"To have that visual component on the screen while an advertiser's commercial is running makes their radio campaign more visible and memorable."

He said radio is still the best and most affordable way to reach people, especially while they are in their vehicles. "Now with this technology, while the ad is running, we can display the client's name, website, phone number, slogan and in some cases their logo, depending on the automaker."

He said the Quu platform has brought in fresh revenue. "While I am not at liberty to share specifics, I am a big fan of the product. Our goal is to have every advertiser take advantage of this great technology."

A WEJZ station vehicle.

Audacy Los Angeles

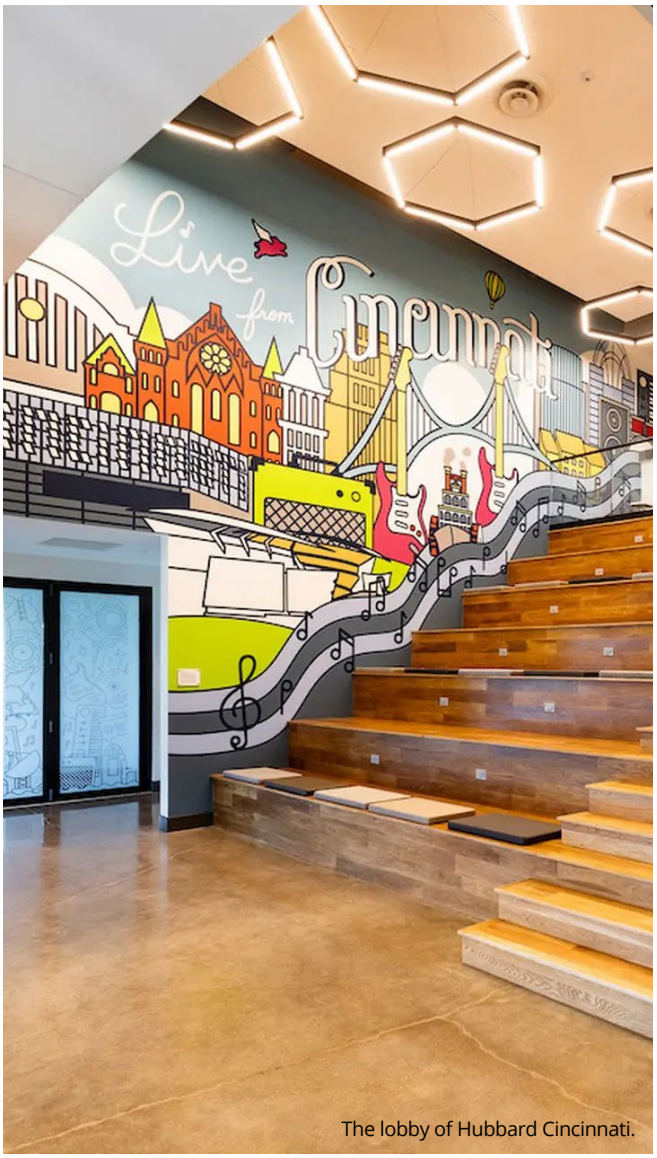
Quu is at work for Audacy in Los Angeles, which Nielsen ranks as the No. 2 radio market in the country with a population of almost 11.3 million people ages 12+. The cluster includes KNX News AM/FM; K-Earth 101 KRTH(FM); 93.1 Jack FM KCBS-FM; 94.7 The Wave KTWV(FM); and KROQ-FM.

"Quu offers our clients a unique opportunity to reach their audiences digitally to reinforce their audio messaging," said General Sales Manager Scott Springer.

"We offer two 'in content' sponsorships per station, each with a 50% share of voice, and only on a full annual basis." He said the program has created a new separate revenue stream with 100% non-spot incremental billing.

"This is 'exclusive' real estate for clients who want to separate themselves in our most competitive advertising categories. Specifically, in Los Angeles, this feature has been popular in the PI Attorney category."

Springer added that a few years ago the cluster moved to an "in-content" partnership dashboard marketing model that provides a much better user experience for its listeners and clients. "This approach also drives more revenue than our previous model of running RDS commercials during stop sets."



The lobby of Hubbard Cincinnati.

Hubbard Cincinnati

Christine Mello is general sales manager for Hubbard in Cincinnati, which includes FM stations WKRQ, WREW, WUBE and WYGY.

"We feel that Quu is good for the radio industry and its clients," she said. "It gives our advertisers in-car dashboard exposure with text content and images that coincide with their commercial message."

The group sells two Content Partnership sponsors per station. It also gives all advertisers the opportunity to upgrade their commercials with AdSync for a small weekly or monthly upcharge to their advertising spends.

"We just launched with Quu in September, and it has been embraced by many of the local direct and agency advertisers who have upgraded their campaigns to include AdSync. Our content sponsorship discussions are happening now for 2025 and have been positively received."

Seven Mountains Media

Kristin Cantrell is owner/operator of Seven Mountains Media, which has 67 radio brands that are heard on 170 signals in Pennsylvania, New York, West Virginia and Kentucky.

"We strive for a compelling listener experience, everywhere our audience expects us to be. The dashboard is central to that experience," she said.

"We are starting with selling content partners and AdSync upgrades to our current customer base. We will expand into other sponsorship opportunities on the platform that build on our on-air local content."

Cantrell described these additions as "a perfect excuse to raise rates."

"Creating a stronger value proposition is easier when you have a new cool tool to wrap around it. We're expecting a strong ROI of 10 to 1 when Quu is fully integrated in our operation."

Their first content partner on Quu is a Mitsubishi dealership. "The client swears by the impact of Quu messaging on brand recall in a very competitive auto market. Quu provides the brand lift that he needs to stay at the top of the market."

Cantrell encouraged small-market broadcasters to participate. "We need to fiercely defend our position on the dashboard of connected cars. Quu not only engages the listener on a whole new level with your station, it improves the overall image of radio as vibrant and relevant, while also offering a way to build new revenue streams."

Broadcasters need to do better

Good metadata practice is still not sufficiently common metadata practice

In his role as vice president, advanced engineering for the National Association of Broadcasters, David Layer has spoken and written about the importance of good metadata management for stations to stay competitive in the amazing new dashboards of today.

How well do you think this message has sunk in for radio broadcasters in 2024?

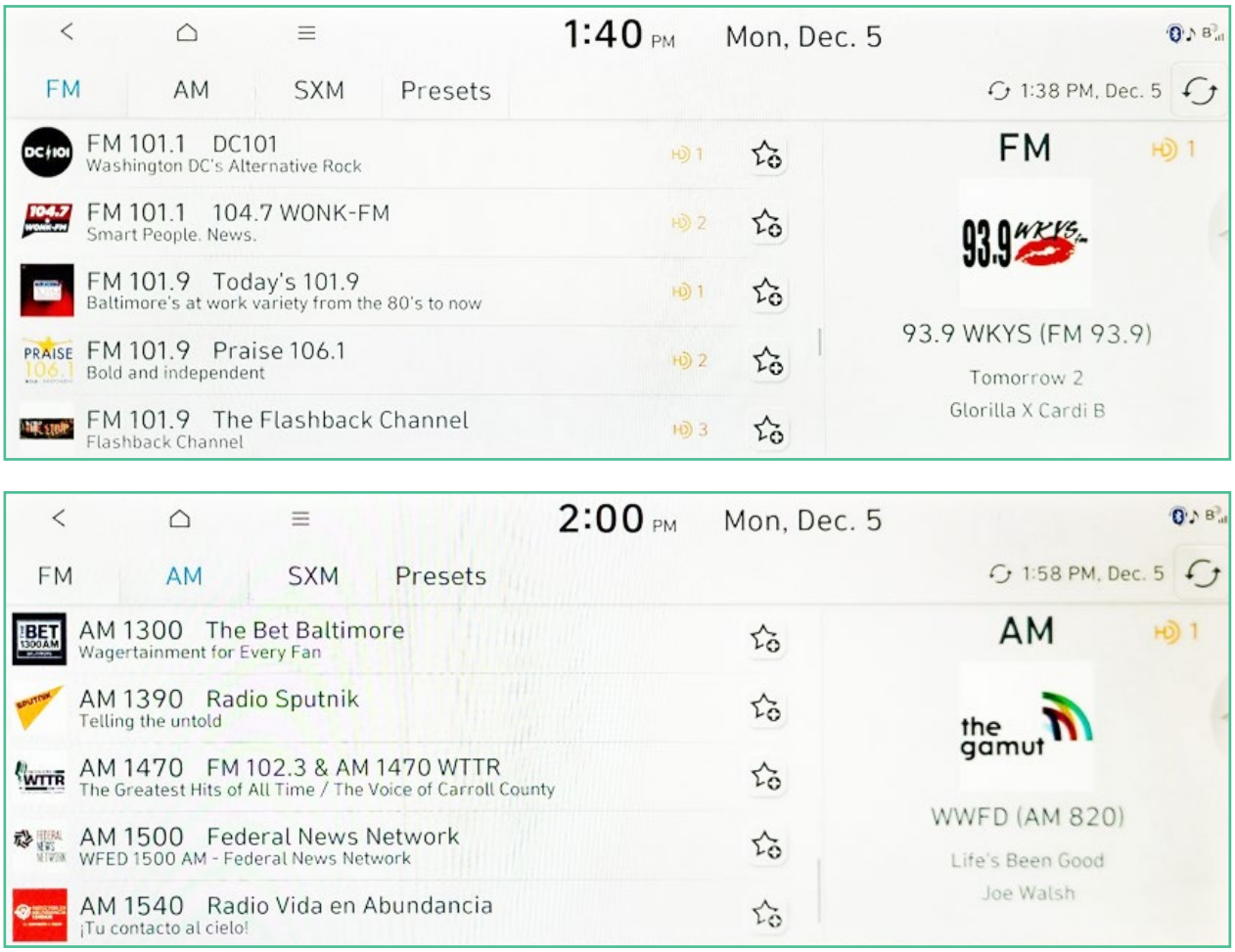
David Layer: NAB has been conducting "digital dash audits" since 2017 (a number of examples are provided in the NAB Digital Dashboard Best Practices Report) to obtain snapshots of metadata usage within a particular market. Comparing more recent results with the original results from 2017 suggests that despite progress, there is still work to be done to get this message across.

Specifically, market-wide metadata usage remains lower than we would like, with low percentages of stations in a market providing "good" metadata.

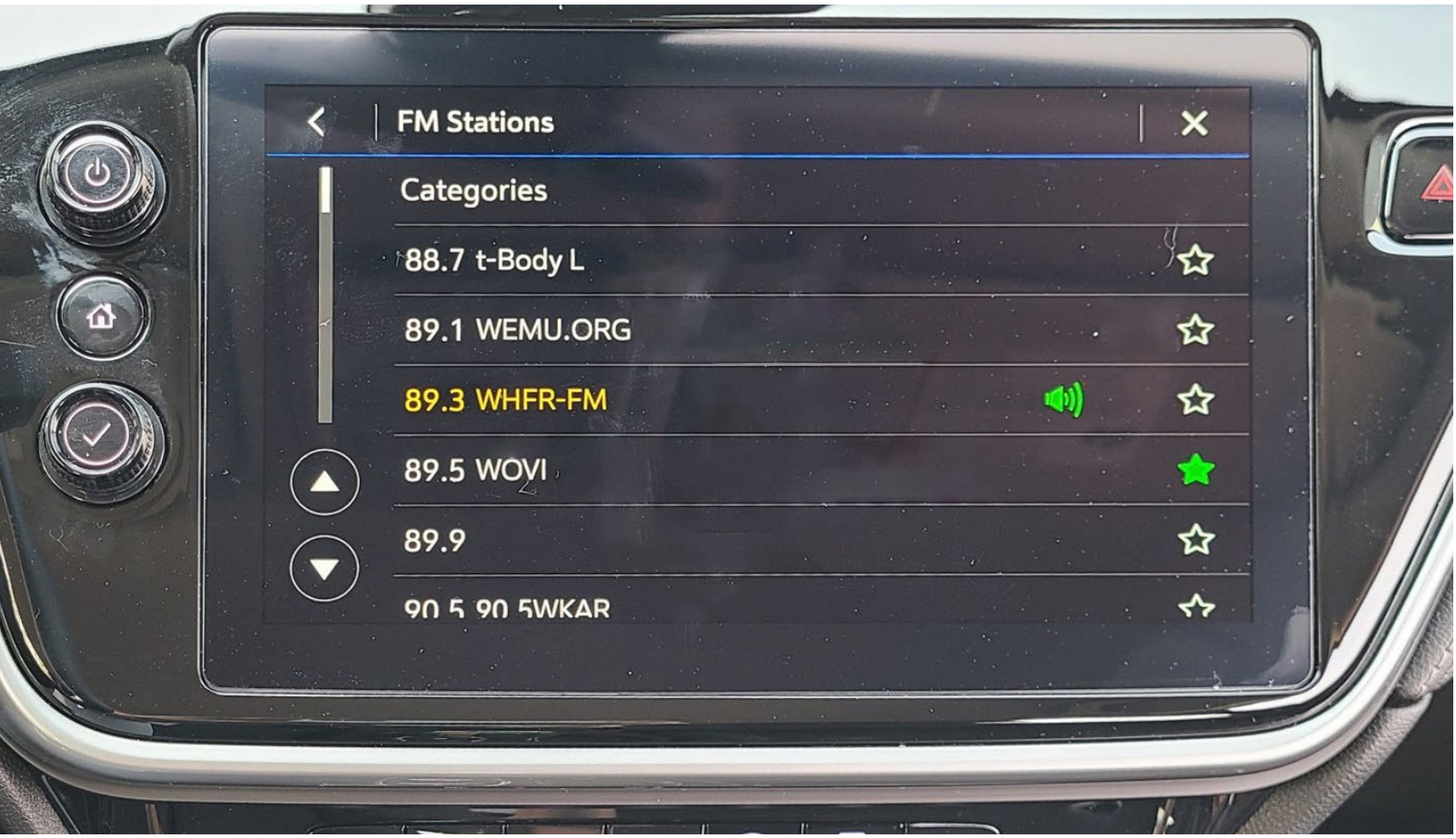
Having said that, stations providing metadata often do a good job of it, the problem is that not enough stations in the market are doing the same good job. This diminishes the appearance of the radio band on the digital dashboard and may frustrate listeners as they get good metadata with other audio services and expect the same consistency from radio.

I think that one of the best things about the DTS AutoStage system are the fantastic AM and FM station lists, with icons and information for nearly every station in the market, making the radio band look great and as modern as any service available (see Fig. 1).

As a group, stations broadcasting HD Radio signals provide better and more consistent metadata than analog-only stations. This is not surprising, as stations that are



Right
Fig. 1: FM and AM station lists from a 2022 Hyundai Ioniq 5, which uses the DTS AutoStage system.



NAB

Photo by Jim Peck

Above
FM station list from a 2023 Chevy Bolt (which does not have HD Radio).

Left
David Layer

investing in HD Radio equipment and operations want to get the most value from their investment. One way to do so is to make use of the many metadata features available, which in addition to satisfying listeners offer new revenue sources. For FM broadcasters, this good metadata usage on the digital signal usually extends to their analog signal as well, where the Radio Data System (RDS) FM digital subcarrier is used to convey the metadata to the receiver.

FM translator stations appear less likely to be transmitting metadata than full-service stations. This is a big deal since as of the end of June, there were 8,906 licensed translators and boosters in the U.S., almost as many as the number of full-service FM stations (nearly 11,000). Cross-service FM translators offer AM stations an opportunity to deliver metadata to listeners, something they cannot do with analog AM signals. Keep in mind, listeners — and radio dials — don't differentiate between full-service and translator signals, so it's important for ALL these signals to include metadata.

RW What's a good example of a feature or capability that metadata now makes possible but that broadcasters may not be taking full advantage of?

Layer: Many vehicles now create AM and FM station lists by scanning the radio dial. By transmitting the appropriate

> **Many vehicles now create AM and FM station lists by scanning the radio dial. By transmitting the appropriate metadata, broadcasters can help ensure their station looks good in the list.**

metadata, broadcasters can help ensure their station looks good in the list.

For example, consider GM vehicles, also interesting because unfortunately most GM vehicles only have analog radios, they have no HD Radio. For the FM band, the station list is populated with metadata from the Program Service (PS) data field portion of the RDS data stream, as shown in the photo of the 2023 Chevy Bolt's digital dash (see previous page).

In that image, it appears that station 89.9 is not transmitting any RDS PS information, while stations 89.5 and 89.3 are transmitting call signs. This is one of the recommended uses of the PS field; another good use is to send a station URL, as station 89.1 in the example is doing, or a slogan; however, it must be limited to eight characters to display correctly in the list because PS is defined in the RDS Standard as an eight-character message.

It also appears that one of the stations in the list, 88.7, is doing what is called "scrolling PS," a technique pioneered in the 2000s that involves changing the PS field data in a "scrolling" or "chunking" fashion so as to display a text message that is longer than eight characters, for example a song title and artist name.

When the Chevy Bolt is scanning the band to create the station list, it appears to grab the eight characters of PS data being received at that time and then stores them to serve as the list entry for that station. As you can see in the photo, the results for stations that use scrolling PS are unpredictable.

To summarize, broadcasters can enhance their

Right
The broadcasters' onboarding portal for DTS AutoStage is at https://onboarding.connectedrad.io/.

appearance in these station lists by being sure to transmit a static, eight-character PS message.

What resources would you recommend for engineers and managers to learn about best practices and healthy metadata management?

Layer: The NAB Digital Dashboard Best Practices Report is an NAB resource that was updated at the end of last year and is a good primer on metadata generally and what broadcasters need to be doing. Broadcasters should also be reaching out to their equipment vendors for playout systems, audio processors, RDS encoders and exciters as these are all important parts of the broadcast chain that play a role in metadata transmission.

I mentioned the great station lists supported by the DTS AutoStage system, and I would encourage all broadcasters to participate in the "DTS Broadcaster Portal Onboarding" process, as this can lead to a great metadata experience and also provide broadcasters with insightful analytical information on listener behavior.

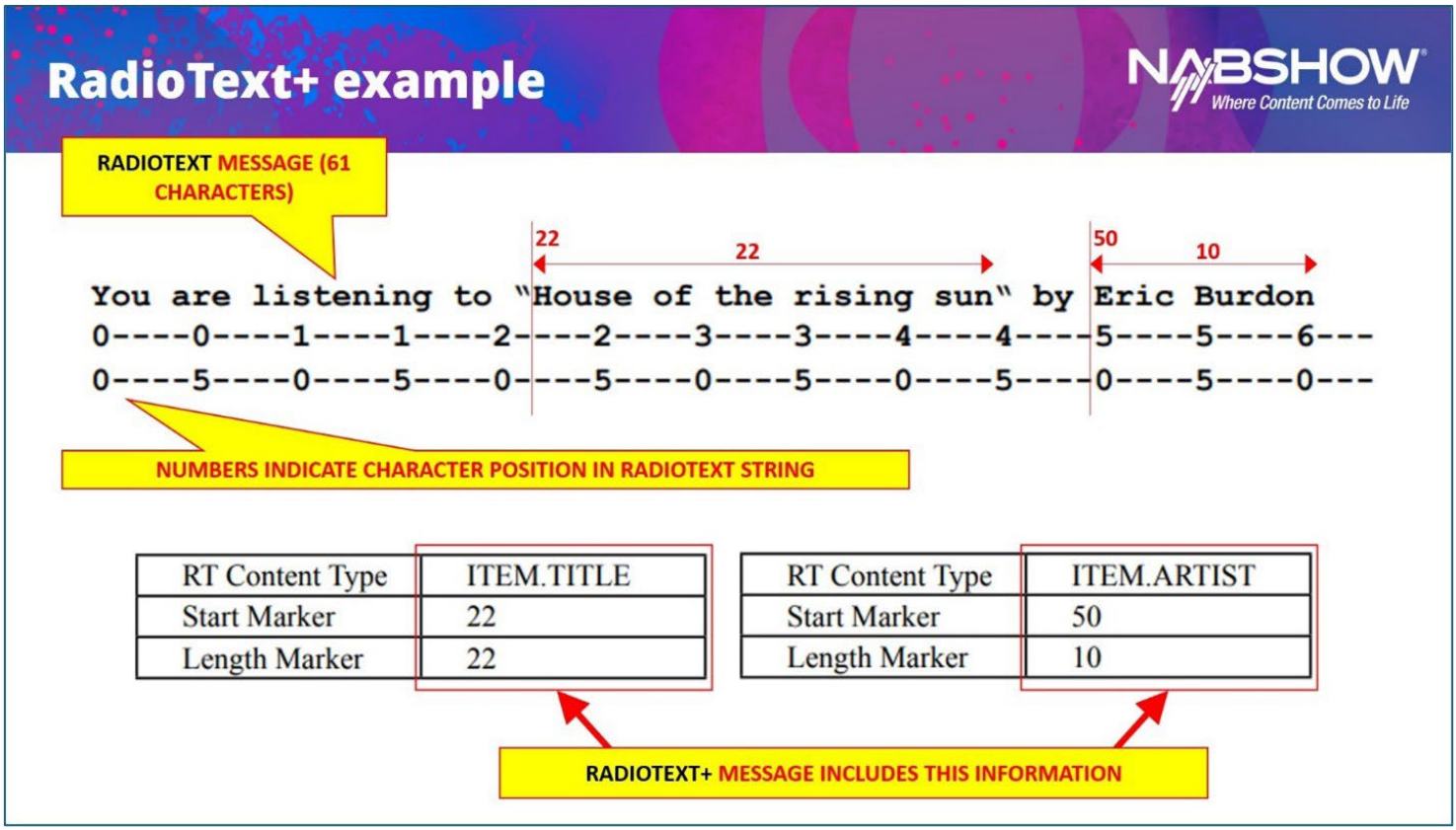
What do you think is the most common mistake or error that broadcasters make? And do you have a favorite tip or best practice?

Layer: Maybe not the most common but certainly the biggest mistake is not doing metadata at all. With today's modern vehicles and screen-driven user interfaces, radio needs to look as good as it sounds, and that is what metadata does for radio. To ignore metadata is to miss a great opportunity to brand your station and look your best for listeners.

I have a few tips. One that is covered in the NAB Digital Dashboard Best Practices Report, is for broadcasters to regularly observe how their station looks on auto dashboards, looking at both analog and digital auto receivers and making any necessary adjustments to optimize appearance.

Also, FM broadcasters who are continuing to use the "scrolling PS" method of RDS data delivery need to weigh the main advantage of doing this — to provide metadata to older auto receivers with character-based displays — compared to not doing this, meaning improved appearance on modern receivers with scan-derived station lists.

Finally, FM broadcasters should consider transmitting RDS "RadioText+" information along with their RDS RadioText metadata, as some receivers — most notably late-model Toyotas — will not display a broadcaster's RadioText messages unless specific fields are identified using RadioText+. The image below illustrates how this works.



Below
Illustration of how RDS RadioText+ messages identify fields in a RadioText message.

Our proposition to carmakers should be consistent

Radio should provide to listeners at least what the music streamers do

Nick Piggott is project director of RadioDNS.

How well do you think the message about metadata has sunk in with broadcasters?

Nick Piggott: Not as widely and deeply as I think it needs to. The nature of radio tends to be quite reactive, responding to things when they're not right, or not as good as the competition. In the case of the connected car, the competition for prominence isn't just against the other radio stations, so don't benchmark against just your competitors. It takes time to change things in vehicles, so there's quite a time lag between setting things up and seeing the effect at scale. And finally, we need to be acting in a coordinated and standardized way, so that the proposition to the automotive industry is consistent, not just from station to station, but country to country as well. Standards like FM, RDS, DAB and RadioDNS enable radio's universality.

What's an example of a feature or capability that broadcasters may not be taking full advantage of?

Below
Nick Piggott

Piggott: We deal with a large number of broadcasters frustrated with seeing their station branding or logo incorrect in cars. The single most helpful thing a station can do for itself is to create a metadata definition — "service information" — in the standard format and advertise it. It immediately makes it possible for vehicle manufacturers to get authoritative and timely information on that station, rather than scrape it out of websites and old databases. Our first question to stations who tell us their logo is wrong is: "But are you providing it correctly in the standard?"

Beyond that, I'm surprised more stations aren't providing more visual support for their radio stations. So many drivers are used to immediately seeing artist, title and image when they're listening to music streaming services, they should be getting the same alongside broadcast radio. All that available screen space not being optimally used.

What resources would you recommend?

Piggott: Clearly I'm biased here, but I think RadioDNS, WorldDAB, NAB and EBU all produce information that is informed by discussions with automotive manufacturers of their expectations of broadcast radio, and isn't targeted at selling a specific product or service.

What is the most common error that broadcasters make?

Piggott: You have monitor speakers in the office to hear when the radio station screws up on-air. You have brand managers who check that your outdoor presence looks right. You have an online team who check the website and the app every day. You need to be paying that level of attention to your metadata as well. Don't wait for a listener to complain to their car manufacturer that it's wrong to become aware of it.

Do you have a favorite tip or best practice?

Piggott: In the hybrid radio model, a lot of the metadata is provided using IP alongside broadcast radio. You might not be able to measure the broadcast radio, but you can measure the IP activity. Your servers have server logs, and it's well worth setting up your metadata to drop markers into those logs when it's being requested for. It's audience insight by proxy.

What else should we know?

Piggott: There are so many opportunities for radio to defend or expand its presence in the dashboard, but it needs a level of R&D and investment we've not been used to making before. The next big opportunity is to seamlessly link live broadcast radio with on-demand listening via broadcaster' own apps, but it'll take some work by broadcasters to achieve it.

GV² PROVING THAT LESS IS MORE

LESS wiring, boxes, cost and complexity
MORE of what you need*

Nautel's GV2 transmitters support* **JUST ADD AUDIO,** our breakthrough HD Radio Software-Based Air Chain.

- Blend-Lock eliminates HD/FM drift
- Omnia for Nautel FM + HD Audio Processing
- Flexible Air Chain hosting/location options
- New capabilities like an Air Chain selector
- Integrated GEN4: Importer, Exporter, PAR2 Exgine
- Built-in STL and LiveWire
- All integrated for easy installation & management

SBE

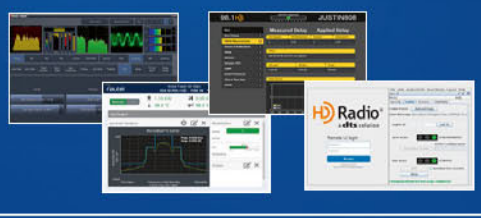
Best of Show 2023 RADIOWORLD WINNER

JUST ADD AUDIO

RF Out

Everything Else Is Inside

HD Radio Digital AM & FM



nautel 55 YEARS ALWAYS FOR YOU

nautel.com/GV2

*Optional Software-Based Air Chain
HD Radio is a trademark of DTS

Visual ads can monetize the dashboard

Stations are getting a premium for synchronized text and images with audio ads

Jeff Detweiler is senior director, broadcast business development for Xperi Inc.

RW We're trying to get a sense of how well radio broadcasters have taken up the message about the importance of visual display and good metadata management.

Jeff Detweiler: In today's automotive dashboards, with their visually impactful screens, metadata plays a critical role in creating a new face for radio. As radio broadcasters recognize the importance of these immersive displays to consumers, they are increasingly moving towards adopting platforms that provide a more enhanced experience. And it is essential as the automotive entertainment landscape becomes more competitive. Broadcasters must adopt advanced metadata solutions. This will encourage consumers to gravitate to stations that offer rich images, album art, station logos, and more, all made possible by well-curated metadata. Without metadata, stations will look unfinished by comparison.

Below
Jeff Detweiler

RW What visual capabilities are radio broadcasters not taking full advantage of?

Detweiler: There are three that come to mind: discovery, engagement and revenue generation.

The first is discovery. The simple addition of a station logo makes it much easier for broadcasters to build brand equity, familiarity and recall with the audience and for that audience to continue to discover their station. When a consumer gets into their car, turns on the radio and sees the station logo, they will know immediately that they are tuned to their favorite station.

The second example is engagement. Radio stations that leverage synchronized metadata with their audio programming can establish a deeper, more engaging experience for listeners. Metadata helps audiences connect with that programming whether it's music, talk, live sports or even advertisements.

> **"The simple addition of a station logo makes it much easier for broadcasters to build brand equity, familiarity and recall with the audience and for that audience to continue to discover their station."**

Revenue generation is the third example. Synchronizing ad images and text with audio is a powerful and valuable new monetization capability for the industry. Quu Inc. reports that radio stations are now realizing a 10–15% premium for including synchronized text with audio ads and a 25–30% premium for including synchronized text and images with audio ads. This represents significant revenue opportunities that shouldn't be overlooked.

You have talked about the possible use of scan codes. How can a station go about doing that?

Detweiler: Scan codes are nothing more than a QR code image, sent synchronously with commercial content or asynchronously as a station promotion that runs unattached to a specific audio segment.

What resources would you recommend to learn about best practices?

Detweiler: As vehicle dashboards and the digital landscape have evolved, so too have industry recommendations and best practices and, more critically, legal, IP and copyright obligations. It is important for broadcasters to look at metadata not as an engineering challenge but rather as an integrated editorial opportunity to help their station stand out among an increasingly crowded digital environment.

Broadcasters should make sure that whatever they do with metadata is done with clear intent, understanding and commercial justification. Metadata should be treated with the same care and protections as core audio productions. There are an increasing number of bad actors in the digital space who leverage and exploit content produced by others, for their own benefit. The very metadata that helps enhance your programming can also be used against you if you are not judicious with where it is published, who it is shared with and how it is technically protected. Artificial intelligence introduces an entirely new level of risk, especially with AI training models running rampant on internet content. Protect your metadata, defend against scraping and do not share it without contractual protections and trusted business partners. Additionally,

Above
A revenue-generating campaign for Beasley station WYUU(FM) in the Tampa, Fla., market using the Quu platform. This broadcaster in a top 20 market generates approximately $200,000 in incremental annual revenue from visual ads.

ensure that any metadata is published with full consent and license from the appropriate copyright holder — examples include record labels, photographers, on-air talent and professional and college sports teams.

With any new platform or partner, ask yourself a few simple questions: Why should I support this platform? How will it benefit my listeners? Are they a credible and scalable partner with a sustainable business model? Does their operation introduce legal risk or jeopardy for my organization?

When it comes to copyright ownership of images and use rights demanded by OEMs, the broadcast world of Radio Data System (RDS) and HD Radio are much simpler than the complexities of the IP landscape and the challenges introduced in the connected car. Having operated for well over 20 years, HD Radio has supported thousands of radio stations and is familiar with existing platforms and content suppliers that provide the technology and fully licensed imagery and album art for this critical use case. Despite these intricacies, all broadcasters should consider embracing broadcast metadata immediately, while at the same time, being judicious in the IP and connected car ecosystems.

The following are great resources to assist you in this journey:

The NAB Digital Dashboard Best Practices Report will assist you in this journey.

Also, standards and guidelines documents from the National Radio Systems Committee including the ones listed below are available at this link. Look for:

- IEC-62106-9, Radio data system (RDS) – VHF/FM sound broadcasting in the frequency range from 64.0 MHz to 108.0 MHz – Part 9: RBDS – RDS variant used in North America, IEC, May 2021
- NRSC-5-E, IBOC Digital Radio Broadcasting Standard, NRSC, January 2023
- NRSC-G300-C, RDS Usage Guideline, NRSC, April 2018
- NRSC-G302, Harmonization of Radio Metadata Across Transports Guideline, NRSC, January 2020
- NRSC-G303, Best Practices for Delivering Emergency Alerts and Information for FM Radio Broadcasters, NRSC, April 2022
- NRSC-G304, Metadata for Streaming Audio Handbook, October 2023

Above
Detweiler said the use of scan codes can increase the impact of visual ads.

Is there a common error broadcasters make in managing metadata?

Detweiler: Number one is not providing consistent metadata on RDS, HD Radio and streaming services. The second is ignoring the pedigree of image content. Copyright compliance and enforcement are big topics at the moment, and liability is weighing on proactive compliance. Previously, the copyright owner would have to illustrate a violation; now, the service provider must confirm compliance with the OEM.

Do you have a favorite trick or best practice that you'd like to call attention to?

Detweiler: Broadcasters should develop and nurture relationships with local auto dealerships. Doing so creates opportunities for broadcasters to experience the latest infotainment developments in new vehicles as well as provides the opportunity to educate the dealers on HD Radio and hybrid radio offerings. Of course, broadcasters can also use the opportunity to put their station on the vehicle presets.

What else should we know?

Detweiler: FM stations should, at a minimum, adopt static RDS tools to enhance listener experience and, ideally, provide static and dynamic metadata to listeners using RDS. Radio stations should also strongly consider adopting HD Radio hybrid IBOC mode. Additionally, AM stations with established FM translators should consider MA3 all-digital operation supporting logos and synchronous images. Broadcasters should adopt best practices in using metadata per the resource documents I listed above.

Related: Read "Why the Software Approach Matters in HD Radio," June 2024.

How Rapid fits into the metadata ecosystem

It plays a role for both commercial and noncom radio broadcasters

Rapid is a middleware solution from All in Media, part of Xperi. It enables a broadcaster to manage the creation, synchronization and distribution of metadata associated with their audio services across broadcast and IP platforms.

Chris Gould is vice president.

How does it work?

Chris Gould: Rapid sits alongside a radio station's automation and scheduling systems and has complete awareness of all the audio elements of a radio broadcast. We use that knowledge to structure and format the appropriate metadata, primarily text, and publish that information into all distribution platforms such as RDS encoders, HD Radio Importers, DAB multiplexers and a variety of IP services.

Historically this capability has been focused primarily on track information such as song name, album and artist. More and more stations are now using this capability to also enhance their spoken-word programming and advertising.

In addition, we leverage our TiVo Music Metadata service to provide additional enrichment to our broadcast customers with fully licensed cover art, artist images and artist information.

How is it different from Artist Experience?

Gould: Artist Experience is a feature of HD Radio that allows a station to display synchronized visuals with any audio element. Again, the primary application is synchronized cover art with the now playing song, but it can really be any image that is related to the current audio, such as a host's image, sponsor logo or message of support, as we saw during COVID. Rapid is the tool that manages this service, content association and synchronization for distribution.

Below WGTS, a noncommercial station in the Washington, D.C., market, displays visual messages using Rapid.

Above
Chris Gould

How is it different from what Quu offers, and are the two compatible?

Gould: Historically, Rapid and Quu were similar in their primary function and capabilities. However, three years ago we formed a North American partnership that enabled both companies to focus on their areas of expertise and the needs of the commercial broadcasters.

Now the systems work hand-in-glove, are fully integrated and are helping commercial broadcasters realize the tremendous value with enhanced advertising. Quu is largely focused on campaign management, content creation, sales and reporting with revolutionary services such as Content Partnerships. Through this collaboration, customers get the best of both companies, the breadth of support from Rapid and TiVo and the commercial service support from Quu. It's a very powerful technology and services combination and together, are delivering tremendous value to our joint customers.

For the non-commercial broadcasters, we offer a configuration of Rapid that enables full metadata management support as well as a range of functionality to enable stations to support their underwriters with robust services from a single platform.

Is it offered on a subscription basis?

Gould: Yes it is.

Does it work with any and all automation systems and other key radio station software tools?

Gould: It works with multiple automation systems. If a radio station has an automation system that's not currently supported we'll integrate it at no additional cost to the station.

Can you give two or three real-world examples of stations that are using Rapid, and with what success?

Gould: We have many stations currently using Rapid to not only deliver album art to their HD Radio broadcasts, but also adding in show programming images. For example, if it's the "Radio World Music Hour" show, in between songs, the show logo is displayed for HD Radio receivers and RDS receivers get the show text metadata. Another example is the number of classical music stations that are utilizing Rapid to now deliver improved composition titles and images. Classical music is a more complex format to match metadata with, but Rapid has streamlined the matching, while still giving stations control to ensure the quality meets their listeners expectations.

What best practices should readers know about to make their dashboard graphics happen?

Gould: Metadata, Metadata, Metadata. Whether the platform is hybrid, digital, analog or an IP stream, metadata

> **"Try to automate as much of the process as you can, it allows you to provide rich experiences to users without adding significant costs to your business."**

> **More and more stations are now using this capability to also enhance their spoken-word programming and advertising.**

is the key that ensures a listener has the best experience while consuming the station's content. In terms of best practices, first keep it simple; if you have limited resources, focus on the information that your listeners value the most, such as Now Playing information, and make that as accurate as possible. Try to automate as much of the process as you can, it allows you to provide rich experiences to users without adding significant costs to your business.

What's the most common objection from a sales manager or station executive? Why aren't more stations doing it?

Gould: Typically the pushback to a middleware solution is the lack of awareness on its impact to the listening or revenue generating experience. Teams at stations still are unaware of the role metadata plays and how significantly it can change the experience for listeners and their bottom lines. Additionally, the thought of tackling metadata can be overwhelming. Years ago it was more challenging, but tools like Rapid have knocked down the hurdles and made it much easier to execute a great metadata experience.

What else should we know?

Gould: While much of the opportunity for metadata today is focused on RDS, HD Radio, DAB and IP services, I believe the most impactful opportunity lies within the connected car and hybrid radio.

As cars become more and more connected and enable various IP-based services, broadcast radio metadata has become vital to radio, driving discovery, engagement and measurement in these platforms.

DTS AutoStage is the world's largest hybrid radio solution with over 7 million cars on the road and the current support of 12 automakers, and is completely free to radio broadcasters. Broadcasters should aggressively deploy metadata management solutions, if they haven't already, and ensure that they are integrated with DTS AutoStage. Rapid provides the best solution for broadcasters for this integration whether it's through the combined Rapid/Quu platform for commercial broadcasters or the non-commercial Rapid configuration for others, broadcasters should act immediately and manage their metadata with the same care and attention as their audio programming.

Above
Station branding for WNYC in New York.

How RCS AudioDisplay supports new revenue

Generali says sales teams increasingly see the potential for revenue through automotive ads

Philippe Generali is president and CEO of RCS Worldwide.

The theme of this ebook is maximizing the impact of radio station visual displays. With that in mind, what is RCS AudioDisplay?

Philippe Generali: AudioDisplay is a tool that allows radio stations to develop new revenue streams by managing text and image ads synced with their audio. It supports RDS and HD Radio campaigns, running when an ad break airs. The platform allows for content tailored to each technology: short, punchy messages for RDS, album art and more detailed ads with images for HD Radio.

Users have full control over their campaigns, with changes taking effect immediately. For example, an account executive can create or update a campaign while with a client and see it go live in the next ad break. AudioDisplay also offers user rights management, so campaigns can be routed through traffic management for approval before airing.

Additionally, AudioDisplay knows the duration of each break and, if no new data (like song info) is available, it will replace ads with station or show branding to maintain the integrity of commercial content. AudioDisplay is also segment-aware. You can schedule campaigns to run during specific programming segments or shows, allowing for segment-specific sponsorships, either alongside or independent of on-air activity.

Philippe Generali

Is this a service, how does it work?

Generali: AudioDisplay is a cloud-based subscription service. Since it's priced by usage, an RCS sales representative will assist you in outlining the best campaign package for your needs.

What other features does the platform offer?

Generali: AudioDisplay includes profanity filters and automatic capitalization adjustments for song titles and artist names. Users can also monitor what's being displayed on their stations in real time from anywhere in the world. You can view a list of all stations in your company and manage individual campaigns for each station or create one campaign for multiple stations.

Many stations will choose to run promos, concert announcements, on-air specials, upcoming contests, downloadable apps, phone numbers and more features that will greatly contribute to de-clutter the on-air audio while offering engaging and more memorable in-car display.

DAB+, the digital radio standard in Europe and ASIA/PAC, is next on the list of features supported by AudioDisplay.

How does the tool fit into a user's workflow?

Generali: Integration with other platforms is key to delivering a cohesive listener experience. For instance, RDS provides metadata that enhances AudioDisplay, while RadioDNS connects broadcast signals with online content, increasing interactivity for listeners.

AudioDisplay helps radio organizations develop new revenue streams by giving them granular control over text and image ads, synchronized with their audio content. We

partnered with Xperi TiVo's service to offer scrubbed and label-sanctioned Artist/Title casing and spelling as well as accurate album art. The station can also customize what other specific graphics they prefer for display while a song is playing on HD Radio and connected cars.

Does a user have to use RCS Zetta, or can it integrate with other automation systems?

Generali: AudioDisplay works with Zetta or other automation systems, giving stations flexibility in how they manage content.

Is AudioDisplay helping stations generate revenue from car dashboard advertising?

Generali: Yes. Though we can't share specific client data, stations are seeing success by leveraging targeted advertising in the car dashboard. Sales teams are increasingly focusing on integrating radio with digital platforms, recognizing the potential for revenue through automotive ads.

To fully capitalize on these opportunities, sales teams must understand the value of targeted advertising and the data-driven insights that platforms like AudioDisplay provide.

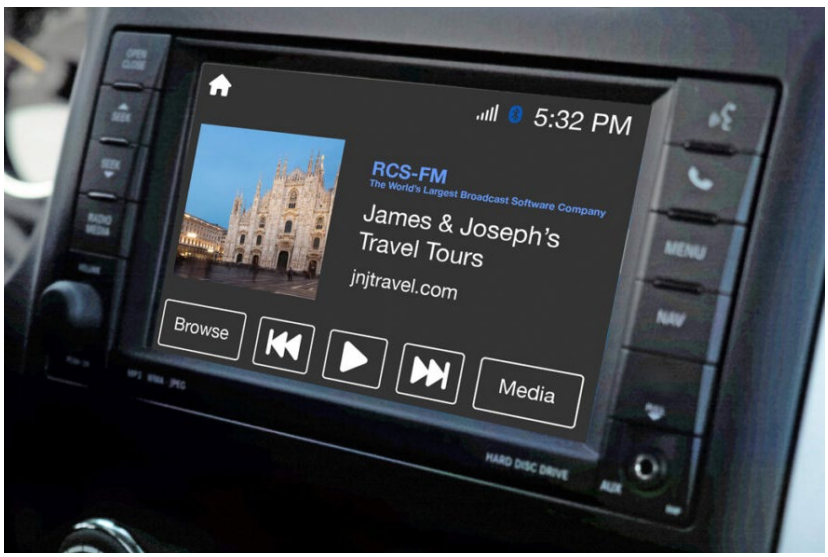
What do potential users need to know about the physical implementation and how to get the most out of AudioDisplay?

Generali: The local RCS Connect Client is installed on a host machine — or multiple machines for redundancy — and relays RDS and Program Associated Data from the automation system to the AudioDisplay cloud service. Traffic, sales and programming personnel can access the service through standard web browsers to create, schedule and monitor campaigns. The service enhances RDS and PAD streams with scheduled content, which is then distributed to broadcast encoding paths via the RCS Connect Client.

It's important to note that licensing agreements for images and other content may also be necessary for your campaigns.

What's the key takeaway?

Generali: Radio engineers and managers should focus on integrating traditional broadcasting with digital platforms. By mastering graphics and exploring new revenue streams — especially in automotive advertising — they can enhance the listener experience. Collaboration with sales teams is essential for navigating these evolving trends and making the most of new technologies like AudioDisplay for effective ad management. AudioDisplay from RCS is used at more than 1,200 FM and HD stations in the U.S., making radio look as good as it sounds and compete with streaming audio apps in the car with stunning visuals. And it makes money too.



Above
The tool supports "now playing" text and visuals and supports RDS and HD Radio campaigns, running when an ad break airs.

To fully capitalize on these opportunities, sales teams must understand the value of targeted advertising and the data-driven insights that platforms like AudioDisplay provide.

How does your station display compare to these?

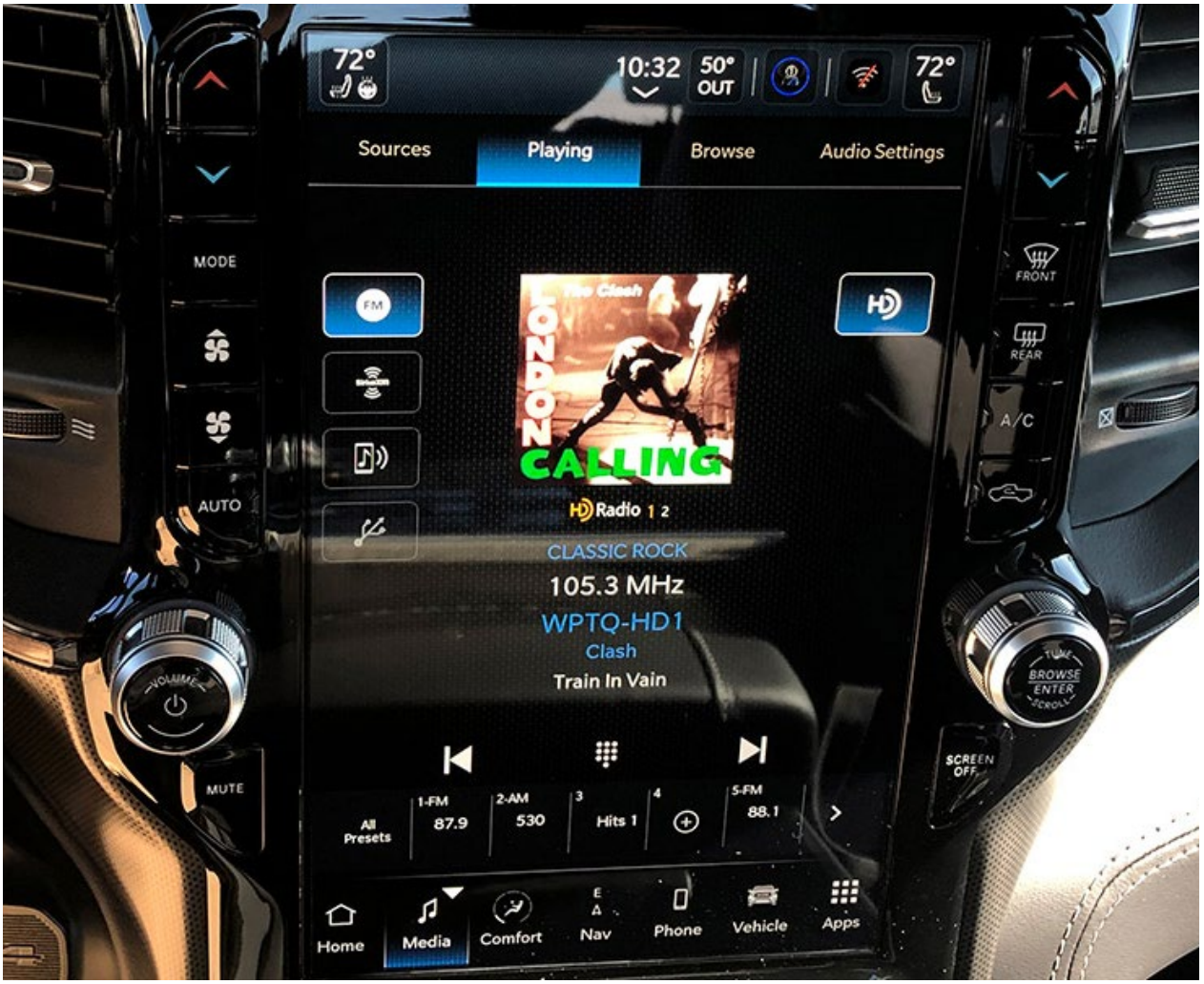
Paul McLane
Editor in Chief

The 16 images that follow are taken from the "2024 In-Vehicle Visuals Report" released by Quu a few months ago. If you care about how your radio station appears on dashboards in the United States, you need to check this out.

As I wrote at the time, Quu's CEO Steve Newberry sent a researcher to car dealerships to sit in the 100 top-selling new cars in the United States. That researcher gathered extensive information in each vehicle: What radio services does it have? Is there a dedicated radio button? Does the car support PS Data and Radio Text for FM? Does it display HD Radio artist and title, logos and album art?

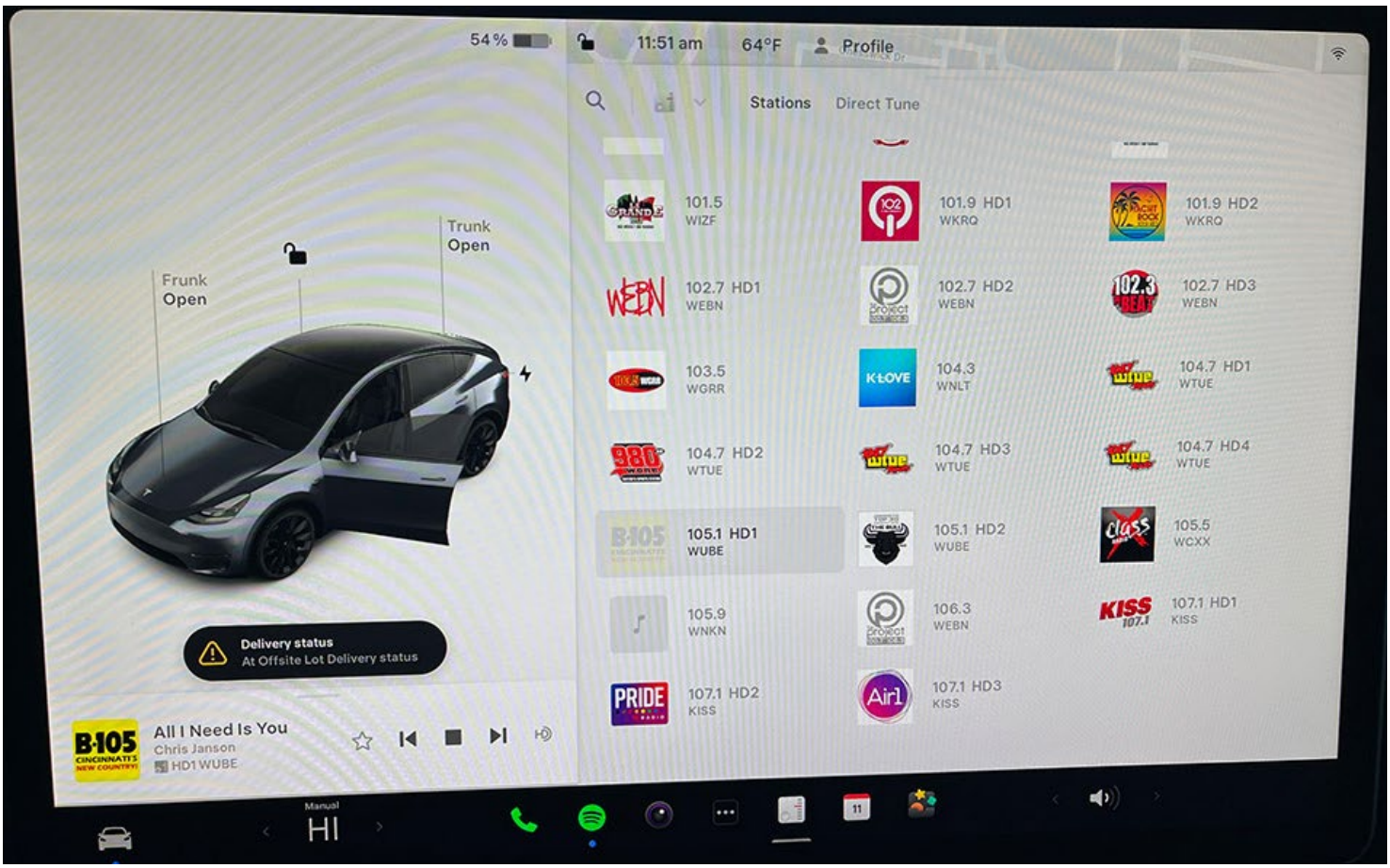
All of that information, reported by car make and model, is available in the report, along with top-level findings (and you can read it here).

But the point I want to emphasize today is that unless you've drilled down into it, you may have missed the best part: sampling all the photos that the researcher took. Flipping through photos of one car dash after another, and seeing how well some radio stations show up versus others, really brings home the message that proponents of good dashboard display have been trying to get across.



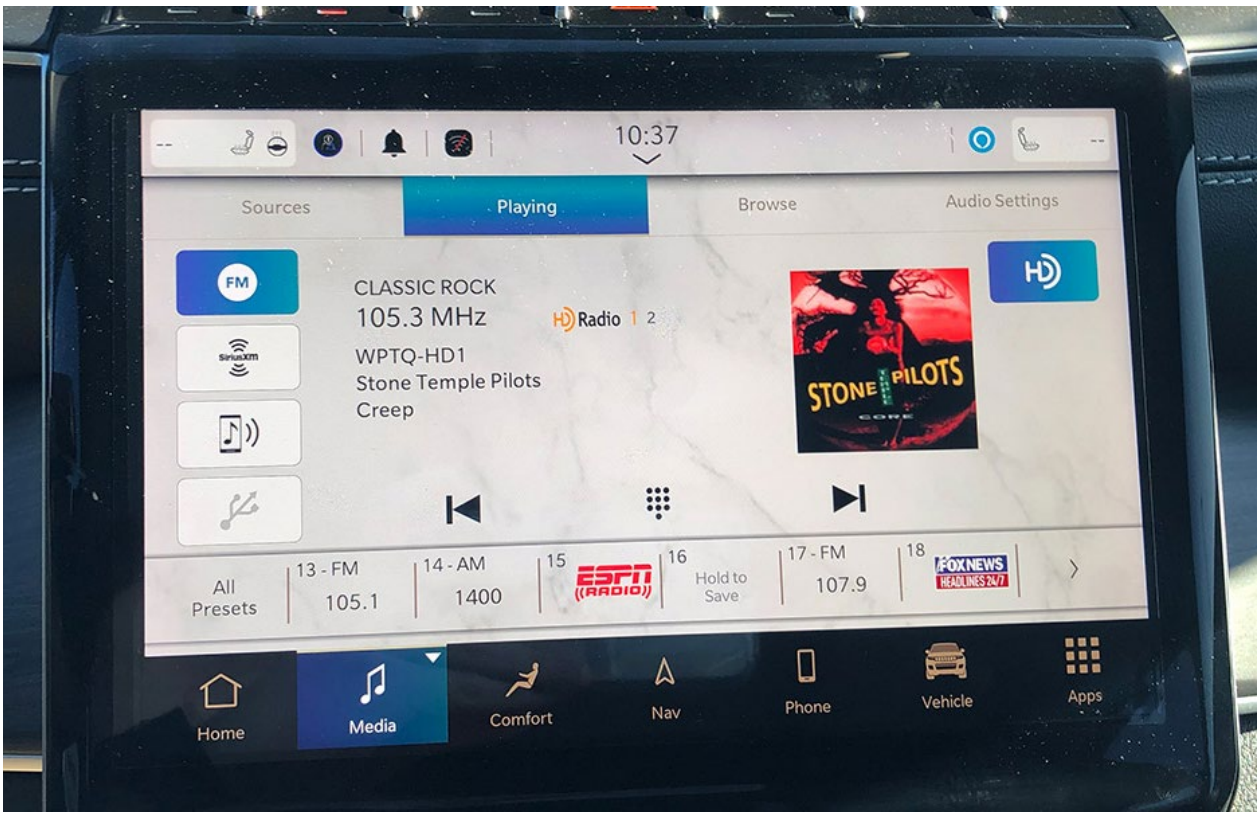
Right
HD Radio in a 2024 Ram 2500 Pickup, tuned to Newberry Broadcasting station WPTQ in Glasgow, Ky.

Left
HD Radio reception in a 2023 Dodge Charger on WPTQ(FM), another Newberry-owned station.



Bottom
Station menu on a 2024 Tesla Model Y, tuned to Hubbard's WUBE in Cincinnati (note logo at lower left of screen).

Above
HD Radio in a 2024 Honda Civic.

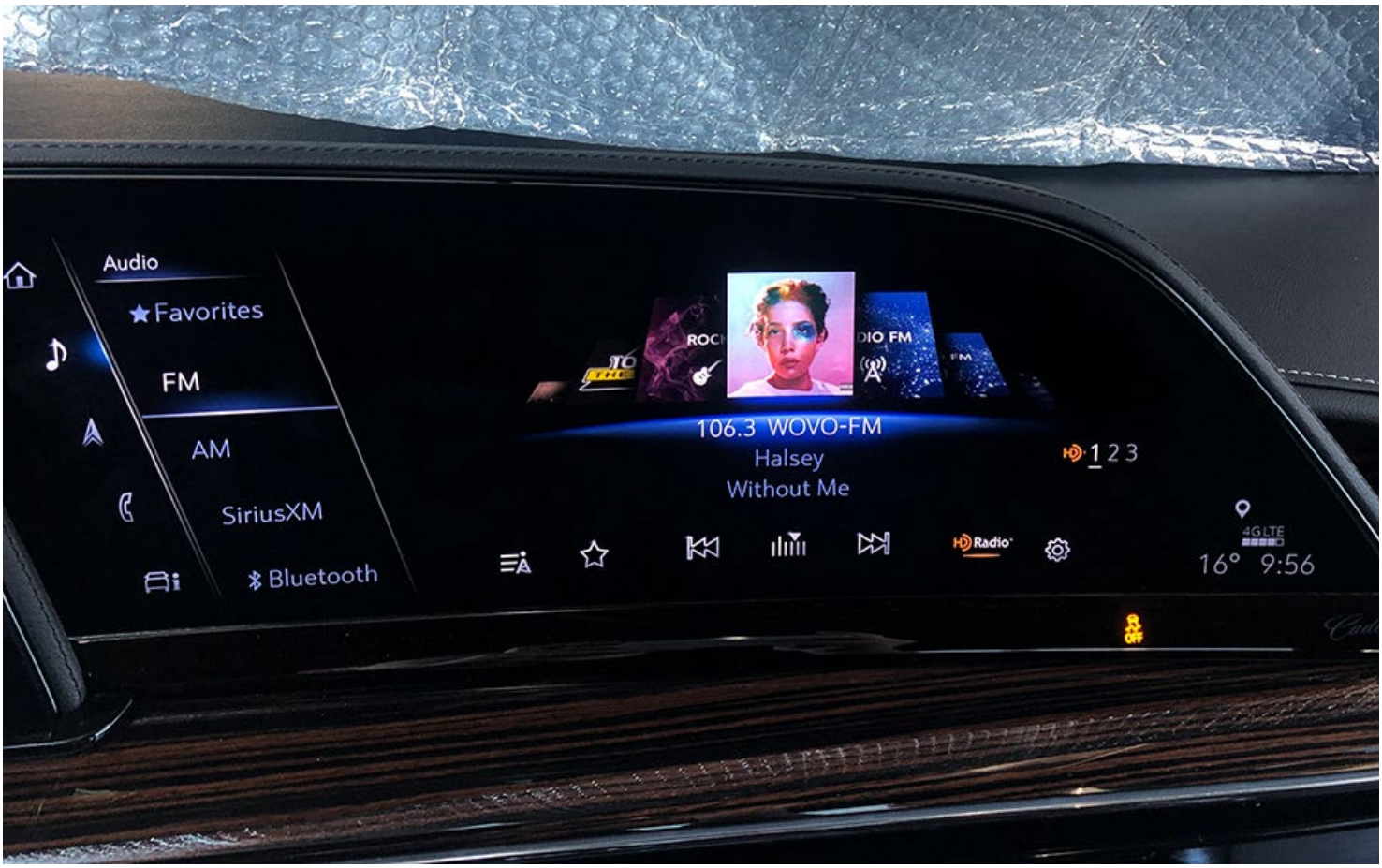


Right
The display of a 2023 Jeep Grand Cherokee Limited, listening to HD.

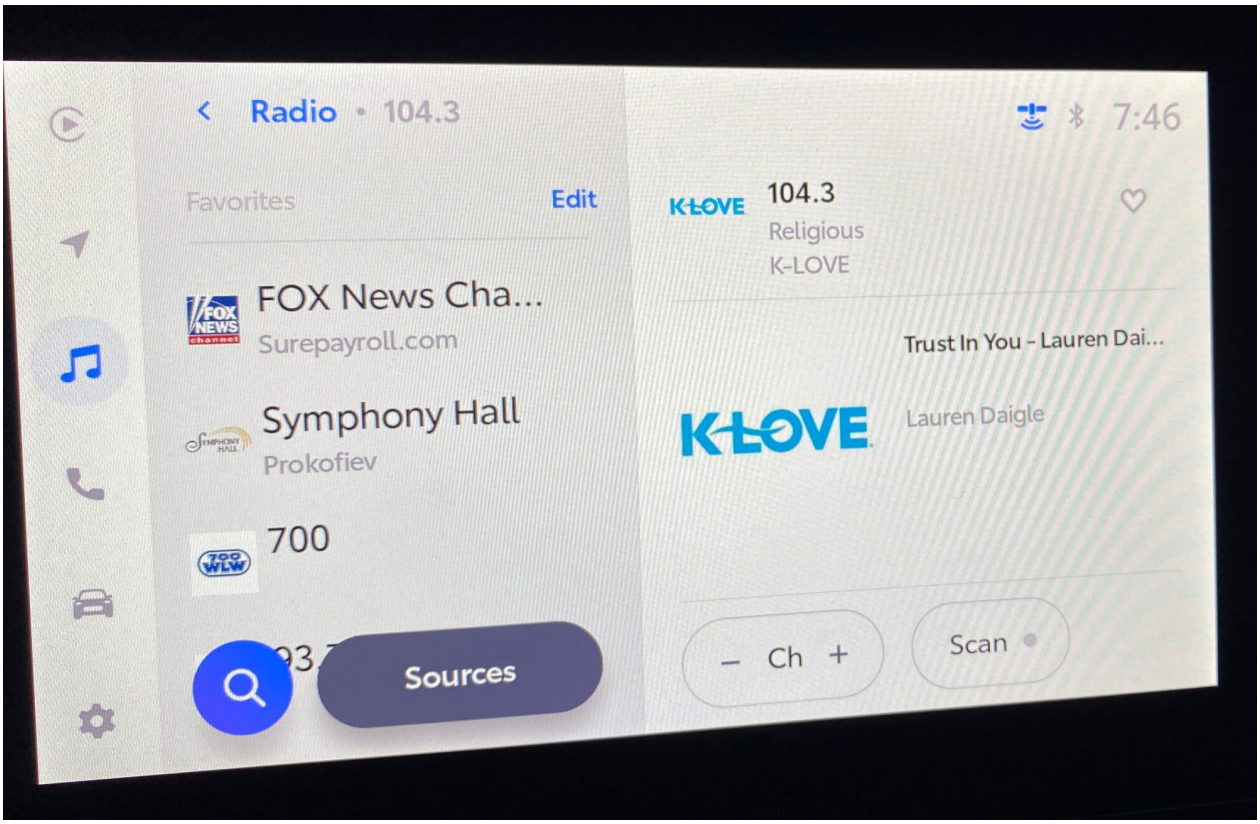
Left
A 2024 Subaru Crosstrek tuned to iHeart HD station WNRW in Louisville.

Left
RDS from WPTQ in a 2024 GMC Terrain Denali.

Left
RDS in a Volkswagen 2024 Jetta SE listening to an FM translator owned by New Albany Broadcasting in Louisville, Ky.



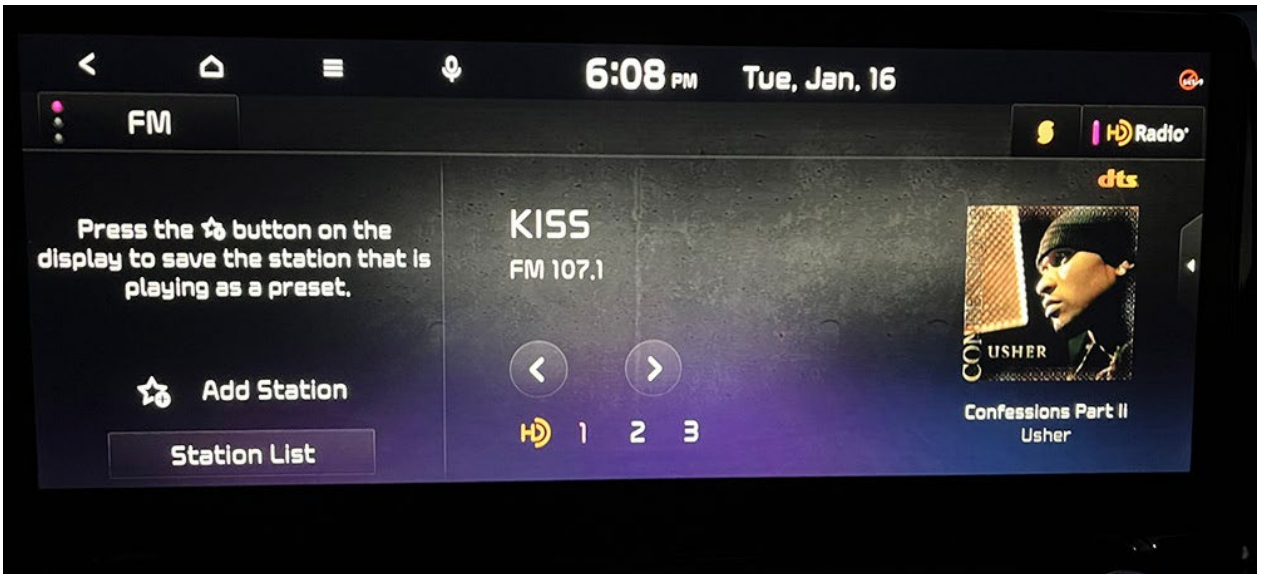
Above
Album art on a 2024 Cadillac Escalade on WOVO in Horse Cave, Ky., a Soky Radio/ Newberry station.



Right
Listening to EMF station WLNT in Cincinnati in a '24 Toyota RAV4.

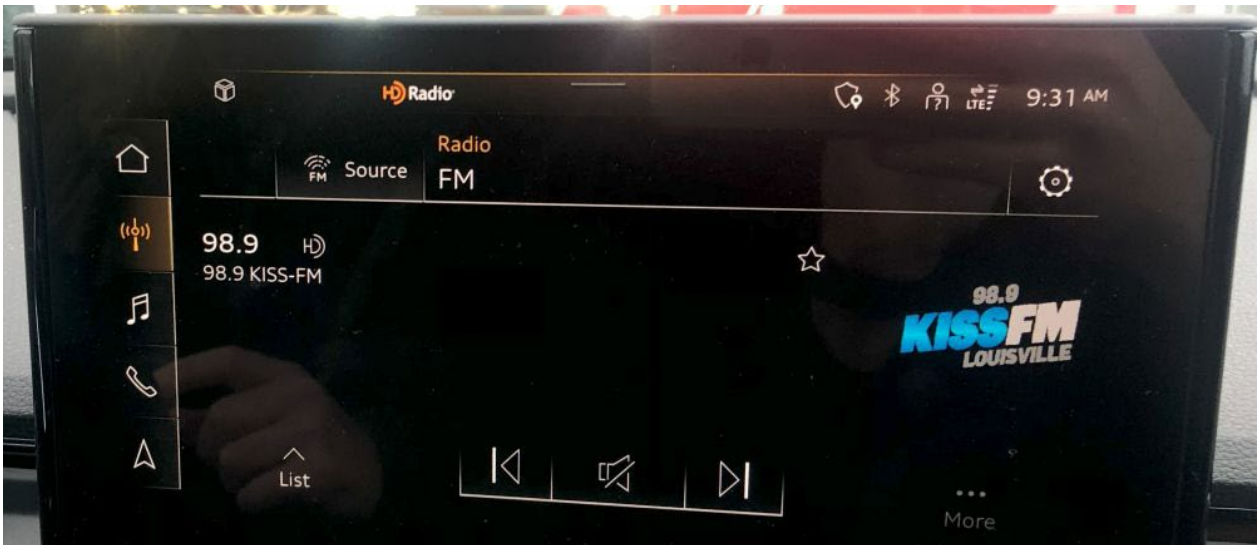
Left
A Quu ad message in a 2024 BMW Series 4.

Left
RDS in a Mazda CX-50.



Left
A 2024 Kia Soul listening to an HD station.

Right
The HD Radio screen on an Audi 2024 Q5 S line 45 TFSI quattro tuned to iHeart station WNRW(FM) in Louisville, Ky.



Right
HD Radio reception of WQMF(FM) in a 2024 Ford Bronco. WQMF is an iHeart station in Jeffersonville, Ind.

Right
RDS on a 2024 Buick Enclave tuned to WPTQ.

Writer

Megan Amoss

Assistant Chief Engineer, Baltimore Public Media

Above
WTMD's analog FM broadcast on DTS AutoStage showing album art, title and artist. The vehicle is a 2022 Hyundai Tuscon Limited; the infotainment platform is "Standard-class Gen5W Navigation" with DTS AutoStage.

Right
WYPR's analog FM broadcast on DTS AutoStage shows station logo and "now playing" info for the current talk show.

Our experience with metadata at Baltimore Public Media

We provide a richer experience, elevate the visibility of our side channels and gain insights into listener behavior

Metadata is a hot topic right now. Radio broadcasters are competing for attention on the dashboard against streaming services with flashy visuals and endless budgets. Equipment and financial concerns can make providing a better visual experience for listeners seem out of reach. What can stations do, now, to improve their appearance on vehicle infotainment screens?

Here at Baltimore Public Media, our main stations WTMD(FM), a AAA music station, and WYPR(FM), an NPR-affiliate news/talk station, have older-generation HD equipment. WYPR's simulcast stations WYPF and WYPO are analog FM only.

Upgrading equipment would be nice, and we are looking to upgrade eventually, but the expense is significant and and upgrade is not in the immediate future. For some stations, the expense could be prohibitive. And for analog AM stations, transmitting RDS and other data over the air is not possible at all.

Streaming services are natives of the internet first and broadcasters second. DNS and other everyday internet protocols are basic tools to them. The trick is realizing that radio can use those tools too, to meet the streamers on their own turf. The visual data streamers provide on the screens is being delivered over IP, not over the air — and

Top
WYPR's HD3 channel on DTS AutoStage. The name and slogan of the channel are displayed as well as the title, artist and album art for the current track.

Above
WYPR's HD3 channel on DTS AutoStage displays the HD3 logo while waiting to get the next title and artist.

we can do that, too.

By signing up for services like DTS AutoStage and registering with RadioDNS, Baltimore Public Media is ready to provide a richer visual dashboard experience to hybrid radio-enabled cars now, elevate the visibility of our HD side channels to equal status, and also gain direct insights into in-car listening — without buying a single piece of hardware or new subscription.

What are these services?

RadioDNS Hybrid Radio and DTS AutoStage both provide enriched user experiences on connected dashboards.

RadioDNS is a service that uses the transmitted RDS PI code in FM signals to provide hybrid radio devices with a centralized and standardized lookup for information about radio stations, supplied by the stations directly through an xml file hosted somewhere on the web.

DTS AutoStage is a connected radio platform that uses its own lists of radio stations, based on the geographical location of the car's radio, to provide logos, service names, descriptions, now-playing info and other metadata to vehicle infotainment screens. Because it uses its own internal lists, DTS AutoStage will work for analog AM stations and others who don't have RDS.

Baltimore Public Media decided to participate in both these systems. I will give some description of our experience in signing up for them both.

RadioDNS

The DNS in RadioDNS stands for the Domain Name System, a standard part of the TCP/IP protocol suite that runs the internet. Your browser uses DNS to connect your request for "google.com" to a Google server's IP address. In the same way, for hybrid radios, RadioDNS uses DNS to connect the listener's device to a file on a server containing your station logo, website links, stream URLs, on-demand offerings and whatever other information you choose to provide.

Signing up for RadioDNS is free. While advanced features such as program guides and dynamic visuals can require some web development knowledge, the basics are easy to set up and there are free tools that can get you going quickly.

RadioDNS station information is stored in an xml file called the SI (Service Information) file. Stations can make and host their own SI file, or they can use a service provider to create and host one for them. The RadioDNS website has the excellent online SI Management Tool for creating SI files, located at https://si.radiodns.org/.

For NPR member stations, NPR offers SI file hosting and RadioDNS registration through PRSS ContentDepot. There are also several other providers. At Baltimore Public Media, we decided to host our own SI file to have maximum flexibility.

The RadioDNS SI Management Tool was easy to use to build the basic SI file for our stations: WYPR, WYPR-HD2, WYPR-HD3, WTMD, WTMD-HD2, WYPO and WYPF. (This is a long list, because to hybrid/connected radios, the HD side channels are presented in the stations list alongside the main channels as equals. The "NAB Digital Dashboard Best Practices Report" goes into detail on this topic and provides good recommendations for branding; find it online by searching for that report name.)

I entered all of the requested information, including long and short descriptions and names, geographical coordinates, PI codes, country codes, stream URLs and links to our stations' websites and social media accounts. I created logo files in the dimensions specified by the SI Management Tool and uploaded them to our domain, noting their URLs for the SI file. I downloaded the generated SI file to use as a starting point.

Then I referred to the standards document "Hybrid Digital Radio (DAB, DRM, RadioDNS); XML Specification for Service and Programme Information" to further build out the xml file to include genre information, keywords and other details. (To find it, go to https://www.etsi.org/standards and enter "TS 102 818 v3.5.1" into the search field.)

Once the file was ready, I uploaded it to a domain that we own, and created SRV records in our web host's DNS Zone Editor for that domain to advertise our SI file. Instructions for creating the SRV records are available on the RadioDNS website. RadioDNS was also very helpful when I asked them a question about it.

Finally, I created a DNS zone file containing the CNAME records needed by RadioDNS to direct requests from hybrid radios to our server, and I submitted it to RadioDNS for registration. (See https://radiodns.org/technical/testing-tools/.)

RadioDNS doesn't actually store your files or logos. You do (or your chosen hosting service does). RadioDNS just acts as a central lookup service. Hybrid radios only have to know about RadioDNS.org, and the zone records point them to you.

A little detail about how it works:

The listener's hybrid radio tunes into WTMD's FM signal and gets our PI code from our RDS. Over IP, the radio constructs our CNAME record string using our frequency and PI code, connects to RadioDNS, and looks us up. DNS tells the radio to go to our domain. The radio visits our domain and accesses the SI file. The user gets our logos, stream URLs, social media links, and everything else we provide in our SI file.

And because they are connecting directly to our web server, we can get some usage statistics from our web server logs directly. Listeners in their cars are no longer purely theoretical. If they go outside of our listening area over-the-air, they can use Service Following to continue listening on our stream, which not only keeps them with us longer but gives us even more-detailed analytics.

DTS AutoStage

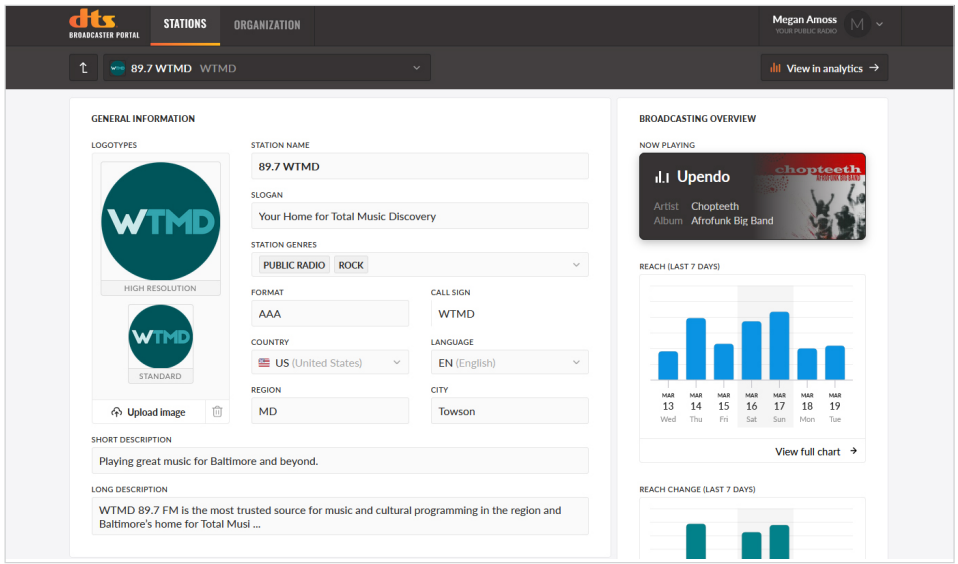
DTS AutoStage from Xperi is a connected radio platform that uses its own lists of radio stations, based on the geographical location of the car's radio, to provide logos, service names, descriptions, now-playing info, and other metadata to vehicle infotainment screens. Because it uses its own internal lists, DTS AutoStage will work for analog AM stations and others who don't have RDS, according to the NAB Digital Dashboard Best Practices Report. Like RadioDNS Hybrid Radio, it also allows listeners who leave the over-the-air range to continue listening on the stream.

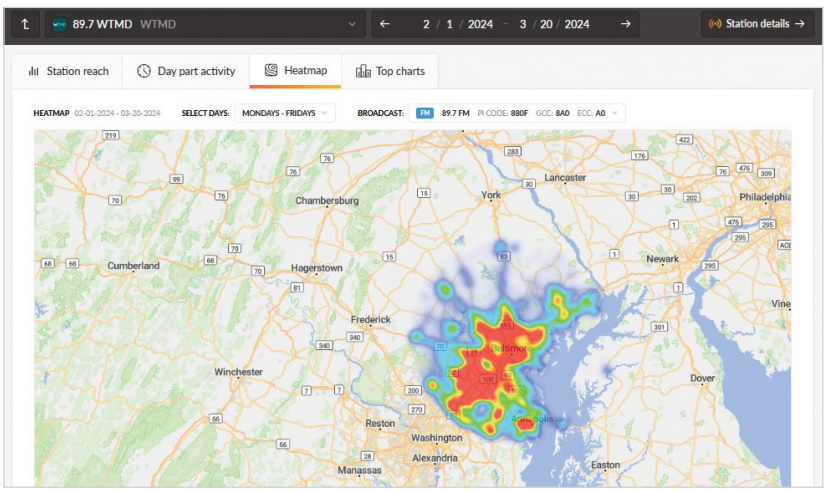
Signing up for DTS Autostage is free for broadcasters. It's important to note that DTS AutoStage, much like TuneIn and other aggregators, already has some data about your station … data automatically scraped from the internet that is almost guaranteed to be outdated, incorrect or incomplete. By signing up, broadcasters can upload their latest logos, slogans and stream URLs and make sure information is accurate and up to date.

Stations who provide live "Now Playing" metadata to DTS AutoStage are rewarded with some fascinating and valuable reporting in return. DTS Autostage is all in-car listening and will provide eye-opening heat maps of where your stations are being listened to.

Signing up for DTS AutoStage was simple, using their onboarding site, https://onboarding.connectedrad.io/. Getting the now-playing metadata up and running required some emailing and waiting, but the wait was worth it once the heat maps and other analytics became available.

Overall, the experience of signing up for RadioDNS and DTS AutoStage was worth the learning curve. By getting involved now, Baltimore Public Media will already have a rich visual presence on dashboards as the new technology rolls out to more and more listeners. And we were able to do it without buying racks full of new hardware.





Above
The DTS AutoStage station overview screen, showing fields that stations can fill out and update, and showing what live metadata DTS AutoStage is receiving from your automation system.

Bottom
A "heat map" showing in-car listening for WTMD's analog FM broadcast. "This is a general aggregation and overview," the author says, "but it is incredibly valuable and eye-opening to see the geographical areas where listening is concentrated. You can change weekdays and date ranges, and you can view each HD and analog broadcast separately."