



RADIO WORLD

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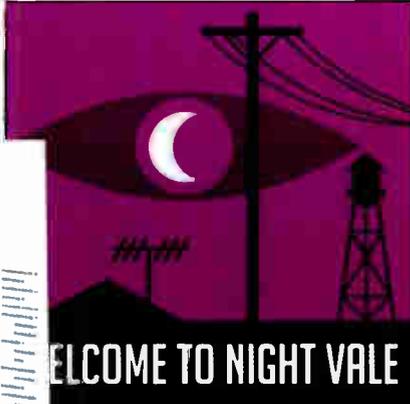
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Clyburn Adjusts to a New Role at FCC

Commission veteran still highlights consumer issues and “smart, targeted” regulation

NEWSMAKER

BY PAUL McLANE

The end of July marks eight years since Mignon Clyburn joined the Federal Communications Commission. She was sworn in by Judge Matthew J. Perry Jr., the late renowned civil rights lawyer and federal judge, in her home state of South Carolina in 2009.

This summer finds Clyburn six months into an unfamiliar role, that of senior member of the FCC’s Democratic minority — indeed its only member, until Democrat Jessica Rosenworcel and Republican Brendan Carr presumably are approved by the Senate.

Clyburn was nominated by President Obama and has served most of her FCC tenure in a Democratic majority; she was acting chair of the commission for six months in 2013 (after which one headline described “the brief, ridiculously productive reign of FCC Chairwoman Mignon Clyburn”). Former Chairman Tom Wheeler has been quoted calling her the “conscience”

of the commission. But she now is at the conclusion of her second term. As of early July, it was unknown whether President Trump would renominate her, though she could stay on beyond the end of the year if a replacement is not confirmed.

Commissioner Clyburn met with Radio World Editor in Chief Paul McLane and Contributing Editor Emily Reigart at FCC headquarters in Washington for an interview about issues of concern to radio. Text has been edited for brevity and clarity.

Radio World: How would you grade yourself in regard to radio issues after eight years?

Mignon Clyburn: I have this love for radio, always have. When I moved back to Charleston, S.C., I used to hang out and listen to WPAL(AM). I was on that station a number of times as a guest before I came to the FCC, and we would talk about the issues of the day. I had my own weekly newspaper and always wanted a show of my own that would bring the newspaper to life; I saw the benefit of the written word as well as



the spoken word and thought that they were complementary, allowing for more discourse.

I love radio. It is one of the most liberating platforms in that you can look anywhere you want, dress any way you want, nobody knows — as long as you have that connectivity to the community.

I give myself a bifurcated grade.
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Jennifer Waits, Radio Survivor

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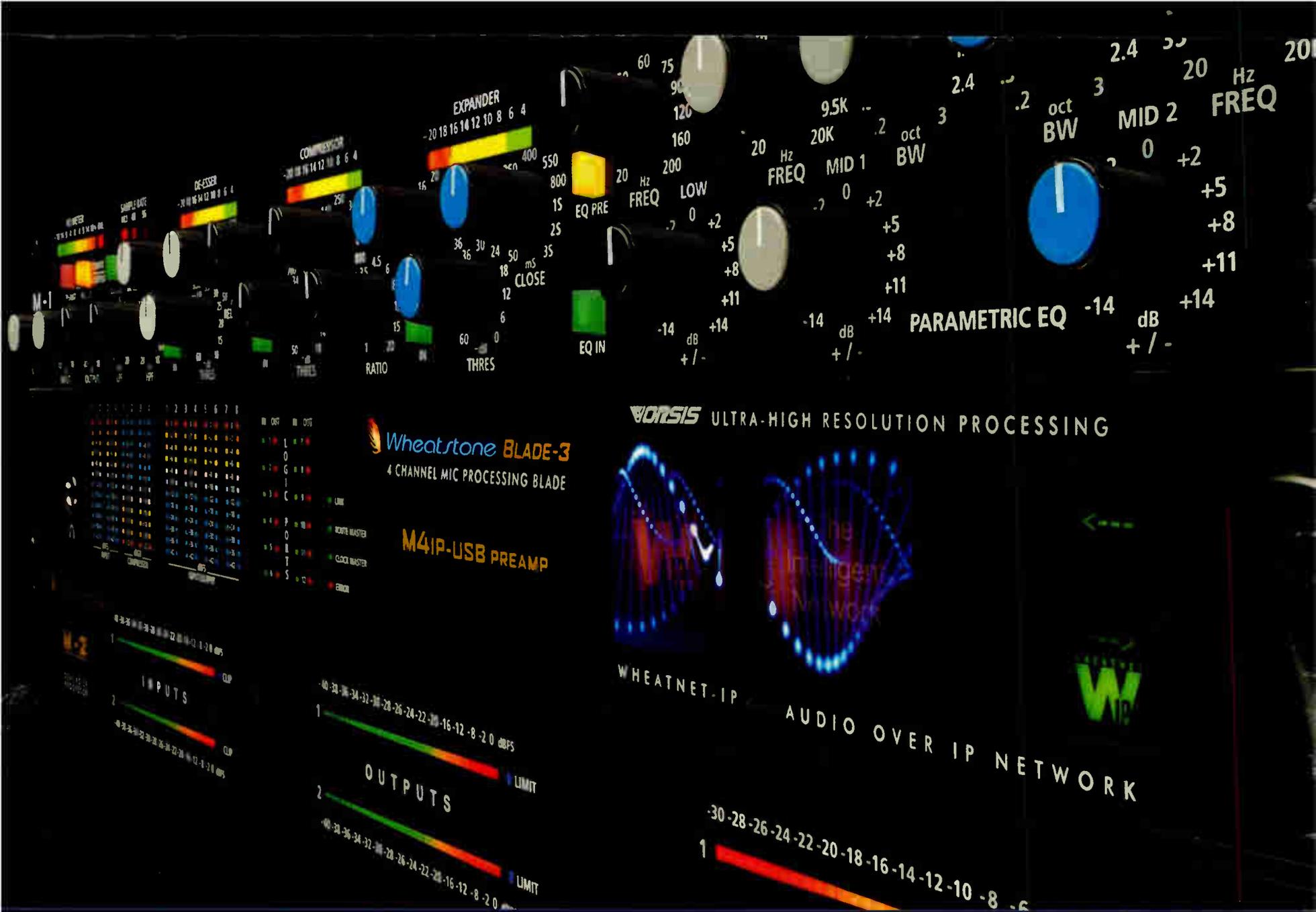
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EDITORIAL STAFF

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ASSOCIATE CIRCULATION MANAGER Michele Fonville

SUBSCRIPTIONS

Radio World, P.O. Box 282, Lowell, MA 01853
TELEPHONE: 888-266-5828 (USA only 8:30 a.m. - 5 p.m. EST)
978-667-0352 (Outside the US) FAX: 978-671-0460
WEBSITE: www.myRWNews.com
EMAIL: newbay@computerfulfillment.com

CORPORATE

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ADVERTISING SALES REPRESENTATIVES

US REGIONAL & CANADA: John Casey, jcasey@nbmedia.com
T: 212-378-0400, ext. 512 | F: 330-247-1288
US REGIONAL: Michele Inderrieden, minderrieden@nbmedia.com
T: 212-378-0400, ext. 523 | F: 301-234-6303
EUROPE, AFRICA & MIDDLE EAST:
Raffaella Calabrese, rcalabrese@nbmedia.com
T: +39-320-891-1938 | F: +39-02-700-436-999
LATIN AMERICA: Susana Saibene, susana.saibene@gmail.com
T: +34-607-31-40-71
JAPAN: Eiji Yoshikawa, callens@world.odn.ne.jp
T: +81-3-3327-5759 | F: +81-3-3322-7933
ASIA-PACIFIC: Wengong Wang, wwg@imaschina.com
T: +86-755-83862930/40/50 | F: +86-755-83862920
CLASSIFIEDS: Michele Inderrieden, minderrieden@nbmedia.com
T: 212-378-0400, ext. 523 | F: 301-234-6303

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CLYBURN

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Photo by Emily M. Reigart

My heart is there. What we've done, I think, we could have done quicker, in some cases maybe a little better; but I think all in all, especially [for] smaller stations, we have offered a lifeline of sorts — translators [and] low-power. All in all, I think things have improved. I don't give myself an "A" or a "B-plus" because I think we should've done them sooner.

RW: *In front of us is the big possible change with the main studio rule. You know how radio's connection to the community has developed historically; are we going to see that connection go away? Eliminating the rule seems almost a foregone conclusion.*

Clyburn: I voted for the NPRM, but I made it very clear that I had some reservations. That presence is often the only link — outside of that signal, that broadcast — that people have to a station. When I was more active in radio, that station was a place that we hung out. Literally hung out. People went there for telethons, they went there for so many things. It was a part of the community.

What happens if we make a true shift, particularly in some of the critical and maybe smaller markets? I don't want to seem like I am disconnected and not recognize that there may be some small stations where there might be some benefit; but I also know that

radio, the stations and the people who own and are on the air, are often our verbal connectivity lifeline.

What happens if the station just becomes some type of a repeater station, so to speak? Or it becomes sort of nationalized and there's no local type of involvement? And then heaven forbid something negative happens; where's that person on the air offering interactive — where is that engagement with the community?

I rarely stand in the way of us having a conversation or discussion, putting things out on the table. But I am worried what this means. Will the nationalization of radio ... what happens to the localism, what happens to diversity? What happens to how I fell in love with radio?

RW: *But do we need a requirement for that? Someone in favor of eliminating the main studio requirement may say, "Technology allows us to be local without being physically there, and there's so many competing media." It sounds like your mind isn't made up —*

Clyburn: The devil is in the details. If you say, "We can be local [thanks to] technology and we can answer calls if they come in," when will you answer calls? What does this mean? Will it be live? Will it be Memorex? I jokingly say this, but I'm very serious: What does

this mean when it comes to the communities? [Radio] is the one signal that we have that's truly, potentially, local. If we move in this direction, what does the future bring?

I'm not going to stand in the way if a legitimate case can be made. I will vote against something I think would decrease that connection to the community.

RW: *What about eliminating or easing subcaps on broadcasters to own a certain number of stations within a market? Any strong opinion; is the current limit good for the public interest?*

Clyburn: I have strong opinions about competition, localism and viewpoint diversity. And I've got strong opinions about holding onto what I think is pure when it comes to the Communications Act. There is a reason why we established media ownership rules; and there are reasons some of them should be retained.

I'm not going to stand in the way of progress; I'm not going to stand in the way of change if it's needed. But if it's going to compromise those three values — competition, localism and viewpoint diversity — it's going to be problematic for me, and more importantly it's going to be problematic for the communities that are served.

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College Radio: Just a Bunch of Kids?

Efforts to preserve radio's history should include college audio heritage — before it disappears

RADIO PRESERVATION

BY TIM BROOKS

Radio World continues our special series about preserving the history of radio, in conjunction with the Library of Congress' Radio Preservation Task Force (<http://radiopreservation.org>).

"They're just a bunch of kids!"

That's what the sales manager of a New Hampshire radio station told local businessmen when he discovered that he was losing accounts to student salesmen from the nearby college station. Some faculty weren't happy with the station either, considering it a mere "radio school" in their midst, and not promoting their vision of academia. One seriously suggested that rock'n'roll be allowed on the station only if accompanied by "commentary and discussion."

Both views seem to miss the point, and the value, of college radio.

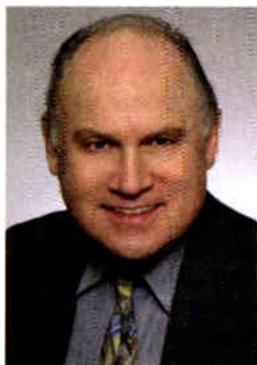
The history of this particular station is explored in depth in my book "College Radio Days," and it reveals some interesting facts about an underappreciated segment of broadcasting.

INSIDE MEDIA

For many years the stations, WDCR(AM) and WFRD(FM) at Dartmouth College, were commercial and run entirely by students.

The students created a climate of professionalism and innovation that did indeed make the stations a formidable competitor in the small northern New England market. But they also created an unusual learning environment, one that helped mold generations of media and business leaders of the future.

This was far from just a "radio school."



Tim Brooks

According to data collected for the book, during the station's entire 75-year history (the original campus station signed on in 1941), only 2.4 percent of its student

leaders went on to careers in radio. Another 11.7 percent pursued careers in other media, such as television, motion pictures, recording or publishing. More than 85 percent went on to non-media careers, such as law, finance, advertising, marketing and computer sciences.

Yet among the many alumni who were interviewed, nearly all gave credit to this early "inside media" experience as helping prepare them for their later careers, whatever those careers might have been. They said they learned leadership skills, speaking skills, entrepreneurship, sales, technical skills and "how to run a business."

Some were quite eloquent about it. "One of the best experiences of my life," said one. Said others, "I learned as much [at the station] as in any of the academic

buildings." "Of tremendous value to me," and quite simply, "I owe my career to Dartmouth Broadcasting."

A current U.S. senator, a station newsman during his college days, said, "It taught me how to ask the *right* questions."

COLLEGE ARCHIVES

Besides producing leaders in many fields, the station produced a great deal of important and interesting programming, some of which is preserved in the college archives. That is one focus of the Radio Preservation Task Force of the Library of Congress, which aims to identify, and encourage the preservation of, both commercial and non-commercial radio archives.

What survives from those 75 years of broadcasting at this one student station? Besides music programming, the station produced many thousands of hours of programs about sports, social issues and contemporary culture. It was also a laboratory for what might be termed periodic waves of student creativity.

Every few years a new group of students would arrive, who would use the stations as a platform for various forms of dramatic and comedic expression, and some of the shows they created are quite interesting. In the 1950s, it was a young

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CLYBURN

(continued from page 3)

RW: Chairman Pai talks about doing away with regulatory “underbrush” or unnecessary regulations; you’ve talked about “smart” regulation. Do specific radio regulations come to mind that need to be updated? It feels like this push is coming from him.

Clyburn: I am sort of in a wait-and-see. When it comes to what we’ve done in terms of FM translators, I cannot tell you the number of people ... Just last week a colleague of mine who owns an AM station said, “Oh my gosh, this is breathing life into me.” When we made those types of adjustments, I could see the joy and promise in their eyes.

When we talk about wholesale deregulation — without looking at what it could mean in terms of the rest of the ecosystem — I’ve got a problem with that.

Clyburn: I have not come to a conclusion at this point.

RW: Most of the effort in AM revitalization has been on the translator side, but there’s a whole bunch of other proposed technical rules. Will we see action outside translator windows this year to move revitalization further?

Clyburn: We made some tentative conclusions last year when it comes to AM stations in terms of daytime/nighttime, groundwave protection, no nighttime skyway protection, no critical hour protections. And we’ve heard from people pro and con.

Look, the chairman sets the standard. He has been passionate about these issues, as am I. I’m willing to do anything that I can to make sure that this medium — again, I’ve got this love for AM too — that this medium has all the oxygen it needs to thrive.

I might be a little less definitive than



Photo by Emily M. Reigart

On eliminating the main studio rule: “I’m not going to stand in the way if a legitimate case can be made. I will vote against something I think would decrease that connection to the community.”

It needs to be smart, targeted and needed; and we have to know the consequences. Everything we do has a ripple effect. And if it doesn’t improve and make stronger, particularly stations that might have needed a lifeline, then I think it’s problematic.

RW: Some translator owners feel the rules don’t give them sufficient protection because one or two listener complaints about interference, even to a distant station, can knock them off the air. Is that on your radar?

Clyburn: When anybody says anything about interference, that’s problematic. When there is an issue or a complaint, we need to investigate it, but we need to make sure that it’s fair and balanced.

RW: Do you think translators, under certain circumstances, should not be considered secondary service?

you would like, other than the aspiration of ensuring that we give, particularly in smaller markets, these stations as much as we can — to be as fair as we can — to give them the tools they need. I am supportive of any initiative that’s targeted and empowering.

RW: Twenty-one years since the Telecom Act of ’96. National ownership caps were done away with ... Were the changes in ownership restrictions for radio in the public interest? Do you feel good about 1996 and what followed in terms of deregulation and consolidation?

Clyburn: There are some aspects, and I guess that’s life, that are problematic. Look at over 15,000-plus radio stations, or whatever the number may be, and about 20 percent are owned by less than two handfuls of owners. Almost 50 percent of the revenue is within that framework. The station that I told you that I adored the most is not the same format [now], not the same owner. Many of these changes are personally problematic for me.

But I understand. I majored in banking and finance and economics. I understand scale and scope. I understand that if you truly believe in an inclusive, robust, healthy, capitalistic marketplace, that changes will come, and not all of

them will be comfortable.

I miss the days of old, so I’m nostalgic. I miss WPAL — AM, FM — they spoke to me. I miss that. And there are a lot of other people who say, “No matter what city I go to, I hear the same thing.” What does that mean for local artists? What does that mean for local voices? What does that mean in terms of any type of investigative reporting on radio? What does that mean for community talk and interaction? What does it mean?

Not a definitive answer. I hate to say this: I listen to less radio now because it doesn’t speak to me as much.

RW: What about newspaper-broadcast ownership? Why shouldn’t a newspaper be allowed to come in, combine with a radio station, maybe save some jobs? Is it time to do away with that restriction?

Clyburn: Just look at your daily newspaper, it’s not what it used to be. Look at your local radio station. It may not be what it used to be. The one thing about the FCC, no matter the rule, if there are exceptions that need to be considered, particularly [in a] particular market, we have the opportunity to waive our existing requirements.

While some people may say it’s a little more cumbersome, a market-by-market approach is healthy. Because not all markets, not all stations, not all situations are created equal. Hopefully the barriers to that are as low as possible by way of expense and being able to file.

But a wholesale change — without looking at the entire ecosystem and what it means for localism, diversity and other ownership opportunities — you’re going to hear me stutter a little bit. And I don’t think stuttering is allowed on radio.

RW: How effective is the commission with three members instead of five?

Clyburn: If you look at the number of items we have teed up or entertained or voted on in the last several months, it’s been very effective. I don’t think there’s been any meeting with less than eight items. So volumetrically, we haven’t missed a beat.

Like most organizations, when by choice or circumstance you are forced to be more lean or efficient, you do what it takes. There is no office that’s dragging its feet, that’s making any excuses because we don’t have a full complement. We’re getting the people’s work done through three different lenses.

RW: Your current term expires shortly. Have you any reason to believe that you will or won’t be coming back?

Clyburn: I have not heard anything one way or the other. It is a privilege to serve. That will come from either the president and/or the Senate, as to what’s next for me.

RW: You’ve not had any conversations with the president about it?

Clyburn: I have not.

RW: How do you feel President Trump is doing so far, in regards to matters of communication policy that play out for broadcasters or FCC interactions?

Clyburn: My only interaction with him is through his appointed chair.

When it comes to radio and its viability, on most things we agree. When it comes to the more broad net — when it comes to communications policy — on most things we don’t agree.

(continued on page 8)

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CLYBURN

(continued from page 6)

RW: You mean the chairman?

Clyburn: Yes. This is the president's appointee, and I am assuming that he is carrying out and representing the president to the best of his ability.

RW: I'm sure our readers would like to know briefly why you feel so strongly about net neutrality and internet regulation, particularly given your background as both a communications regulator and public utility commissioner.

Clyburn: When you talk about broadband-slash-the internet, it is the most enabling, empowering platform of our time. It will allow you, no matter what your platform or your signal, to possibly be picked up on another platform.

I am separated by time and space from my hometown radio station. If you've got an online presence, I can stay in touch and in tune; but if that presence is being compromised by someone who has a relationship or a preference for another station, has an interest in another station — the internet service provider who basically has your fate in their hands — that's problematic.

That's why you hear me talking about an open, non-discriminatory, transparent platform, where the rules of the road are clear, where there is no preference given for content that passes over it.

If I've got a relationship with your competitor and I slow down your traffic or cause it to be buffered, then you've got a problem, and we all have a problem. There should be a regulatory referee on the field ensuring that does not happen.

My colleagues, they don't think that it should be explicit from that perspective — that the market will take care of itself. If the market took care of itself so well, we wouldn't have traffic lights. If the market took care of itself so well, we wouldn't have an FCC.

Companies, industry, they do what they do best. I don't disrespect industry; but they look out for their interest. They look out for the interests of their shareholders. And if by chance I don't make the cut, then who's there to look out for me?

RW: The FCC has cut back its enforcement field presence. What can broadcasters concerned about pirate radio expect now?

Clyburn: While it is true that we have had cutbacks in field offices in terms of numbers and personnel, [it] has nothing to do with our commitment to ensuring that people are compliant with our rules. We have and will continue, as best we can, to stamp out those who will arbitrarily use our airwaves for whatever gain.

We're cutting back across the board. We've got an appropriations hearing tomorrow [late June]. We're going to get yet another haircut — from 5 to 7 percent depending on how you work the figures. That has an impact as to how we conduct ourselves. That has an impact on field offices.

for AM and FM radio ... for low-power radio ... for the radio ecosystem, period. Fifteen thousand licensees — you're important, you're vital.

But there are realities where we might not be able to do as much as possible. We are and will continue to leverage resources on the outside to ensure that we protect and serve.

RW: Some folks have said over time that at least one of the commissioners should be an engineer by requirement. Do you think that that's the case?

Clyburn: I've met some engineers and [smiles] ... I've met some engineers. I think what you want out of a person who

On rule changes generally: "If it's going to compromise those three values — competition, localism and viewpoint diversity — it's going to be problematic for me."

So what we are attempting to do is work closely with local authorities because some of these pirate radio station quote-unquote "owners" have other businesses that might not be in sync and compliant with the local laws of the land.

It's important to leverage whatever resources we have to include the local authorities to help in this effort, and know that when we catch them that we seize where we can, and we levy fines where we can, in order to be a deterrent. We're just going to have to do it more efficiently, more targeted. You can point to the four or five areas of the country where it's acute. I am confident, and I've seen it firsthand, that we're doing the best we can to deal with the problem.

RW: Some broadcasters say pirate enforcement didn't really feel like a priority under Chairman Wheeler as much as it is now.

Clyburn: I disagree. I visited as many field offices who told me what they were doing. I've ridden in the cars and heard some of the signals. Just because you don't say it five times a day doesn't mean it's not happening. And you have to make important and hard decisions by way of cutting back on resources because of the budgetary realities.

Those are just the realities of today. You've got a finite resource by way of personnel. You are charged with keeping afloat and allowing for infrastructure, investment, opportunities and innovations to a [communications] ecosystem that's responsible for one-sixth of our nation's economy.

We know and have an appreciation

sits in the offices on this floor is someone who cares about serving the community, who respects stations and their purpose, and who recognize that you're first informers. You want a person that will listen when there are problems, and who will act expeditiously in order to solve them. I honestly don't think that a particular label, major [or] discipline would guarantee that one way or the other.

Should we have more engineers surrounding us? The answer is yes, and we're doing more ... That's just not a radio thing, it's a communications thing.

RW: Where do you come down on whether smartphones should have FM, and whether it should be required?

Clyburn: I've been talking with some of your members, and you know who they are, for a number of years. One from Indiana, but I won't mention his name ... for a while.

The dexterity, the capacity for that has always been something that I've wanted and supported personally. Whether or not we should mandate something? I've been slower on the uptake when it comes to that.

I always felt that there were others like me who would want it and that the market would adjust to it. From what I've been told and what I've been seeing, all of the major wireless providers have at least one phone with a dedicated chip inside. So there has already been some movement; there are relationships and partnerships that have been established. I really think we're moving in the direction without the government lifting and

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"SMART, TARGETED REGULATORY ACTION"

Mignon L. Clyburn is a graduate of the University of South Carolina and holds a bachelor of science degree in banking, finance and economics. She joined the FCC in August 2009 and was sworn in to her second term in February 2013; she served as acting chairwoman for much of that year, between the tenures of Julius Genachowski and Tom Wheeler.

She is former publisher and general manager of The Coastal Times, a Charleston-based weekly paper that focused on issues affecting the African American community; she co-owned and operated the family-founded newspaper for 14 years. Clyburn went on to serve 11 years as a member of the Public Service Commission of South Carolina and was its chair from July 2002 through June 2004.

Clyburn is the daughter of Rep. Jim Clyburn of South Carolina and has been the subject of speculation at times as a possible future congressional candidate herself. Her FCC biography describes her as a "longtime champion of consumers and a defender of the public interest" who "considers every commission proceeding with an eye toward how it will affect each and every American."

Issues of interest, according to her bio, include accessibility in communications for disabled citizens, competition across communications platforms and, where needed, "smart, targeted regulatory action" including media ownership rules that reflect "the demographics of America, affordable universal telephone and high-speed internet access, greater broadband deployment and adoption throughout the nation, and transparency in regulation."

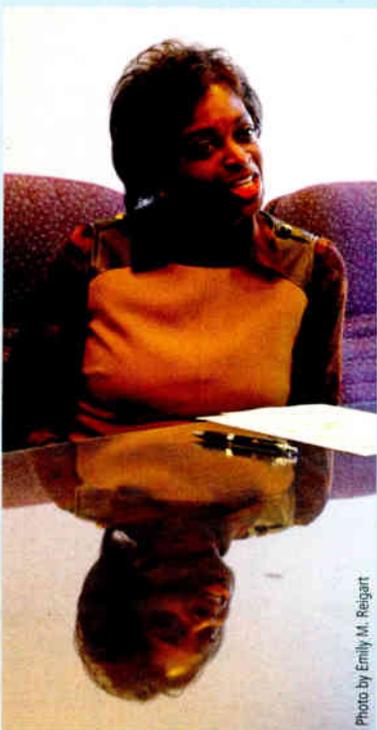


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More than just an IP Codec...

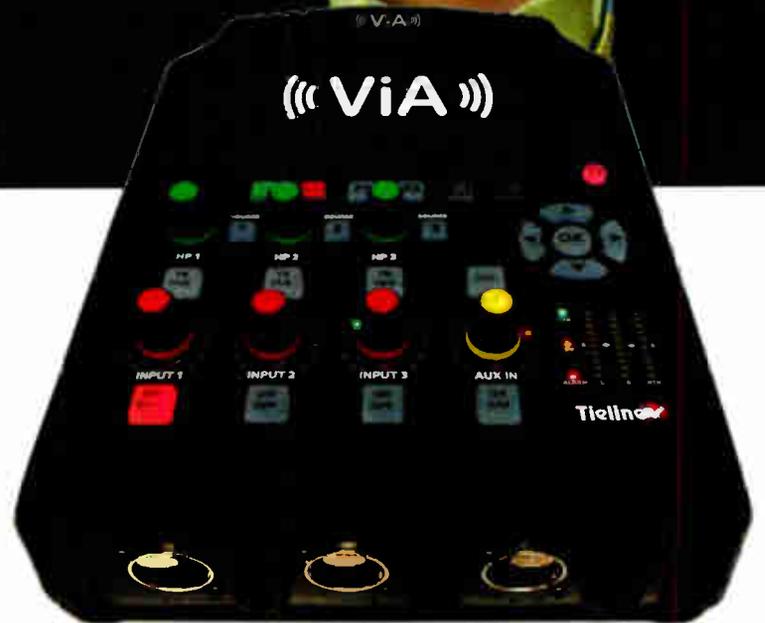
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- John Herath, Director of Operations, Farm Journal Radio

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CLYBURN

(continued from page 8)



Photo by Emily M. Reigart

requiring a mandate. I think the market in and of itself will address this issue; I thought it would move faster, but I'm pretty much pleased with the direction. You've got a choice, you've got an option with the major providers, and I'm not unhappy about that.

RW: What would you say that the government's role is, if any, in how radio broadcasters are present and available on the dashboard? Is there any role for the FCC in discussion about design of the dashboard and the way that consumers interact with audio? Many radio broadcasters feel like they're getting lost in all of that.

Clyburn: That's an interesting question. I don't know if there should be a formal role. We all benefit if there is an interaction. This is one of those cases, I think, where it would be beneficial for both parties to be involved. You can look in other disciplines where there has been interaction at the government level and private industry in order to realize consumer benefits.

I don't know if anything more formal should be realized at this time.

RW: In today's environment, with this



media landscape, with the number of proliferating channels, is it even still relevant to be talking about trying to change policy to encourage more minority ownership?

Clyburn: Number one, we need to make sure that whatever decisions we

It's been mischaracterized, and there's been pushback in terms of getting the type of data we need to make informed decisions.

There are some other things that we can do, along with Congress, to ensure that we have a diverse, inclusive media

should play a role with that, private industry should play a role with that. We all benefit when we are all inclusive. Diversity and inclusion benefit us all. Having voices that reflect this incredible mosaic of American experiences, I think we will all be better served.

A lot of the tensions that I see is because we are too siloed. Media platforms, if they were more reflective of the American experience, could truly be continual informers when it comes to that.

The NAB [Education] Foundation is doing some incredible things in terms of training new talent, and a lot of their graduates have gone on to buy stations. We know access to capital is a problem. We've had "access to capital" programs here at the FCC, and the NAB had their first one not so long ago, recognizing that that is a challenge.

So where there are issues and challenges, the FCC, the industry, Congress should be unapologetically targeting ways to ensure that those who want to be new entrants have at least a fighting chance.

That's why I don't give myself an "A." Because I know we can do a better job of ensuring we have the data to make the right choices, coming up with creative alternatives to encourage more opportunities.

We're doing so on the broadband side, we're doing so on all the other silos; why not here in radio?

About Chairman Pai: "When it comes to radio and its viability, on most things we agree. When it comes to the more broad net – when it comes to communications policy – on most things we don't agree."

make in terms of changes with ownership rules don't have a further adverse effect. Say what you will in terms of the benefit of the Telecommunications Act and all of the things that it has allowed; you have seen a steep decline in terms of women and minority ownership. And you have seen a steep climb when it comes to media consolidation. I don't think all of that is accidental.

I've gotten pushback and [been] demonized for asking for data that will inform us going forward. I have asked for [the FCC] to look at the landscape in order to give us a better baseline when it comes to making a decision.

ecosystem. We got rid of what was then called the minority tax certificate. That vehicle allowed for an exponential increase in the number of diverse individuals who had stations. With that gone, we've seen a steep decline. Bringing that back, looking at those in the communities that want to be a part. I'm agnostic as to what it's called [but] I think we need something of that nature.

I would even be willing to relax, in certain instances, ownership rules, if there were an incubator program. I've talked about coming up with an incubator program for those who want to be a part of this incredible space. The FCC

IN CASE YOU MISSED IT

Radio World and our NewsBytes e-newsletter complement one another. The magazine brings you news analysis, features and deep-dive coverage 26 times a year; the newsletter provides a snapshot of a day's regulatory and technology headlines in near-real time. To receive the free newsletter, click the *Subscribe* tab at radioworld.com, then choose *Newsletters*.

Here's a sampling of headlines from recent weeks:

► Radio World Celebrates 40 Years

It's hard to believe ... but Volume 1, Number 1 of Radio World reached our readers in July of 1977.

► Study Finds 600+ FM Stations Could Be Affected by TV Repack

We already knew the ambitious process was likely to have operational implications for broadcasters. An NAB-commissioned study sought to quantify the scope; we published the station list.

► Pubcasters Say Kill the Hourly ID

"Stations should be permitted to identify themselves on-air in a manner that makes the most sense to the local station."

► NAB: Main Studio Rule Must Go

The association is one of many calling for elimination of the rule, though voices of dissent remain.



► Vegas Translator Sells for \$400,000

The deal was struck between Windy City Broadcasting, owned by John Bridge, and Farmworker Radio Educational Network for a translator in Sin City (and it wasn't even a record).

► Stack of NUOs Handed Out by Enforcement Bureau

Enforcement offices of the FCC on the eastern seaboard have been busy of late, hunting down and knocking on doors to tell a handful of FM operators that they are operating unlawfully.

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This Surfboard Saves Space in the Studio

And don't forget to hang your "No Vacancy" sign

WORKBENCH

by John Bisset

Read more Workbench articles online at radioworld.com

We've written here before about microphone placement in studios, specifically how the monitors and mic arms or booms can cause control room countertop clutter as well as disrupt sightlines among the talent.

could design and fabricate the "surfboard" but cautioned readers to secure the services of a local structural engineer in designing and fabricating the best means of secure attachment to the deck above.

Keep in mind that most mic arms are pulled, pushed or otherwise adjusted by the talent before every break. This could amount to hundreds of times a day. You don't want the surfboard to come loose,

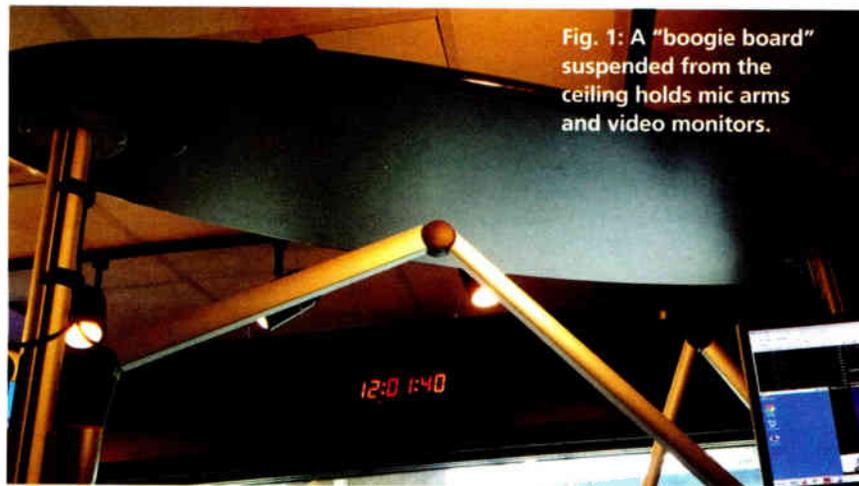


Fig. 1: A "boogie board" suspended from the ceiling holds mic arms and video monitors.

When Chris Wygal, operations manager and engineer for Liberty University's The Journey network, was remodeling his control room, making the best use of counter space was paramount.

With a multi-person morning show, mounting the mic arms and monitors in the console furniture tabletop wasn't going to cut it. After some study, Chris came upon a novel design: a surfboard, or more appropriately, a shorter "boogie board," structure suspended from the ceiling, as seen in Fig. 1.

Fig. 2 shows how the mic arms are mounted to a pedestal, which connects to the surfboard. The board is then suspended from the ceiling.

For the fabrication of the boogie board and the secure mounting, Chris turned to Liberty's facilities department. They not only cut and finished the board; the department's structural engineers also determined the best way to attach it. They tied a new subfloor about 4 inches above the suspended ceiling, spanning the room with 2x8s crisscrossing the room to create a structure that would stabilize the board completely. Two 3-inch diameter pipes are bolted to the new subfloor. These extra steps create a non-swaying base for mounting the mike and monitor hardware.

I spoke to George and Jason Neil with Graham Studios (www.grahamstudios.com). They said their company



Fig. 3: The surfboard holds mics and monitors efficiently.

so secure the skills of a professional if you go this route.

Most will admit the finished product looks amazing, and when professionally secured, not only keeps the countertop clear but should provide years of service (see Fig. 3).

Larry Wilkins is a retired regional engineer for Cumulus and director of the Alabama Broadcasters Association Engineering Academy. Seeing the need to provide proper training for broadcast engineers, Larry has worked with the ABA to offer a series of in-person tutorial sessions, covering a variety of topics related to both radio and television



Fig. 2: Standard mic mounting and monitor hardware is used, only inverted!

being a nuisance, they can also be dangerous to our health.

A serious condition is Hantavirus pulmonary syndrome. It is a respiratory disease transmitted by infected rodents through their urine and droppings. Humans can contract the disease when they breathe in aerosolized virus. How can the virus become airborne? Think of that wet/dry vacuum used to clean up the mess.

Make sure that openings that would allow access to the building by these guests are addressed, even during the design, construction and maintenance of transmitter sites. The "No Vacancy" sign should always be on.

Any removal or cleanup from these pests should only be done while wearing a breathing mask and gloves, and then spray the building with a good disinfectant. Better still, call in a company that does this type of work. You're not being paid enough to put your health at risk!

Here's a link Larry provided for more information on Hantavirus: <http://southernnevadahealthdistrict.org/health-topics/hantavirus.php>.

Find more information on the ABA Academy at <http://al-ba.com/wp2/aba-engineering-academy/>. Some of the classes are also found on the YouTube channel of ABA Engineering Academy.

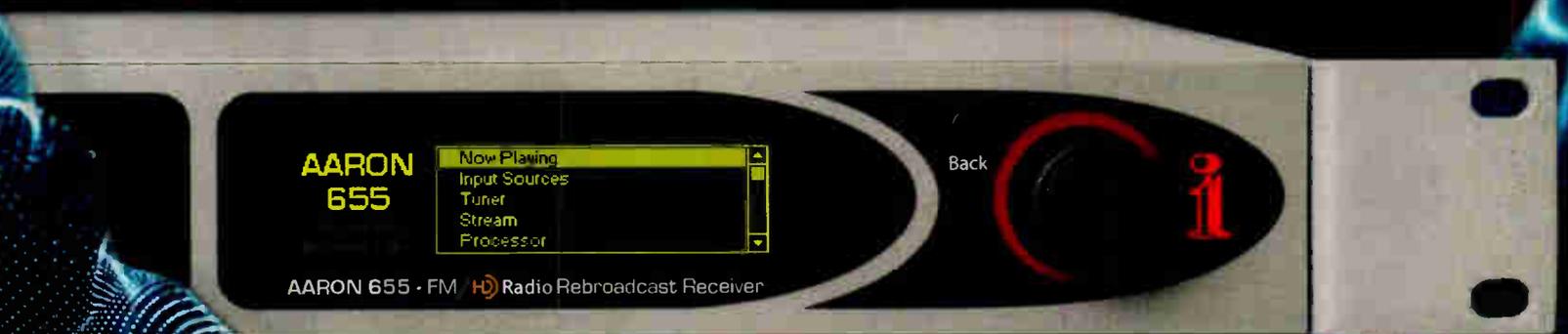
Some upcoming courses include "Understand Digital Audio Workstations" (Aug. 3), "Basic Radio Broadcast Engineering" (Oct. 2-6), "Basic Television Broadcast Engineering" (Oct. 23-27) and "Advanced Radio Broadcast Engineering" (Dec. 4-8).

Additional seminar dates will be announced soon, for include topics such as audio/video over IP, solid-state transmitters, video ingest/payout systems and broadcast antennas. For more information on these free seminars, contact Larry Wilkins at lwilkins@al-ba.com.

Workbench — Radio World's iconic and most popular column — relies on your good, practical ideas and those of your colleagues. Send in tips big or small; help your fellow engineers and qualify for SBE recertification credit. Email johnpbisset@gmail.com. You can even (gasp) fax them to (603) 472-4944. And discover a trove of past tips by clicking on the Columns & Views tab at radioworld.com, then choosing *Workbench*.

John has spent almost five decades in the broadcasting industry and yet he is still learning. He handles West Coast 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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Entering the Brave New World of Podcasting

"Welcome to Night Vale" exemplifies the podcast phenomenon



Cecil Baldwin and Meg Bashwiner perform in the "Welcome to Night Vale" live show.

Whitney Browne

BY JAMES CARELESS

"Welcome to Night Vale" is a twice-monthly podcast about the fictional American desert town of Night Vale and the very, very weird things that happen there.

Presented as a series of Night Vale Community Radio bulletins by station announcer Cecil Gershwin Palmer (actor Cecil Baldwin) and occasionally joined by actors doing other characters, the podcast includes unsettling news briefs such as "It is possible you will see hooded figures in the dog park. Do not approach them."

Also: helpful news-you-can-use about the unmarked helicopters circling above a local children's play area. "Are the unmarked helicopters circling the area black? Probably world government. Not a good area for play that day. Are they blue? That's the Sheriff's Secret Police. They'll keep a good eye on your kids, and hardly ever take one."

Add in the many strange Night Vale

residents that Cecil refers to during his "broadcasts" — including the Faceless Old Woman Who Secretly Lives in Your Home and a five-headed, 18-foot-tall dragon named Hiram McDaniels who once ran for mayor of Night Vale — and this is one quietly nightmarish place to live. (Oh yes, and the community radio station's interns keep dying. It happens.)

"Night Vale is what happens when you have an isolated American desert town where every single conspiracy theory is true," said Joseph Fink, who co-created and co-writes the podcast with Jeffrey Cranor. "It's just that kind of place."

A SOLID SUCCESS

To say the least, listeners around the world love "Welcome to Night Vale." Since Fink and Cranor started posting their podcasts online in 2012, their show has been downloaded 150 million times through iTunes, Soundcloud, Youtube and www.welcometonightvale.com.

Fink and Cranor also published a novel in 2015, "Welcome to Night Vale," which has been well received and nominated for the Goodreads Choice Award for Best Science Fiction. A second novel will be released in the fall and is available for pre-order on Amazon.

Such is the popularity of this low-key horror podcast — aptly described by blogger Eilenne Maksym as Lake Wobegon's Garrison Keillor reporting from Batman's Arkham Asylum — that



Fink and Cranor have been able to stage, record and sell tickets to live podcasts in 200 theaters in 16 countries.

The content from these live broadcasts is separate from the original podcasts, and are packaged into "live albums" for sale at www.welcometonightvale.com. The podcasters sell a range of Night Vale-themed apparel, artwork and accessories through their website.

"The merchandise sales, along with our live shows, have allowed us to earn enough to make 'Welcome to Night Vale' a full-time job for both of us," said Fink.

A HUMBLE NIGHT VALE-STYLE BEGINNING

The success of "Welcome to Night Vale" illustrates what is possible in the Brave New World of Podcasting.

"Even with heavyweights such as HBO and ESPN pouring money into podcasts, a small indie producer can still succeed in the medium if their content catches on," said Fink.

This observation certainly applies to "Welcome to Night Vale."

It started for the two New Yorkers when Fink had been fired from his customer service job at a prepaid debit card company, and Cranor was a database manager.

"We came from the New York theater scene, where everyone has ideas, but no one has money to stage them," said Fink. "This is where the style of 'Welcome to Night Vale' came from: just one person standing on a bare onstage telling a story, with no costumes or props."

Even today, the podcast employs the same economical style in its live shows, with only a microphone or two to capture the audio.

The program's understated, satirical wit generated considerable word of mouth in its initial season. "We had about 150,000 downloads that first year, which was respectable," said Fink.

As the duo kept recording new podcasts — not making any money from their efforts at the time — the show's popularity grew until the fans set up their own page on the microblogging site Tumblr in July 2013.

"Then things exploded," Fink said. "In our first month on Tumblr, 'Welcome to Night Vale' was downloaded 2.5 million times. The next month, the number jumped to 8.5 million downloads, and things have been steady ever since."

HANDS-ON

There is a central reason the "Welcome to Night Vale" podcast has stayed popular with its fans, and continued to extend its reach and roster of projects. That reason is Fink and Cranor's ongoing personal involvement in the podcast, both as main writers and guiding forces to Night Vale's select group of contributors.

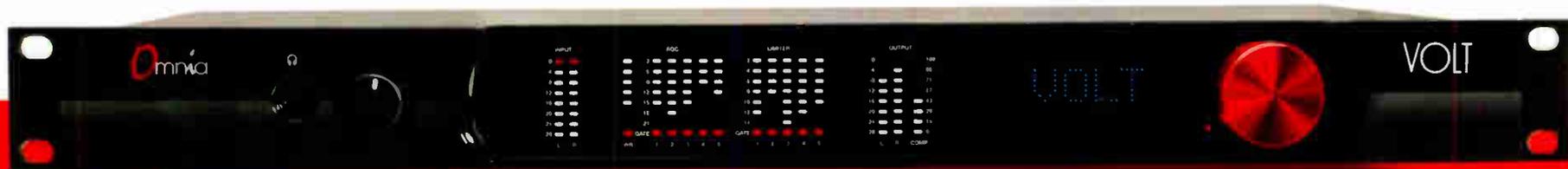
"We still write the scripts, and work very closely with the people who help us put on the live shows and our other projects," said Fink. "Even today, Jeffrey and I are the two main creative forces of Night Vale Presents."

In doing so, Fink and Cranor have not lost sight of the low-key stylistic magic that made "Welcome to Night Vale" a success in the first place: Their content still crackles.

Take Episode 103 ("Ash Beach"), 102 episodes after the pilot from which this

(continued on page 18)

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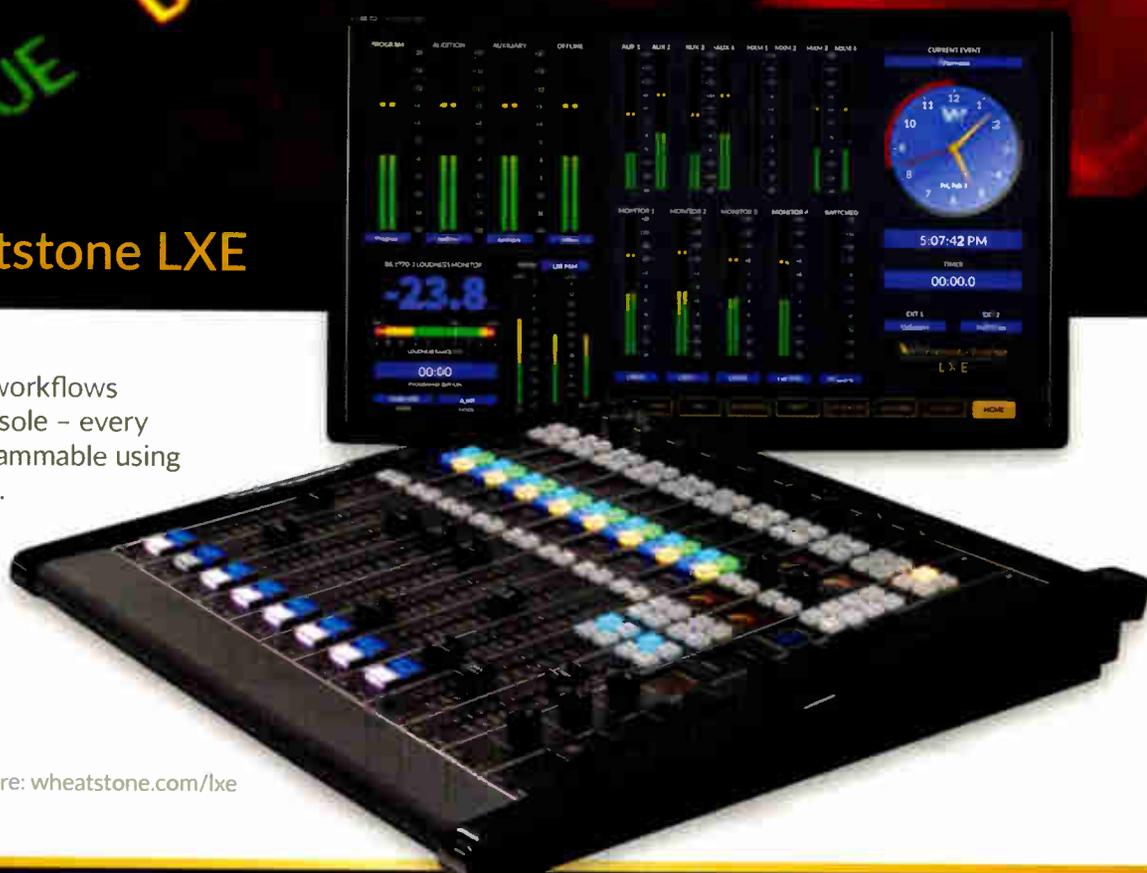
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World Radio History

Local Musicians Are a Key Connection

Capitalize on area talent to engage listeners

Hats off to American University's NPR affiliate WAMU(FM) in Washington for recognizing that local music is important.

It's exciting to hear a talk station have the courage and smarts to take a position concerning local musicians' significance to the community.

How do they do it? They clearly and concisely explain to the audience that the music they're playing between shows is created by local musicians. While they don't always have time to announce the name of the act, it does happen often enough to clue listeners in to what's going on. It feels almost like being in on a cool secret.

Their website states "'Capital Soundtrack' is our way of amplifying our local musicians and tapping into the rich and diverse sounds of this place we call home. Let WAMU connect you with the sounds of Washington." WAMU.org also lets listeners hear the full-length versions of the songs.

SNIPPETS COUNT

Before you start hating on this abbreviated on-air approach to touting local artists, consider what most stations, even music stations, do to promote local bands. Usually, nothing.

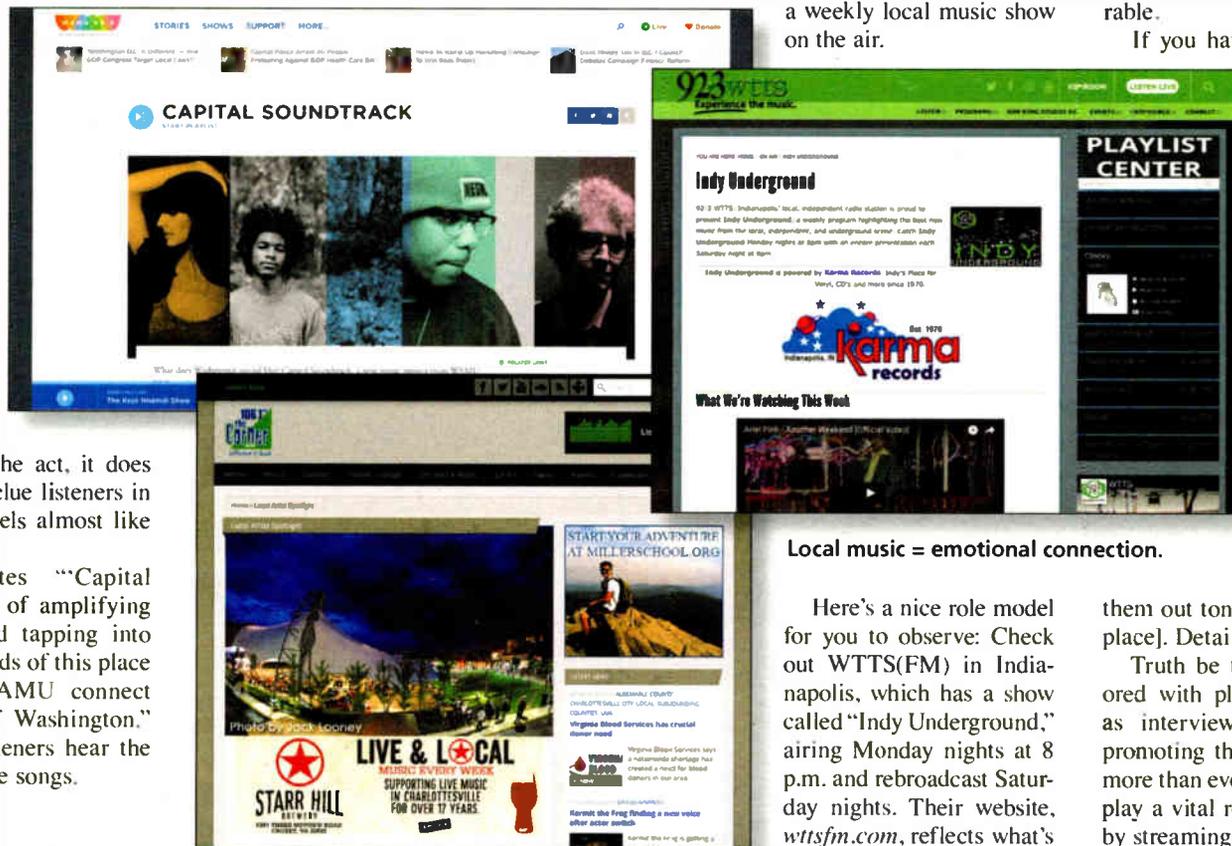
Integrating local music into the fabric of a radio station is difficult. I will admit, it's risky to introduce new songs to listeners — especially if they're from unknown acts — but take a lesson from the "Capital Soundtrack" project. Consider what you can do to frame your approach to local music properly.

I admire the way WAMU sets the tone by expressing the importance of local bands across a variety of music genres. I've heard rock, jazz, blues, country, classical, the whole gamut, all in very short snippets. While this may seem insignificant, it's the natural start to what can be a long build to something

more important. Just by recognizing that there is a local music scene — and admitting that you are willing to show support — gets you in the game.

solicit interest from local musicians. As songs start to come in, another angle is to feature them in a special area of your website or on a YouTube channel that you build out, specific to this project.

Step three is to step right up and start a weekly local music show on the air.



Local music = emotional connection.

Here's a nice role model for you to observe: Check out WTTN(FM) in Indianapolis, which has a show called "Indy Underground," airing Monday nights at 8 p.m. and rebroadcast Saturday nights. Their website, wttntfm.com, reflects what's been played each week,

with links to local acts.

Even talk stations like WAMU could set aside 30 to 60 minutes per week for local music (the station already broadcasts "Hot Jazz Saturday Night" from 8–11 p.m. weekly). Breaking format

PROMO POWER



Mark Lapidus

once in a while draws attention and makes the listening experience memorable.

If you have HD channels, you have a greater opportunity to feature local acts. You could even have local musicians take over blocks of programming, playing their own stuff and the music that influenced them.

As important as playing the music is letting your audience know where they can hear local talent play. This can be a simple 15-second promo: "We support local music! Have you heard [Artist Name]? Check

them out tonight at 8 p.m. live at [local place]. Details at [station website]."

Truth be told, I've long been enamored with playing local songs, as well as interviewing local musicians and promoting their performances. But now more than ever, broadcast stations should play a vital role that isn't yet performed by streaming services.

I feel compelled to continue pounding the drum for local music on radio because the cultural past, present and future should always be recognized and celebrated.

Mark Lapidus can be reached at marklapidus1@gmail.com.

The next step is deciding how often and how much local music you're going to commit to playing. Starting small is fine. Finding a few initial songs or artists to feature with even moderate frequency creates a new platform to



article's first snippets were quoted.

"We're getting reports that the grand re-opening of Ash Beach is going ... well, oh, not *well* as in good," Cecil announces on Night Vale Community Radio. "So the beach, which is completely black and not at all connected to any body of water, is apparently really hot, and beachgoers are having a difficult time getting the dark ash stains off their burning skin. Also, there are reports of hazy humanoid

figures emerging from the ash. They have long thin arms, gaping mouths with hundreds of tiny square teeth, round glowing eyes, and they shimmer in and out of visibility."

Strange? Yes. Unsettling? Certainly! But there is no doubt that the "Welcome to Night Vale" podcast fits the tone of our time and proves that a low-budget yet quality audio production can still tear up the internet, even in 2017. After all, 150 million downloads can't be wrong.



HIGH CAPACITY EVENT STUDIO TRANSMITTER LINKS



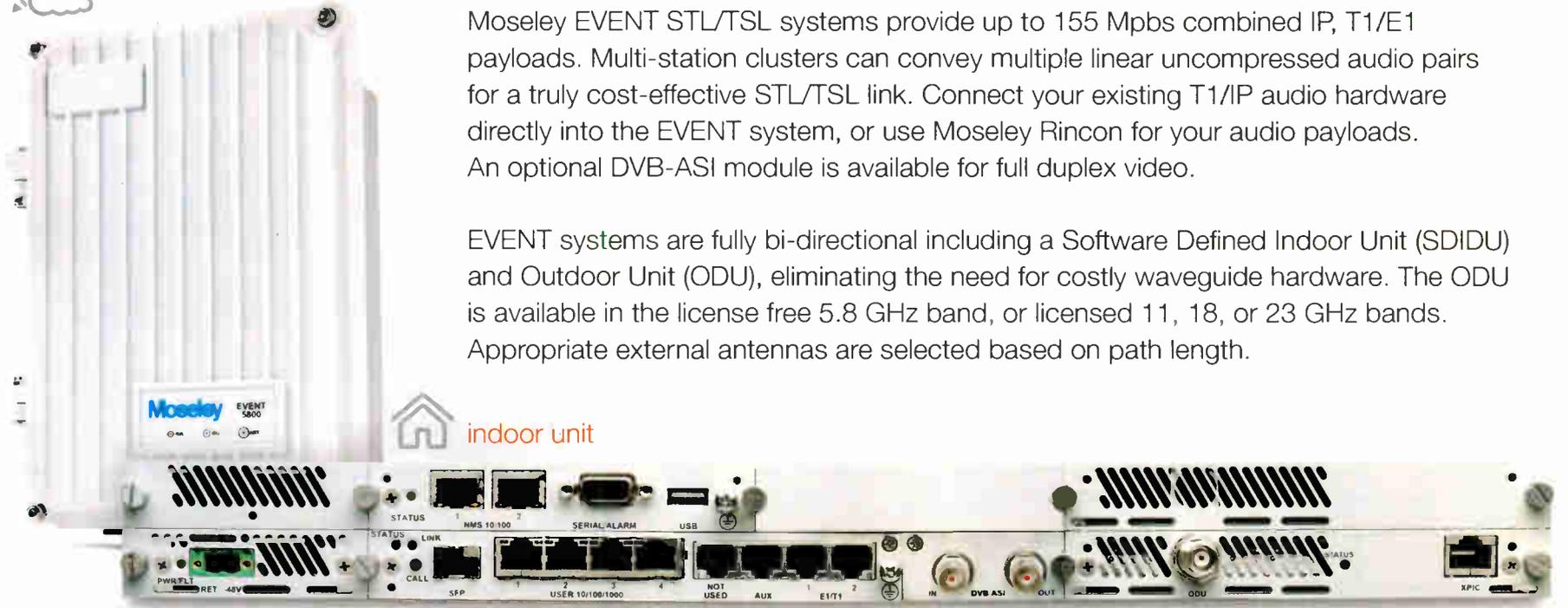
outdoor unit



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indoor unit

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SUMMER OF PRODUCTS

RADIOWORLD July 19, 2017

It's new equipment season again! Radio World's "Summer of Products" feature is all about new gear that has come onto the market in recent months, especially during spring convention season. Here and in the next several issues we feature equipment that caught our eye. Send ideas to radioworld@nbmedia.com with "Summer of Products" in the subject line.

GATESAIR EXPANDS INTRAPLEX FAMILY

The GatesAir MPXp is the newest member of the Intraplex codec line. It is an IP codec designed to minimize bandwidth usage for delivering STL signals. By using AES192 technology and bandwidth reduction schemes, the unit can transport signals as low as 1.8 Mbps, which the company describes as "more than 50 percent reduction in bandwidth utilization compared to most codecs on the market."



Besides a digital composite signal it also handles analog signals. GatesAir says, "Its flexible dual-domain capability allows the broadcaster to install a newer audio processor supporting AES192 and have it interoperate with exciters supporting only analog composite signal interface today. This not only provides a transitional path for a digital exciter upgrade, but also enhances signal quality by keeping it in the digital domain across the IP path."

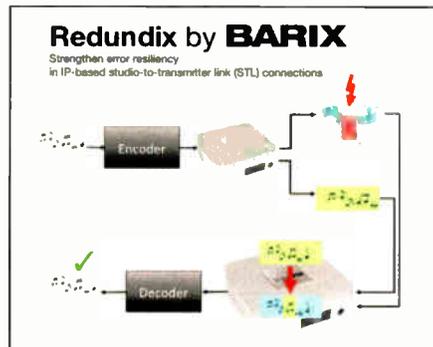
The Intraplex IP Link MPXp shares technology and features from earlier Intraplex IP Links such as dynamic stream splicing technology, along with "multiple input and output ports for signal redundancy, decoding of audio and RDS content from either the input or output signal, and the option to incorporate external SCA subcarrier signals into the output signal. Its integrated RDS decoder further reduces equipment costs for the broadcaster who was previously forced to install expensive outboard boxes to support RDS."

Info: www.gatesair.com

BARIX DEBUTS REDUNDIX SYSTEM

IP audio specialist Barix's new Redundix system is an audio-over-IP system that gives radio broadcasters a hardware system for correcting glitches over IP STL connections that affect on-air signal quality. An optional managed service that optimizes audio quality in nonoptimal transport environments is available.

The Redundix system looks to add resilience to IP-based transport by either time-delaying two streams on the same network, or sending a redundant stream



WORLDCAST OFFERS BROADCAST NETWORK MANAGER

Built from the previous WorldCast Manager Desktop, WorldCast Manager Server is a global application, the company says, to integrate "the control of multiple devices across multiple locations and enables unified control from a single location."

Improvements include measurement logs, history, alarm notifications via emails and SMS. A built-in management information base library based around data from leading broadcast equipment manufacturers aids in interfacing with equipment in various facilities.

WorldCast adds, "The new software version stays true to the same philosophy of simplicity and presents all information, no matter how complex in a clean, simple and intuitive interface."

Info: www.worldcastsystems.com



KINTRONIC SAYS "HOW DRY I AM!"

If your transmission line is having a water problem, where do you turn? Maybe to Kintronic. The company recently debuted a pair of automatic dehydrators.

The Model LAB4.50 and Model LAB9.50 (shown) both offer dual pumps and automatically regenerating drying chambers that run alternately. Kintronic rates them to greater than 165,000 MTBF.

The LAB4.50 is specced at handling 79 gallons per hour, while the LAB9.50 tops out at 264 gallons per hour. Kintronic says that the units are low-power and quiet. There is an optional digital flowmeter available and optional SNMP and HTTP Ethernet remote alarms and control.

Info: www.kintronic.com



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HENRY'S TALLY HO FOR MIKA

Henry Engineering, well-known for its blue problem-solving boxes, has a new one, Mike Alert.

Mike Alert is a control interface designed for use with microphone arms that use integrated two-color tally lights. An example is Yellowtec's m!ka system.

Mike Alert provides the power and control circuitry necessary to interface the mic arm to the tally outputs of a console, router or other equipment. Each Mike Alert can control two mic arms.

Both the microphone audio and tally circuits are interfaced, with automatic polarity control to correctly operate the white and red tally indicators. It is compatible with any console or piece of equipment that provides a GPI contact closure, open collector, logic or DC voltage for tally light control.

Info: www.henryeng.com

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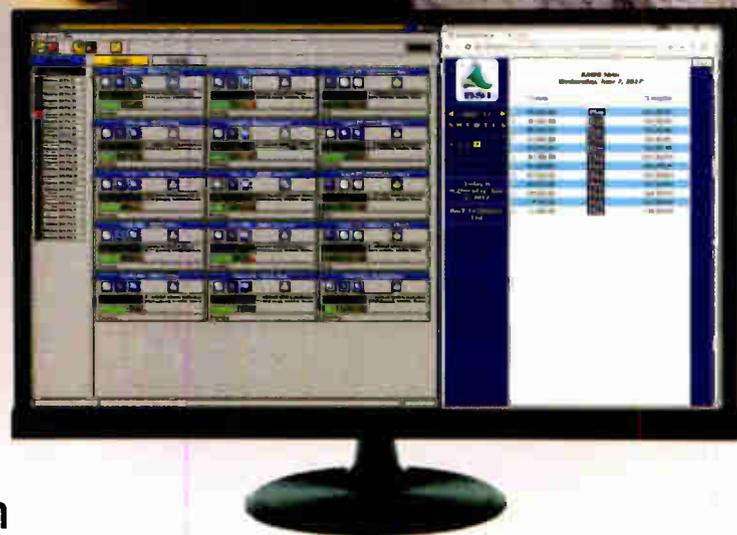


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25-SEVEN INTRODUCES "MOD MONITOR FOR WATERMARKING"

The Telos Alliance unveiled what it calls a modulation monitor for watermarking.

A followup to its Voltair watermark monitor and processor, the 25-Seven TVC-15 Broadcast Watermark Analyzer and Monitor is a complementary product or can be operated independently.

The TVC-15 — TVC for "tone verification codec" — enables stations to detect, monitor and analyze how well programming elements support audio watermarking every 400 milliseconds. A connected watermark encoder is not required but stations must be in electronically measured markets.

The codec detects and analyzes the code symbols in any audio because its analog inputs allow users to monitor any source. A front-panel graph of watermark density provides a granular display, and users can download reports of different lengths of time so that stations independently verify the presence and relative quality of embedded watermarks.

Stations using Voltair can utilize TVC-15 to adjust enhancement levels automatically and optimize "the tradeoff between robust watermarking and clean



audio," according to the announcement.

It reports minutes and seconds since the last successfully decoded message (based on the encoder ID that accompanied the last valid message, along with an optional display of time stamp), as well as indications of

whether the message is reliable. The interval display updates and gives a quick indication of current signal.

To gauge the impact of various acoustic environments, TVC-15 lets users load the signal with selectable levels of simulated noise.

The code symbol strength bar is a white line on the front-panel LCD that changes height to show the strength of potential code signals in watermark channels. Actual code symbols require 400 ms to broadcast, measured and displayed in the main confidence graph. The time display on the bottom of the confidence graph is based on the real-time clock, which helps users correlate confidence readings with changes in programming.

Info: www.telosalliance.com

RAPCO HORIZON'S NEW KID ON THE BLOX

Widget maker RapcoHorizon has a new Blox problem solver, the BTIBlox, a Bluetooth interface in an XLR plug-on package.

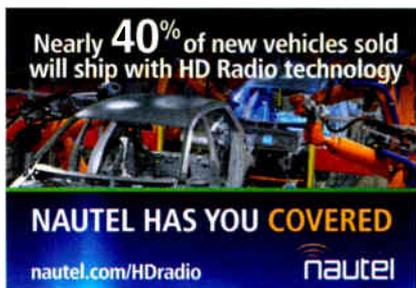
The BTIBlox has a male XLR plug on one with a translucent other end covering status LEDs. It can plug into a mixer input to provide a streaming input from a Bluetooth transmitting smart device such as a smartphone or tablet.



It operates under phantom power or an internal rechargeable battery. It follows Bluetooth 4.2 spec and has a line of sight range of 75 feet.

Rapco's Darius Seabaugh said the spring NAB Show presented the company "a unique opportunity for us to display our BTIBlox to a crowd that might not otherwise consider this product ... This new self-contained device allows users to simplify their audio streaming workflow by eliminating the need for multiple wires to connect to an audio device."

Info: www.rapcohorizon.com



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COMREX POLISHES THE OPAL

Codec maker Comrex has a shiny new IP audio portal, the Opus-based Opal.

Comrex explains, "Once installed, Opal serves a web page to anyone who accesses it through a computer or Android device (with a microphone, earpiece and browser). This web page will allow a user to click a button and broadcast from their computer or phone in high fidelity. High quality return audio is also provided to the guest."

According to the company, Opal offers studio-quality sound. It is aimed at "users who need to coordinate call-ins with non-technical remote guests — guests can simply click a link, and connect instantly. Opal establishes the link using the Opus encoder, for excellent fidelity and low delay."

The half-rack Opal can support two connections at once.

Info: www.comrex.com



STUDIO TECHNOLOGIES DEBUTS DANTE INTERCOM AUDIO ENGINE

When used with Dante-compatible products, Studio Technologies' Model 5422 is capable of creating party-line intercom circuits. It uses Dante audio-over-Ethernet technology with AES67 support for use with additional on-air, audio mixing and specialized interfacing applications.

For operation, the Model 5422 requires a power source and Ethernet network connection. The platform can be used in mobile broadcast facilities, post-production studios, commercial and educational environments and entertainment venues. It is compatible with Dante-compliant devices.

Studio Technologies offers the Model 5422 in two versions, one with 32 input and output channels, the other with 64 input and output channels. It features dual Gigabit Ethernet interfaces for switched, redundant and split Dante operation, with web-based configuration and network-enabled software updating.

Info: www.studio-tech.com

STUDIOCAST OFFERS VIDEO SOLUTION FOR RADIO

StudioCast's HD8 auto IP video switcher features functions including graphic insertion, titling and logos, graphic composition and display of messages coming from social feeds. It can record the signal in HD and stream to several sources simultaneously, and supports the main camera PTZ control protocols available on the market.



The system is equipped with a specifically designed camera, which features an HD sensor that is remote controllable via IP. According to the company, the camera is able to capture wide angles and requires only the usual lighting of a radio studio, without the need for additional projectors.

In addition, says the firm, StudioCast's automatic intelligent algorithm manages fader starts as well as mic levels. StudioCast can be interfaced through IP with the AEQ, Axia, DHD and Wheatstone mixers, or via its optional audio bridge to connect to any other analog console.

StudioCast automatically selects the most suitable camera angle and manages tight or wide-angle shots. In order to avoid untimely switching when several people talk simultaneously, the system alternates wide shots or "picture-in-picture" type compositions where several cameras appear at the same time.

The company says it developed this algorithm so that it resembles human operation as closely as possible to guarantee accurate video coverage of each speaker.

Info: www.studiocast.fr



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ENCO DEMOES WEBDAD

Automation system developer ENCO is getting even deeper into the cloud these days. According to the company, WebDAD provides an "an even richer and fully virtualized toolset to remotely access and control their studio-based ENCO DAD radio automation systems."

It is part of the company's enCloud suite of cloud-based tools. "The broadcaster can control the complete on-air interface over IP via any standard web browser. This includes the ability to manage and drive on-air presentation, playlist manipulation, voice tracking and other critical production tasks across the end-to-end workflow."

ENCO sees WebDAD and similar tools as leading to decentralized operations. Ken Frommert, ENCO general manager, said, "While radio conjures up images of DJs talking into mics and operating radio control panels, the reality is that we're now moving in a direction where everything is OS-agnostic and increasingly virtualized. With WebDAD, the board operator no longer needs to be physically at the radio station or sitting in front of the automation system to control and playout a live radio show. They can now take full control of their radio station as if they were in the studio via a web browser on their iPad, mobile phone or other connected device."

WebDAD joins the recently released enCloud Weblib2, a remote media library manager and viewer design for remote use including smartphones and tablet.

Fommert said, "We're rapidly getting to the point where no one needs to go to work at the radio station anymore. ... It can all be done remotely, which is a very big deal. WebDAD and the larger enCloud suite are laying the groundwork for stations to become completely virtualized."

Info: www.enco.com

DIGIGRAM ADDS MPX OPTION

Digigram recently had a nice surprise for owners of certain members of the Iqoya IP codec line, the release of an optional direct digital MPX to the transmitter feature.

A software addition for the Iqoya *Link and Iqoya *Link/LE IP codecs make it possible for digital AES192 composite MPX signals to be sent straight to transmitters.

Digigram has also announced the Iqoya *VIP audio over IP software engine for "high-performance" encoding, transcoding and streaming with Windows and Linux applications. The company says, "The easy-to-integrate Iqoya *VIP engine from Digigram features native high-performance MPEG-TS and ACIP AoIP streaming formats; top-of-the-range MPEG, AAC, OPUS and apt-X encoding/decoding; and accurate PTP clock synchronization."

Info: www.digigram.com



PLATINUM TOOLS OFFERS NEW CABLE TESTERS

Can you ever have too many testers around? Platinum Tools hopes your answer is no. The latest in its collection of handheld testers are the T130 VDV MapMaster 3.0 and the TP500c LanSeeker.

The MapMaster 3.0 is an upgrade to MapMaster 2.0. It tests Cat-7, Cat-6A, Cat-6, Cat-5e, Cat-5, Cat-4 and Cat-3 shielded and unshielded cables, voice and coax cables for continuity, shorts, etc. along with offering mapping of up to 20 locations. Platinum Tools' Jason Chesla said, "It is the ideal instrument for installation, troubleshooting and maintenance on telco, network or coax cable in any situation."

The LanSeeker is a cable tester with an onboard tone generator. It will test for shorts, opens, miswires, reversals, and split pairs and can display connection and fault information on a pair-by-pair basis. It also generates audio tones for use with tone tracers on all pairs.

Platinum Tools Product Manager George Jang said the LanSeeker is suitable for installation and troubleshooting of twisted pair security and datacom cables, supporting both unshielded or shielded twisted pair.

Info: www.platinumtools.com

YAMAHA UPGRADES CONSOLES

Yamaha Professional Audio is releasing a software upgrade that will give its CL and QL consoles more Dante features.

Version 4.1's improved Dante functionality adds AES67 interoperability that allows communication with Ravenna, Q-LAN, Livewire and other audio network systems for significantly improved system expandability.

In addition Dante Device Lock will secure device settings. This would be especially useful for equipment rental companies, providing them with a means to keep settings or provide clients the ability to save settings along with providing settings portability.

The update also provides more support for Shure wireless receivers.

Yamaha also has been touting the latest version of Steinberg's Nuendo music production and editing suite. Version 8.0 includes new tools such as a sound randomizer, a new synthesizer, a new eight-band parametric EQ along with several housekeeping improvements, such as direct offline processing, a user profile manager, ADR enhancements, a new video engine, reworked plug-ins and improved overall performance.

Info: www.yamahaca.com



NEW RECEIVER FOR INOVONICS

Inovonics recently started shipping its new rebroadcast receiver, the Aaron 655.

The Aaron 655 handles FM and HD Radio signals along with analog, AES-digital and streaming program inputs.

In addition it has a processing chain that includes "gated and 'windowed' AGC, a unique 'syllabic' leveler, three bands of compression, and



both wideband and independent HF limiting." And "four sections of parametric EQ, a 'Bass Punch' utility, independent Density and Loud/Smooth adjustments and variable composite processing round-out the processing function."

There's also an onboard RDS encoder that can also regenerate incoming RDS and/or reformat HD Radio PAD for RDS retransmission. Naturally, the Aaron 655 is web-enabled for remote operation of all of its features. Notifications and alarms are available via email or SNMP.

Info: www.inovonicsbroadcast.com





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iZotope RX6 Advanced: Versatile Audio Fixer

High-powered audio suite can “see” what is wrong with your audio ... and fix it

PRODUCT EVALUATION

BY KEN DEUTSCH

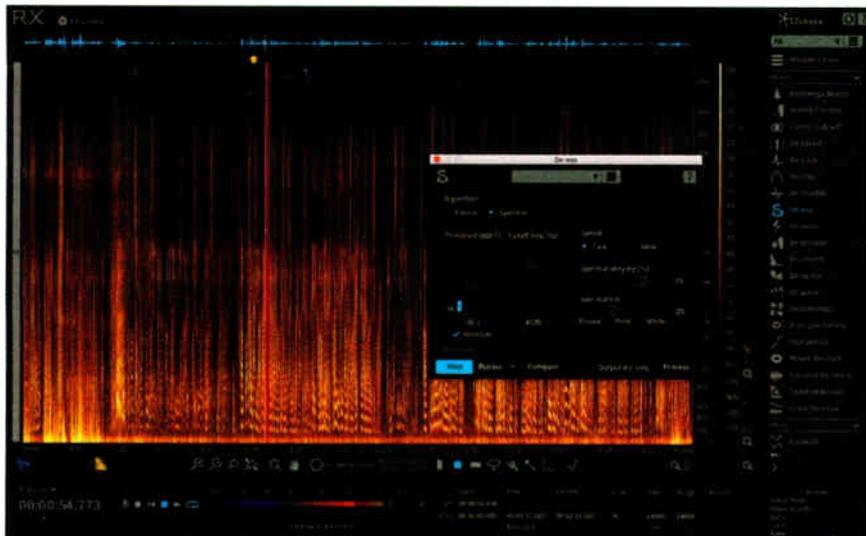
Cambridge, Mass.-based iZotope produces software for mobile and club DJs, radio, sound for video, as well as measurement and metering. However, this review will focus on the company's professional post-production tool, RX6 Advanced. Retailing at a hefty \$799–\$1,199 (an upgrade from a previous version is only \$399), this package is for

audio: as the familiar waveform or as a spectrograph. You can also select any balance of the two, which are provided in contrasting colors for easy viewing: blue for waveforms along a timeline on the X-axis, and amber for frequency on the Y-axis. A slider allows you to select how much of each is seen.

INTERPOLATE

I now find myself editing visually first and aurally second because one glance at the spectrograph shows me many common problems.

It is quite obvious when there is a nasty plosive, which shows up as



The spectrograph with the De-ess tool open.

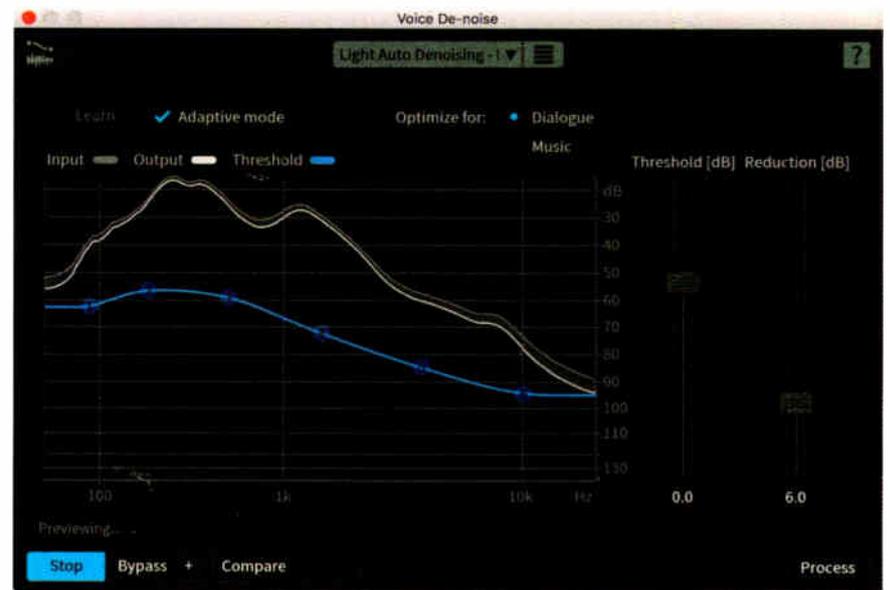
serious folks who earn their living from sound design, editing narration, and in particular, improving flawed audio from outside sources.

I have used various noise-reduction and audio repair software over the last 25 years including DINR, now offered as a plug-in from Avid, and CEDAR, the U.K.-based noise reduction pioneer. I am pleasantly surprised at how differently RX6 Advanced operates. The user interface offers two ways to view

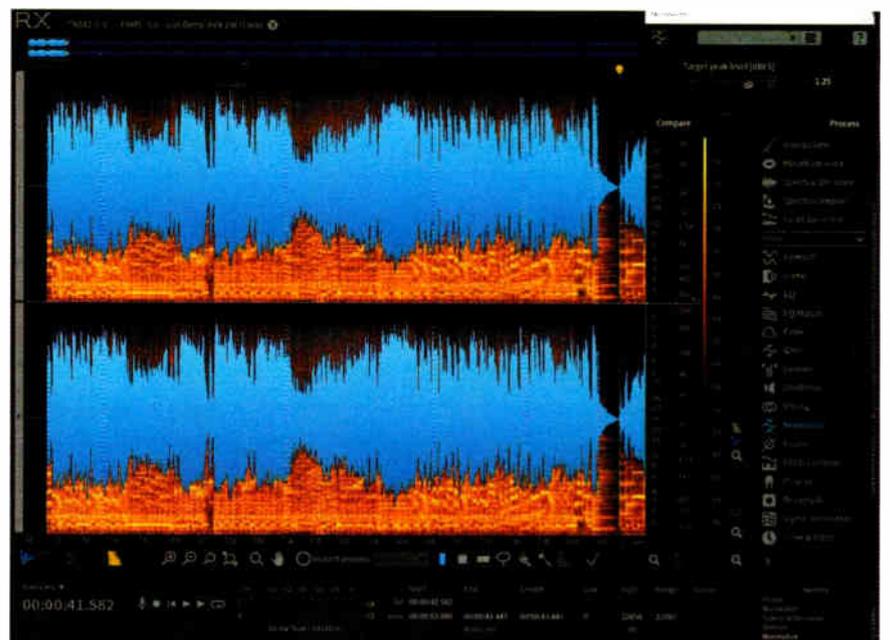
a bright yellow blotch in the lowest frequency range. Similarly, I now can easily spot a sibilant “S” which appears as a vertical streak of bright yellow in the mid-range. General noise manifests as a hazy blue curtain, usually in the upper frequencies where hiss resides. Of course, before I make any changes to my audio I verify what I am seeing by listening, usually with earbuds or headphones to get the most detail.

Viewing this two-track editor in waveform mode provides the best way to work in a linear fashion, such as shortening a pause or removing a bad take. Usually the spectrum view is best for spotting potential problems in the audio itself. But RX6 Advanced has much more.

It would be impossible to detail all 40 of the production tools, but they are explained at the company's website, www.izotope.com. While you will prob-



The Voice De-noise tool provides numerous options for fine-tuning its operation.



RX6 Advanced can overlay spectrographs and waveforms.

ably use a few modules repeatedly and some hardly ever, it's worth checking them all out because you may discover a gem.

As an example, I had never investigated a repair tool called “interpolate.”

Much of what I use RX6 for is restoring ID jingle packages from the 1960s and 1970s, which were recorded analog on magnetic tape. One problem these relics often evidence is dropout, wherein the audio goes missing for a fraction of a second at points where the tape may have been creased or the oxide wore off. I zoom into the spectrograph view until I see a dark vertical line, which represents a disruption in

the audio. I highlight just the dark line and hit “interpolate,” using the default setting. RX6 fills in that tiny fraction of a second using material from either side, all of which occurs in a flash. And then when I play that section back, the dropout has vanished.

Other useful tools in my workflow include “Spectral De-noise,” which takes a fingerprint of the background noise in a quiet part of the material, such as right after a song, or between paragraphs of a narration. Then I select the entire audio track and run this process. In a few seconds I have a cleaned up the offending noise. If necessary, I can make a second pass using a different

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PRODUCT CAPSULE**IZOTOPE RX6 ADVANCED**
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- + 40 individual modules for repairing virtually any aspect of a narration track or musical recording
- + With practice and patience, the individual modules do an excellent job at their stated purposes
- + Good online support in the form of knowledge base and videos

Thumbs Down

- Lengthy wait time while repair modules work on longer audio segments
- Some modules have confusing or at least nonintuitive settings
- Price point makes this a tool that only professionals can afford
- Some overlap in module function is confusing

Price: \$1,199 retail, starting at \$399 to upgrade from earlier versions

For information, contact
<https://support.izotope.com>

section of noise as a sample.

With other software I have used there always seemed to be some unwanted resultant artifact such as a twisted reverb trail or a strange out-of-phase sound where noise reduction was used, but you can push RX6 Advanced hard and still not affect the underlying audio.

For narration, I use several modules including "Breath Control" (which attenuates or removes breaths between phrases), "Mouth De-click" and "De-mouth Smack." Then I run "De-plosive" to get rid of those overly aggressive Ps and Bs. The results sound quite natural. Again, each of these processing passes takes just a few seconds, and you can set-up an automated chain of your favorite features, in the order you choose, with the settings you want. This is a time-saver when multiple files require the same treatment.

I had often heard that one problem you could never fix was analog distortion. Once a microphone was over-driven it was all over. No more! Now you can highlight such an area and select "de-clip," which rewrites those distorted peaks and makes the annoying break-up go away. There are YouTube videos that demonstrate this as well as all of the other audio restoration tools.

Besides running these processes across an entire audio file, you can also visually isolate an item you wish

to remove, such as a truck horn beeping during an interview. You can see irritants like these as little yellow horizontal lines in the spectrograph. Select one of them using your choice of tools, then either greatly attenuate it or erase it entirely, filling in the space with surrounding material. If there are a number of such interruptions, use the "find similar" function and RX6 will identify everything that looks like your annoying beep and all can be treated at once. I was even able to remove some idiot's shrill whistling amidst the applause during a recording of a concert. No one will

know it but me.

But one feature still puzzled me, the "leveler." It seemed to operate like a compressor, but not quite. I asked Mike Rozett, product manager for RX at iZotope, to explain.

"The 'leveler' automatically rides the gain in your file to even out the variations of the signal level," he said. "The algorithm consists of a compressor with a makeup gain to achieve a smooth signal that's aiming towards [though may not exactly hit] a



desired target RMS level. The compressor has the ability to prevent pumping on speech pauses or breathing sounds, using the optimization mode, for either dialog or music. The level detector stage includes the K-weighting filter that helps equalize the audible loudness, not just RMS level. However, the 'leveler' module is designed for the smoothing of overall audio signals, rather than taking an entire signal and using a fixed

(continued on page 28)

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STUDIO SESSIONS

iZOTOPE

(continued from page 27)

gain to ensure it hits a loudness compliant LKFS level [Loudness, K-weighted, relative to Full Scale], which is the goal of the loudness module."

I have raved about many of the features of this versatile software, yet I could find very few negatives other than the wait time while a process runs on a long audio file. That is a first-world problem and far from a serious flaw. Thus I asked the RX product manager about common user complaints he has received.

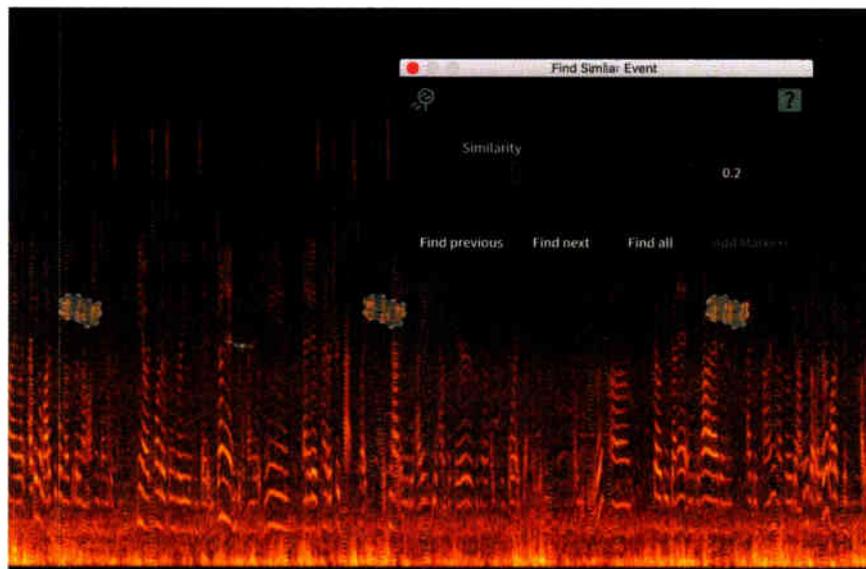
"We hear two things pretty consistently," Rozett told me. "The first is that most users would like to have more plug-in versions of our modules so that they don't have to leave their DAW. Another aspect of RX that we

are pretty aware of is the CPU cost. We always strive to optimize software but we would rather give the user more processing power."

In summary, iZotope RX6 Advanced is a powerful and fairly intuitive product, once you understand the concept of viewing audio as both a waveform and spectrograph. While this took some getting used to, it was really worth it to enjoy such a diverse palette of audio repair and enhancement tools.

It should also be noted that iZotope offers cheaper noise reduction packages based on the same technology but lacking some of the fancier, higher-end tools.

Ken Deutsch is a recovering disc jockey and now works as a closed caption transcriber for the deaf. He has written two books about radio jingles, which are available on Amazon.



RX6 Advanced provides a "find similar" tool for locating and isolating for treatment repetitive annoyances such as chirps or squeaks.

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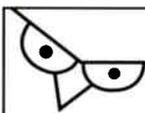
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WYBG 1050, Messina, NY, now off the air is selling: 8-channel Harris/Gates console; 250' tower w/building on 4 acres; collection of very old 78s dating back to 1904; 12' satellite dish on concrete base; prices drastically slashed. 315-287-1753 or 315-528-6040

WANT TO BUY

Collector wants to buy: old vintage pro gears, compressor/limiter, microphone, mixing consoles, ampli-



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

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What Would Happen Without the Main Studio Rules?

Can stations with no local physical presence maintain community ties?

COMMENTARY

BY DEE McVICKER

A commissioner commenting on the FCC proposal to abolish the main studio rule brought up the example of a North Dakota station where authorities claimed “no one was home” when a train carrying dangerous chemicals derailed, jeopardizing the community.

Although the station owners have repeatedly said the story is not true — that the station had responded immediately and the local authorities simply had an outdated station phone number — this 2002 incident underscores an important issue.

Can a station with no local physical presence maintain ties with its community, especially during an emergency?

We’re about to find out, if the FCC repeals the main studio rule that, for almost eight decades, has required a TV or radio station to maintain a main studio in its community of license.

The FCC started proceedings to eliminate the AM, FM and TV main studio rule in May and opened MB Docket No. 17-106 FCC 17-59 for com-

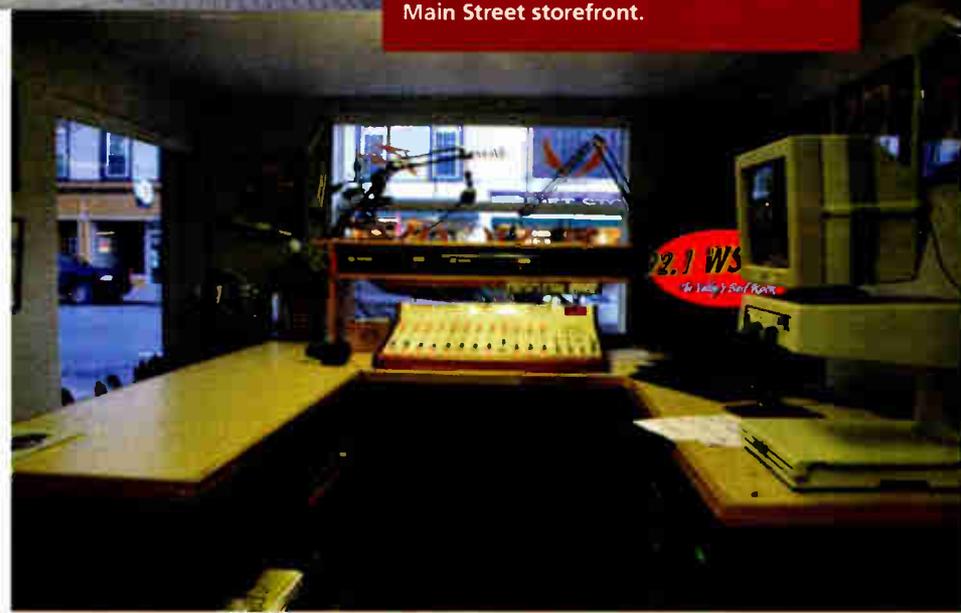


Photos courtesy Scott F. Bush

In Lock Haven, Pa., WSQV(FM) and WBPZ(AM) are part of a business owned by the Schlesinger family that also includes a music store and a weekly newspaper, all operating from a classic Main Street storefront.

ments on June 2.

At present, stations are required to have a main studio, a fulltime staff present at the studio, and up until recently, maintain the station’s public inspection files there. If the ruling prevails, broadcasters will no longer need a main studio nor full-time staffing there, but they will likely still need to maintain a local phone number or toll-free number as a service to the community.



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WHY NOW?

When the rule was conceived decades ago, local access to the main studio was an important focal point for the community. It wasn’t uncommon for listeners to walk into the studio off the street to talk to jocks on the air or to ask them to spin their favorite record.

Today’s widespread communications have made it so much easier for broadcasters to have an ongoing dialog with the community outside the studio, first through the phone, and more recently, through email and social media.

We might even argue that widespread communications and technology such as IP audio networking now make it

possible for broadcasters to participate more fully with listeners and viewers by bringing radio and television out into the community. We’ve seen many examples of this recently, with temporary studios established at county fairs, or at shopping malls or in concert halls, for example. The easy portability of technology like IP audio networking makes this, and so much more, possible.

Meanwhile, the commission already has eliminated many of the primary justifications for the main studio rule. It started with the 1987 deregulation, when stations were no longer required to originate a certain number of programming hours from their studios. A more recent ruling eliminated the necessity to keep public files physically housed at the main studio, making it possible instead to post public files online only.

Now, with this proposed rulemaking,

the FCC will release its final hold on the main studio, giving over the responsibility of local radio to the broadcasters who serve those communities.

Will we see windows boarded up and abandoned studios everywhere across the country as a result? Probably not.

Will eliminating the rule make it practical for some co-owned or jointly operated broadcast stations to co-locate their offices? Probably.

Will abolishing the main studio create competitive market conditions that will lead to happier, more productive talent and better local radio? We hope so.

The author is a marketing associate for Wheatstone.

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