



# RADIO WORLD

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## WGN Radio Gets New Space

For Jim Carollo, it was a return to full-time duty

BY SCOTT FYBUSH

**CHICAGO** — For most of its nine decades of broadcasting, Chicago's WGN Radio has been closely associated with one address: the famed Tribune Tower that anchors the southern end of Michigan Avenue's Magnificent Mile.

company Tribune Co. decided to lease WGN's prime ground-floor space facing Pioneer Court to a restaurant — and it needed the space quickly.

That meant a busy year for WGN's chief engineer, Jim Carollo, a veteran of 42 years. He'd been settling into a peaceful semi-retirement when then-

General Manager Tom Langmyer called him back to full-time duty to relocate WGN from the very studios Carollo had designed and built back in 1986, a facility Langmyer recalls as "the envy of all American radio" when it opened.

"I said, 'Hey, you know what, wouldn't it be great to have your legacy be this new thing instead of just the end

(continued on page 32)

## FACILITY PROFILE

While the station moved away in 1961 to a new joint radio-TV facility a few miles away near Wrigley Field, the radio side of WGN returned to Tribune Tower in 1986, occupying a spacious suite of offices and studios on the south side of the building's ground floor that included a prominent "showcase studio" fronting on Michigan Avenue.

### THE TIMETABLE

As those studios hit the quarter-century mark, WGN radio management began thinking about a move, even drawing up plans for a return to WGN's TV building.

But the push for a move went into high gear in late 2011, when parent



**'Radio Is Innovative Again'**  
Paul Brenner, Radio World's Excellence in Engineering Award recipient, takes the long view about our industry.  
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World Radio History

# Riding Out Hurricane Sandy

Cumulus Satellite, WNBC(TV) and Clear Channel helped keep WOR on-air during hurricane



In WOR's transmitter field in Rutherford, N.J., the water level was 10 feet above normal – right to the tops of the tower roads.

Photo courtesy of WOR

*She thinks I'm the coolest 'cuz I saved her a few K at BSW!*



BY THOMAS R. RAY III

Oct. 29 and 30 saw what was possibly the worst storm to come up the East Coast. Superstorm Sandy made landfall as a Category 1 hurricane at Seaside Heights/Tom's River, N.J., approximately 58 miles south of New York City.

## FIRSTPERSON

As I wrote this article in November, thousands in New Jersey and on Long Island still had not had power restored.

I make my remark about Sandy being possibly the worst storm to hit the New York City area based on a statement made by my barber, Tony, who is almost 102 and is the world's oldest practicing barber per the Guinness Book of World Records. Tony told me he had never, ever seen a storm as bad as Sandy.

Hurricanes rotate counter-clockwise. Making landfall south of New York City meant that the New York area would be

on the northeast quadrant of the storm. This quadrant of a hurricane pushes water. Storm surge was a huge issue with this one.

The WOR(AM) studios are in lower Manhattan, two blocks north of Wall Street on the west side of Broadway. Manhattan is an island and is divided by officials into four evacuation zones. Evacuation Zone A ends literally at the back door of 111 Broadway. The rest of the building is in Evacuation Zone B.

Zone A is the first area that would flood. The WOR studios have a diesel generator for power backup with approximately three days of fuel. We also have a microwave STL that repeats through 4 Times Square in midtown, in addition to two T1 circuits to the transmitter in Rutherford, N.J.

Being on the third floor, it would not be a major issue for personnel to get from the lobby to the studios even without power and therefore elevators. We tested the generator before the weekend

and made sure the fuel level was up to the top.

At the transmitter, we are in a literal swamp. When we built the site in Rutherford, N.J., which you've read about here in the pages of Radio World, we found that 100-year flood stage is nine feet. We built the site at 13 feet. In this case, that proved fortuitous. We have a 4,000 gallon diesel tank at the site that had 2,000 gallons in it, enough for four and a half days.

Since our satellite-delivered programming is downlinked at the transmitter, I removed the remote equipment from the WOR van and proceeded to put together a small studio, just in case. Two audio inputs would prove to be crucial: audio from a digital television tuned to WNBC(TV) in New York on Channel 4, and the same audio from a DirecTV receiver.

WOR and WNBC(TV) have an agreement that, should WOR need to,

*(continued on page 10)*

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# He Emphasizes 'Innovation' Over 'Legacy'

Brenner believes radio can be innovative again when it pairs its open mic with the smartphone

Paul Brenner is the recipient of Radio World's 2012 Excellence in Engineering Award. For this honor we choose individuals who represent the highest ideals of the U.S. radio broadcast engineering profession and reflect those ideals through contributions to the industry.

Brenner is senior vice president and chief technology officer for Emmis Communications. He also is president of the Broadcaster Traffic Consortium, of which Emmis was a founding member.

For us, Brenner embodies the evolving nature of radio engineering and technical management. He's not only technical (indeed, a self-described geek), but he's also entrepreneurial, business-savvy, wise to the ways of promotion and eager to help radio find new ways of doing things.

Longtime readers know my belief that radio's technical leaders must earn "a place at the table" with the CEOs and GMs who chart our industry course. Paul Brenner — like many of our past honorees such as Mike Starling, Gary Kline and Jeff Littlejohn — definitely

has the ear of upper management, and not only within his own company.

## WHAT'S NEXT IS NEXTRADIO

Brenner's labor in the area of smartphones is one big reason for this award.

Right now he and Emmis Communications are promoting their NextRadio app to the wireless industry. It is a receiver application for FM- and HD Radio-enabled smartphones that allows a user to listen to local radio without using the data plan for streaming, yet it takes advantage of the data channel to add interactivity. It was funded in part by NAB Labs and is in final beta testing in preparation for a launch on several smartphones and carrier networks.

"We walk into carriers and pitch it," he told



Paul Brenner



me. "It takes me five minutes to get some of the most technologically innovative people to say, 'Radio is innovative again. You've married the open mic with a device that someone looks at 40 to 50 times a day.'"

Brenner hopes leaders in radio will come to see that big deals with the carrier industry to get FM radio into smartphones is crucial to radio's long-term viability.

"It's going to mean money, it's going to mean investment," he says. But radio organizations should not forget the value of their analog FM spectrum too. He'd like to see our industry spend less time on debates over things like Internet royalties, and focus more on radio's "secret value" — marrying its over-the-air product with the interactive angle. Wireless executives, Brenner insists, understand this value and are ready to respond to it.

Brenner agreed with my assessment that getting cell carriers to turn on FM in their phones has been "a slog." His boss, Emmis Chairman, President and CEO Jeff Smulyan, has been focused on that goal for some four years. But Brenner believes the path Emmis is taking is the correct one.

"We spent a lot of time as an industry arguing with the wireless industry on a regulatory basis and on a scale basis, [telling them] 'we have 275 millions of listeners, we do public service, our on-air inventory is powerful, we provide EAS.' That was the tack for so long."

Often, carmakers, handset manufacturers and Internet software firms see radio as a "legacy business," a medium with good listenership that is cheap to build products for, but one that does not bring them growth.

"As a legacy business you really have to

## FROM THE EDITOR

Paul McLane



demonstrate innovation to get their attention. The wireless industry looks at us and says, 'You're trying to ride on our backs. That's not the way this world works.'"

Smulyan and Brenner prefer a different path, one in which radio approaches the wireless companies with the goal of being an innovative partner and supplier.

The NextRadio app fits with that philosophy, he said.

"It took me 10 minutes to get my first handset maker to say, 'Hey let's build our first NextRadio smartphones next year.' We're seeing good progress. We are at that tipping point." (Look for an announcement on that development soon.)

## MONEY IN THE DIGITAL PIPELINE

Meantime, the Broadcaster Traffic Consortium is now six years old, and "we're growing like pre-IPO Groupon," he said with a laugh. "It's like somebody lit a fire."

The independent consortium consists of broadcast groups that connected their infrastructure to create a North American network to distribute data via terrestrial FM and HD Radio signals. The Nokia Location and Commerce division provides the data about traffic, weather and fuel prices.

At inception, the consortium consisted of eight groups and about 100 stations in 50 cities. It currently has 20 commercial and noncommercial radio organizations representing about 1,500 FM stations, more than half of them digital, and now close to 200 stations active in approximately 90 markets in the United States and Canada.

BTC is in the third phase of growth. In fact Brenner told me the consortium has just agreed to expand again, up to 24 radio groups by the middle of next year, and covering more than 100 cities. "We are responding to device and automaker demands for more HD Radio coverage and preparing for more product releases in 2013. More market coverage means more unit sales."

Thus the data capabilities of radio, Brenner said, are being converted into revenue for BTC members every day.

For a broadcaster, BTC is a cloud-based service, designed as SaaS (software as a service), so it involves minimal work for the station. ("Stay on the air, that's all I ask," Brenner says.)

RDS is part of that; but the BTC is, explicitly, an "HD Radio data distribution consortium business model," and one of its stated goals is to unify the industry for delivery of HD data services.

(continued on page 5)

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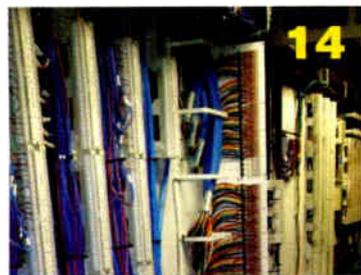
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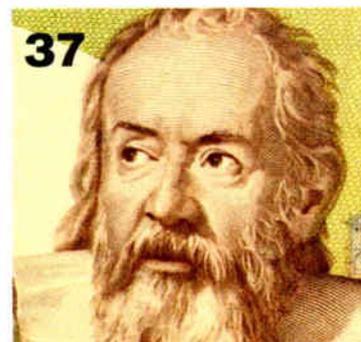
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iStockphoto/Georgios Kollidas

**NEWS**

"We're showing that HD Radio is beating satellite and mobile broadband in a very specific business," Brenner said, and he feels the pitch is working. At a recent Detroit conference for suppliers of location-based services to automakers, he said, device maker Garmin gave HD Radio a very public endorsement for its ability to deliver data to the dashboard. HD Radio was ranked as the best technology for mass-market content such as traffic and weather.

When a device that features Nokia content via HD Radio is sold, BTC gets a share of the license fee that Nokia charges the customer for content. Nokia licenses dynamic content to device makers and automakers, and BTC gets a cut for providing HD Radio coverage for distribution.

did it to make HD Radio something that would compete more successfully with satellite." And he thinks we'll see a notable development in that area soon.

"Next year, it's very likely that certain cars will have satellite telematics removed and HD Radio will replace it — a ginormous strategic win for radio, taking away satellite telematics subscribers." And another win for HD Radio as a data delivery platform.

**THE LONG VIEW**

Brenner has said he takes a "long view" of broadcasting. I asked what he meant.

"There are a lot of people in the industry who do very well by being the best on-air broadcasters they can be. They fight for localism and ratings," he replied.

"The short view is to keep operating

**'Let's talk about apps, let's talk about software.  
... What is the technology you have that fits into where  
the world is going?'**

"More manufacturers are choosing HD Radio for data. ... Garmin was all RDS before; now they have six HD products, and they're working to make all their portable nav devices based on HD Radio. That could be worth up to 2 million units a year." All told, he said, there are about 12 million devices in the market relying on BTC-delivered signals, a number that is growing by approximately 1 to 2 million devices a year.

"The founding members didn't do this for money," he continued. "They

radio the way you are, and take the risks that all the things that evolve around you dissolve away your success. For me the long view is [to ask], what are the evolutions of the world around us and how do we fit into those?"

Thankfully for Brenner, he works for an executive who seems to think the same way.

"Smulyan tells me, 'Don't do anything that takes advantage of your brethren. Do things that benefit your industry.' ... Jeff loves entrepreneurial people.

I learned a long time ago that if I was going to get a seat at the executive table, I had to bring entrepreneurial ideas. He expects the traditional technology expertise; but you have to step beyond that. 'Bring me ideas that show growth potential. Don't [just] be a cost center.'"

Through his work, Brenner now also enjoys relationships with other industry executives like Bruce Reese, Peter Smyth, Ginny Morris, Caroline Beasley, Doug Franklin, Dan Mason and David Field, among others.

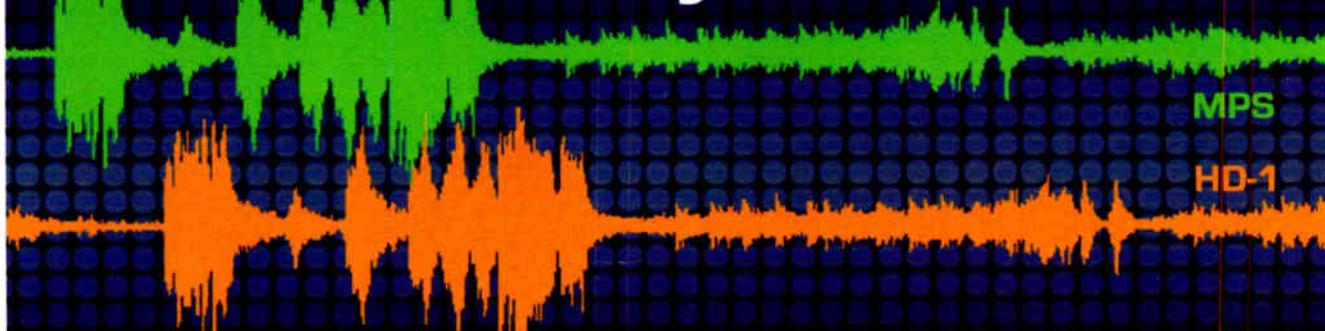
"I have to be able to step into that arena. I have to talk like a business person. Our entire industry needs to do that. ... There needs to be a lot more time spent on things that have nothing to do with 'traditional engineering.' It's not just keeping the systems on the air every day. Let's talk about apps, let's talk about software. ... What is the technology you have that fits into where the world is going?"

Brenner is 44 and lives in Indianapolis with his wife Carly and daughter. In addition to the work described above, he also served on the FCC Communications Security, Reliability and Interoperability Council body that wrote rules for new EAS CAP standards. He is active on the NAB Radio Technology Committee as well as the National Radio Systems Committee.

For encouraging productive relationships with the wireless industry, for innovating in digital data distribution, for leading a consortium of competitors to business and technology success, Paul Brenner is our recipient of the Radio World Excellence in Engineering Award.

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# Whither Standalone Internet Radio?

Internet radio is succeeding though not in the exact format we expected

BY JAMES CARELESS

*The author writes the column Radionet for the international edition of Radio World.*

Radio World has been covering the convergence of radio and the Internet since the mid-1990s. Yes, we were there when RealPlayer v.1 was launched.

In those early days of audio streaming, we were on the lookout for the first “true” Internet radio. This would be a radio-like appliance that would tune Web broadcasters the same way that one tunes to AM and FM stations.

At the time, it seemed reasonable to assume that Internet radio receivers would replace AM/FM receivers at home in the kitchen, at the office, and — if someone could figure out how to make the Internet wireless — in the car as well.

In January 2000, our vigil appeared to have been rewarded by the appearance of the Kerbango Internet Radio. This was a retro-style radio receiver with stereo speakers, an LCD display, a broadband connection port, and the ability to tune Web stations as if they were AM or FM broadcasters.

Sadly, the Kerbango never made it to market. The developer was bought out by 3Com. That company was subsequently hammered by the dot.com crash: In a cost-cutting move, 3com killed the Kerbango.

Since that time, companies such as Grace Digital Audio, Logitech and Sangean have released their versions of standalone Internet radios. They are selling enough of these devices to justify their continued manufacture.

This said, standalone Internet radios have not taken over the home, office or car; even with the help of 3G/4G and Wi-Fi. So what happened?

## APP OVER APPLIANCE

Internet radio has not succeeded as a mass-market appliance. But it is def-



**The Kerbango Internet Radio: What Internet radio looked like in 2000.**

initely succeeding as a mass-market application — or “app” — to varying degrees around the world.

In the United States, according to Fred Jacobs, president of Jacobs Media, “Nearly four in every 10 people of the 57,300-plus respondents to our eighth national ‘TechSurvey’ listen to Internet radio weekly, mainly on PC but also on mobile phones. As well, based on the 170 stations who responded, most stations in the top 100 U.S. markets are streaming their signals on the Web.”



**Bec-Tero Radio Bangkok Group PD Lawan Chumsai na Ayudhya, with her company's five radio sites.**

In the United Kingdom, growth is far slower. “Only about four percent of people here listen to Internet radio,” said James Cridland, managing director of Media U.K. and a self-described “radio futurologist.”

“In Germany, the percentage stands higher at 10 percent. The differences may

be due to wider choice on digital radio, and music licensing fees,” he said. “It is very expensive for U.K. pure-play Internet broadcasters to stream music.” Again, most of this listening is done on PCs, with some being heard on wireless devices as well.

In Thailand, Internet radio “is basically in its infancy,” said Lawan Chumsai na Ayudhya,

already streaming is two FM stations online, and has launched three standalone Web-only stations branded as Rad Radio (Dance), Tofu Pop Radio (Asian Music) and Rock On Radio (Rock).

## THE RE-EMERGENCE

The company has made this move because it believes Internet radio as an app “has a future, and it is important that we start building the foundations now, if we want to grow this part of our business,” Ayudhya said.

Meanwhile, in South Africa, “Internet radio is fairly new in our country and there is no industry body that exists to measure the handful of stations that do exist,” said Matona Sakupwanya, general manager of the Radio Advertising Bureau South Africa. Based on what the RABSA

**The Grace Digital Mondo: Internet radio of 2012.**



does know. “In terms of traditional radio, the radio receiver is still the most used to listen to radio,” Sakupwanya said. “24.7 percent listen via cellphone, 3.7 percent desktop and 0.4 percent via DSTV [digital satellite TV].”

So much has changed since Radionet began its Internet radio vigil that it is hardly surprising that we predicted Internet radio's rise as an appliance, rather than an application. Back then, standalone radios were a known quantity; streaming computers and cellphones were not.

Still, there is one consolation for those of us who love actual radio receivers, and it is that standalone Internet radios are getting more traction in the marketplace. The reason: If you listen to SiriusXM in your car and on your iPhone, you want that content on your kitchen radio, bedside alarm clock and legacy stereo system, said Grace Digital Co-Founder Greg Fadul. This is why Grace Digital offers nine Internet radios/Wi-Fi music players and plans to expand the line in 2013.

*James Careless reports on the industry for Radio World from Ottawa, Canada.*





1664: Just what it looks like. Two tin cups and a string. But it transmitted sound!



1876: Alexander Graham Bell's commercially viable telephone.



1900: Phones become fixtures in more well-to-do and steam-punk homes.



1920: Every home is working toward having a telephone!



1936: The advent of the dial desk phone. No more asking the operator to connect you.



1963: Push buttons usher in the thoroughly modern world. Touch tones enter pop culture.



1983: The mobile phone is a reality. Plots in all TV shows get a boost!



2004: IP Telephones begin to become the staple of modern business.



2007: Smartphones are complete communications centers. AND they can sound great!



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Selected content from Radio World's "The Leslie Report" by News Editor/Washington Bureau Chief Leslie Stimson.

## THE SAME DEMOCRAT REMAINS IN CHARGE AT FCC — FOR NOW

After the election, we now know the FCC will remain with a Democrat at the helm.

But it may not be the *same* Democrat next year.

For more than a year, I've been hearing rumors that President Obama's former law school basketball colleague and former commission aide, Chairman Julius Genachowski, wants to leave the commission to go back to the private sector; he took over as chairman of the commission in 2009.

The speculation among communications professionals has been intensifying since the election, though his office steadfastly denies rumors of a planned departure.

The two other Democrats on the commission — Commissioners Mignon Clyburn, a former state utility commissioner and Jessica Rosenworcel, a former top aide for West Virginia Democrat Sen. Jay Rockefeller — are seen as contenders to succeed Genachowski.

Among some media observers, there's the thought that it's time a woman led the agency. Both Clyburn and Rosenworcel are well-connected and have powerful political backers on Capitol Hill.

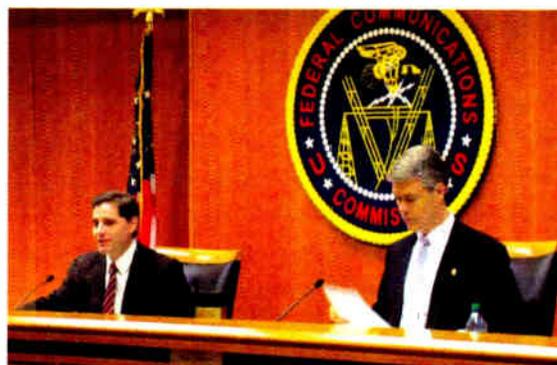
However, picking one over the other might be problematic insiders say. While Clyburn is the senior Democrat should Genachowski leave, her low-key style might not work for the high-profile chairman's

## NEWSROUNDUP

**AM:** The Cromwell Group is asking the FCC for a waiver to move an FM translator farther than currently allowed in order to re-broadcast an AM signal. If approved, the action would have "an immediate, substantive, effect upon the vitality of many AM stations. While there are a number of ideas for revitalizing the AM service, most will not bear fruit for many years," writes owner Bud Walters in the request. He wants to buy an FM translator on 91.7 MHz in Central City, Ky., from Way Media, change the city of license to Tell City, Ind. and move the signal to 103.7 MHz in order to re-broadcast WTCJ(AM) on FM. That station airs on 1230 kHz. He calls the FCC's current rule — limiting FM translator site moves to only a few miles and only to adjacent channels — "a procedural barrier of outdated public interest benefit."

**RADIO REVENUE:** Radio revenue remained flat in the third quarter, according to the RAB. Spot revenue, off-air and total industry revenue showed no growth compared to one year ago while digital was up 8 percent. The industry posted moderate 1 percent growth through the first nine months of the year, the RAB says.

**TRIBUNE:** The FCC granted Tribune a permanent waiver of the newspaper/broadcast cross-ownership



FCC Chairman Julius Genachowski, left, is shown with Commissioner Robert McDowell.

position; then it would be awkward to promote Rosenworcel over her.

A way to get around that would be to select someone from outside commission leadership, as President Obama did when he chose Genachowski, goes this line of thinking.

In one way at least, precedence favors Clyburn: She is a former state utility commissioner in South Carolina. Tennessee Republican Deborah Taylor Tate held a similar post before she was selected by George W. Bush in 2006.

National accounts have several names being bandied about, including National Telecommunications and Information Administration Administrator Larry Strickling; former Cellular Telecommunications Industry Association head Tom Wheeler; Scott Harris, executive vice president of Neustar and onetime head

rule in Chicago allowing common ownership of WGN(AM), WGN(TV) and the Chicago Tribune. The decision essentially continues waivers it granted in 2007 when the agency approved the transfer of control of Tribune to the Zell Group and helps Tribune exit bankruptcy. Commissioners Robert McDowell and Ajit Pai called the cross-ownership bans outdated.

**CROSS-OWNERSHIP:** Chairman Julius Genachowski circulated a media ownership proposal to his fellow commissioners to relax the newspaper/broadcast cross-ownership rules, including eliminating outdated prohibitions on newspaper-broadcast and TV-radio cross ownership. In theory, the relaxation would permit one entity to own both a daily newspaper and a radio station, or both a television and radio station in the same market; however FCC attorneys say other limits would remain. For example, transactions would still be subject to subject to local radio and TV ownership limits.

**OWNERSHIP:** Women and minorities comprise a sliver of AM and FM commercial station ownership, according to the FCC. Women held a majority of the voting interest in 300 commercial AMs in 2011; that's 7.8 percent of the 3,830 AMs on the air. Men owned 2,841 commercial AMs, or 74.2 percent. Women own slightly more FMs, 323 commercial FMs, or 5.8 percent of 5,611 stations. In contrast, men owned 4,290 commercial FMs, or 76.5 percent.

of the FCC's International Bureau; and Blair Levin, a former FCC chief of staff who recently oversaw preparation of the national broadband plan.

Former FCC Commissioner Jonathan Adelstein — who recently left his job as administrator of the Rural Utilities Service — is considered a possibility. Susan Ness has also been mentioned for the post; she was an FCC commissioner under President Clinton and was part of the transition team reviewing the Federal Trade Commission as the Obama administration prepared to take over in his first term.

From my perch, covering the FCC since the Reed Hundt days before I came to this publication, it's clear the chairman's office gets the majority of the praise for whatever issue the commission is or isn't working on. The chairman also gets most foot traffic — and the brunt of the blame when there are controversial calls.

Staffers in the chairman's office burn out fast; they're usually ready to move on after a year and a half to two years, because of the long days and stress. Chairmen themselves rarely stay longer than four years.

Accomplishments under this chairman's watch include a revamp of the FCC website, though anecdotally, people I speak with usually prefer the older site, which is still available, saying it's easier to use.

The Genachowski FCC focused a lot on broadband, and the commission presumably will continue to do so even with someone else in charge. Under Genachowski, the agency has proceeded with its plan for stations to "voluntarily" participate in an auction of their television spectrum eventually.

Most recently, the agency unveiled its system for TV stations to upload and maintain public inspection files, including their political files; the commission has plans to broaden the system to include radio.

Genachowski is pushing to streamline and modernize media ownership rules, including elimination of prohibitions on newspaper-radio and TV-radio cross-ownership, which he sees as outdated. The agency is trying to wrap up the media ownership review by year-end. If the change passes, the FCC would essentially keep in place what the agency proposed in 2007 under then-Chairman Kevin Martin — and has been defending in court ever since.

Perhaps the most visible failure under Genachowski's watch concerned broadcast indecency. In June the Supreme Court declined to take on the Janet Jackson Super Bowl halftime show wardrobe malfunction case from 2004, letting stand an appeals court decision that twice threw out the FCC's ruling against CBS and a \$550,000 fine.

While the commissioners get the glory, career civil servants do the bulk of implementing policy even while the direction at the top may change. And the agency's work, which continues no matter who's in charge, tends to pile up at year-end.

It will be interesting to see what will happen next year with the AM initiative, the commission's expansion of efforts to help owners of facilities on that challenged band.

Low-power FM advocates were hoping the FCC would finalize LPFM service rules, including program origination requirements, and that it would hint at the timing of an application window. The agency signaled it intended to discuss LPFM — as well as the 6,000 or so FM translator applications still pending from the 2003 window — at its late November meeting.

# MEET THE NEW AXIA xNODES!

## IP-AUDIO JUST GOT AN UPGRADE.



Everybody knows that Axia introduced broadcasters to IP-Audio in 2003. 3,000 studios and 30,000 connected devices later, the competitors who said "it'll never work" are now eating their words. How do you follow up that sort of success? If you're us, you open up a case of Monster and go back to work. So we did.

The result: Axia xNodes, smart new AoIP interfaces that transform your audio devices into an intelligent network. Use them to turn analog, digital or mic-level signals into routable IP-Audio, with associated GPIO logic. They're so advanced, they won two major awards at their NAB debut.

### WHAT CAN YOU DO WITH THEM? HERE ARE A FEW IDEAS.

- » **BUILD A ROUTING SWITCHER.** One stand-alone xNode is an 8x8 (4x4 stereo) routing switcher. Connect 8 xNodes to a switch and make a 64x64 routing switcher. Need more I/O? Connect more xNodes. Like all Ethernet-based networks, Axia systems are naturally scalable, up to 10,000 stereo signals (plus logic)
- » **ADD MICS TO THE MIX.** xNodes make awesome multiple Mic preamps. They have ultra-low-noise, ultra-high-headroom, studio grade preamps with selectable Phantom power. Put your Mics in, bring your analog line level out. And that IP-Audio network jack? Ready to be used whenever you upgrade to a full IP-Audio network.
- » **STL OVER IP.** Today's cluttered RF spectrum makes IP a great alternative. Put an xNode at either end of a fiber run, OC-3 circuit or a pair of inexpensive Ethernet radios to send eight channels of uncompressed audio to your TX – and get eight channels of audio backhaul too.
- » **MAKE AN A/D/A.** Take one analog and one AES/EBU xNode and rack-mount them side by side. Voila! Eight precision A/D converters and eight precision D/A converters, in just 1RU. Studio grade, 48 kHz, 24-bit Delta-Sigma A/D and D/A converters, with 256x oversampling, make difference you can hear.
- » **SAY SO LONG TO SOUND CARDS.** PCI, PCIe, USB3, FireWire... who needs 'em? Load the Axia IP-Audio Driver onto your PC workstation and connect it to an xNode to get eight professional, balanced outputs and eight inputs. Use an industry-standard DB-25 breakout cable for pro XLR connections. You'll get studio-quality audio and save some green, too.
- » **SLIM DOWN YOUR SNAKE.** Connect two analog or AES xNodes with a single Ethernet cable for an instant 8x8 bi-directional snake and bid the multi-pair bundle goodbye. Add a few more xNodes on each end for a 16x16, 32x32 or 64x64 snake. Use off-the-shelf media converters for long-haul fiber connections.

**xNODES ARE SMALL.** Mount them on your wall, under the counter — mount 'em on the ceiling if you like. Optional rack- and wall-mount kits provide plenty of options.

**CONFIDENCE METERS** on every xNode mean you'll never have to wonder where the audio's at. Audio presence and levels are both displayed at a glance.

**INFORMATION OVERLOAD?** Not here. Sharp, high-rez OLED displays put all the information you need right on the front panel, without the need for a distracting multi-colored lightshow.

**xNODES WORK WITH BOTH LIVEWIRE AND RAVENNA** AoIP networks — making them compatible with IP-Audio gear from over 40 major broadcast companies.



**NO NOISY FANS HERE.** Front-mounted heat sink keeps xNodes calm, cool and collected using air-conditioned studio air (instead of that hot air in the back of the rack).

**NOT AT THE OFFICE?** No problem; built-in webservice lets you manage an xNode from anywhere. Or, use Axia iProbe software to manage your entire facility – back-up and restore settings, automatically update software and more.

**RJ45 OR DB-25?** xNodes give you I/O both ways, so you can choose whichever industry-standard breakout cable you prefer.



**FAST, ONE-BUTTON SETUP.** Hit the switch and plug 'em in — your xNodes will be streaming audio in under 30 seconds.

**DUAL ETHERNET PORTS** for redundant network links. The overnight jock kicks out a connection? No problem, the other one takes over so your programming never skips a beat.

**xNODES HAVE AUTORANGING INTERNAL POWER SUPPLIES,** but can use PoE (Power over Ethernet) too. Perfect for those out of the-way places where a power cable is inconvenient. Hook 'em both up for redundant, auto-switching backup power.

**VERY VERSATILE.** 5 different xNodes handle nearly any signal type. AES/EBU, Analog, Microphone and GPIO xNodes are perfect when you've got a lot of one audio type to work with. But what if you need a little of everything? This is the Mixed Signal xNode. Think of it as your utility MVP, with a switchable Mic/line input, 2 dedicated analog ins, 3 analog outs, a digital AES/EBU input and output, and 2 GPIO logic ports.

**MONO OR STEREO ROUTING.** Choose from 8-in, 8-out mono operation or 4-in, 4-out stereo. Both signals intermix seamlessly on your Axia network.

**TWO xNODES MOUNT SIDE-BY-SIDE,** so you can create your own custom mix of I/O types within a single rack space. Pair up an AES/EBU xNode with a microphone xNode, or match a GPIO xNode with an analog unit. Or combine a couple of Mixed Signal xNodes for the ultimate mix of mic, analog, AES3, Analog and logic I/O.



[AxiaAudio.com/xNodes](http://AxiaAudio.com/xNodes)



## SANDY

(continued from page 3)

we can take the audio from WNBC(TV) to air during an event such as hurricane Sandy. Additionally, should WNBC(TV) lose their transmitter facility, WOR will carry their audio as often as possible. This is a great thing for WOR — WNBC(TV) has resources that WOR does not to cover many aspects of the storm and its aftermath thoroughly.

I spent Monday Oct. 29 at the transmitter site, building the “studio” and keeping an eye on things. I also threw together a quick automation system so that I could leave WNBC(TV) up on the remote board, and the automation system would blow the WOR ID over the top of WNBC(TV) on the top of the hour — sloppy, but it would keep us legal.

### HOTEL STAY

At 4:30 p.m., the water at the culvert at the front of the site was at eight feet. I decided at this point to go to a local hotel for the night. Being that the entire area of the transmitter is a man-made island, I did not want to take the chance that four feet above flood stage was a miscalculation. We have satellite Internet at the site. I would be able to log into the site as required with my smartphone if necessary.

My hotel room overlooked the WOR towers. I put the radio on and was in constant communication with the studios, working with them if they needed guidance to bring in various audio sources. I heard the transmitter drop off the air several times on momentary power failures. At 8:06 p.m., the transmitter dropped and didn't come back. Coincidentally, the lights in the hotel dimmed with this drop.

I started counting. At 15 Mississippi, the transmitter came back up. Logging into the site showed the generator was running and all was well. At roughly 9:54 p.m., Consolidated Edison, the power company in Manhattan, pulled power to 111 Broadway as a precaution in the event their transformer vault were to flood. This decision was based on the fact that the Brooklyn Battery Tunnel, the entrance of which is not far from 111 Broadway, was taking on water.

I heard former New York Governor David Paterson and studio crew mention that the lights went out briefly. Thanks



Photo courtesy of WOR

**The water crowns at the front of the WOR transmitter building in Rutherford, N.J. Water is up to the top of its channel.**

to the uninterruptible power supplies in the studios, we did not miss a beat. At about 10:30 p.m., I heard WOR go silent. Logging into the site showed that the T1s had failed. I switched to the microwave link.

Being in touch with the studio showed that we had no phones of any type. The office system was out. The listener call-in lines were out. The “private” lines in the studios were out. ISDN circuits were out. The Internet was out, meaning our newsroom now had no news input because our AP service is now delivered via Internet. We still had cable TV, so were able to gather information from WNBC(TV). At midnight, we put WNBC(TV) audio on the air overnight. I should mention that not long after we lost the studio phones, the power at the hotel went out so I was now relying solely on my smartphone for communications.

John Gambling and the morning show went on the air at 6 a.m. on Oct.

30. At 8 a.m., during a break, John called me to ask if there was any way we could put WNBC(TV) on the air. The studios had lost cable TV and they now had no outside information coming in. I said yes; I was able to log into the transmitter site and had WNBC(TV) up on the board at the site. He gave me an on-air cue, and we switched.

At this point, I started making my way to the site. I crossed the intersection with Polito Avenue in Lyndhurst. I saw a lake spread out in front of me. CBS Radio-owned WINS(AM) in New York City is located at the other end of Polito. They were off the air. As I drove up to the access road to the WOR site, I took a breath and was delighted to see the water level at approximately 10-1/2 feet. The road into the area was above water and, frankly, did not look any worse for the wear.

I arrived at the WOR transmitter site to find it high and dry. The generator

was chugging away, the transmitter was on at full power, WNBC(TV) audio on the air, but there were no telephones or ISDN services.

The phone company's subscriber line interface circuit was down. The SLIC is normally a box with phone company equipment that converts fiber to copper circuits. The fiber bears many, many phone circuits to a given area; the SLIC converts it, and the various phone services are distributed to the area on copper wire. It's cheaper to do this than run multiple pairs of copper from a central office.

However, with no information coming into the studio facility, we had lost the use of the studios; it made no sense to air from there if we had no information we could give out. We called our soon-to-be new owners, Clear Channel, and they arranged a studio for WOR local programming, which was fine and dandy.

But with no phone lines at the site, I had no way to get audio into or out of the facility. I made a phone call to Cumulus Satellite, uplink provider for the WOR Radio Network. They configured a special channel for us on their system which I could downlink at the site.

### CUMULUS SATELLITE

Clear Channel dialed an ISDN number at Cumulus Satellite. In turn, Cumulus Satellite put that up on the bird. I took it down at the site — a 46,000 mile STL hop for roughly six miles from the studio. Perfect. We could now get WOR local programming back on the air.

But I could not export our satellite channels. I called a couple of our operators who live in Jersey and told them they were assigned to the transmitter site — come on over. We ran with operators at the site and all satellite programming coming from the transmitter, and WOR local at Clear Channel, until Thursday afternoon. Con-Ed surprisingly turned power back on at 111 Broadway late Wednesday afternoon and our phone services returned.

On Thursday, I had a delivery of diesel fuel at the transmitter site. The day tank under the generator was full, but the big tank outside had been sucked dry. Later the evening of Nov. 1, power came back at the transmitter site.

It took until Monday Nov. 5 to get the studios fully back to normal. Because we were about to run out of fuel on Wednesday, Oct. 31, we started shutting down studio systems so we could shut off the generator before the tank went dry. Power literally came back when Anthony was going to start walking up the 24 flights up to the genny to shut it down, so we started turning studio systems back on. We lost an audio card in an ENCO workstation, a power supply in a studio mix engine and a power supply in the studio switcher computer, and

(continued on page 12)

# ROC YOUR WORLD

## The new ROC console from Logitek



The ROC is paired with the JetStream, a powerful 128-channel networked audio node.

When Logitek introduced its first ROC console back in the 1990s, it marked a revolution in audio console design. One of the industry's first router-based digital consoles, the original ROC boasted simple wiring and access to multiple sources at each fader.

Over the years, the router-plus-console Networked Audio concept has become the standard in console architecture. Although the original ROC was retired years ago, Logitek has continued to develop systems for both TDM and AoIP audio networking. The new ROC takes the best of the original design and pairs it with the latest technology and styling.

Available in multiples of 6 faders (up to 24), the ROC is housed in an attractive table-top enclosure. Durable Penny & Giles faders, OLED source indication and intuitive controls make the ROC a natural for on-air, production rooms or even in temporary studio setups. Two monitor feeds, front panel headphone connection and user-assignable softkeys will please even your fussiest operators.

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# A Look Around WVTF Public Radio

Paxton Durham shares some organizational tips from Roanoke

WVTF Public Radio and Radio IQ, with stations across central and western Virginia, is celebrating 25 years of public radio service.

## WORKBENCH

by John Bisset

Read more Workbench articles online at [radioworld.com](http://radioworld.com)

Chief Engineer and Engineering Manager Paxton Durham, who has been with WVTF since 1990, shared some facility design thoughts with *Workbench* readers, as well as pictures of his Roanoke facility.

Like most engineers responsible for facilities with both paid and volunteer staffs, Paxton is a big believer in labeling. In a number of applications, he uses the label to explain, as seen in Fig. 1.

"Not everyone is all that technical," he says. By using labels not only to identify equipment but also to explain how it operates, procedural problems are reduced.

Paxton has used labels liberally throughout the facility; Even the 75-ohm cable feed distribution can be followed, as shown in Fig. 2.

Most facilities depend on computers; WVTF is no different. By locating all



Fig. 1: Labels explain operations. Figs. 1-7 are from WVTF Public Radio and Radio IQ.

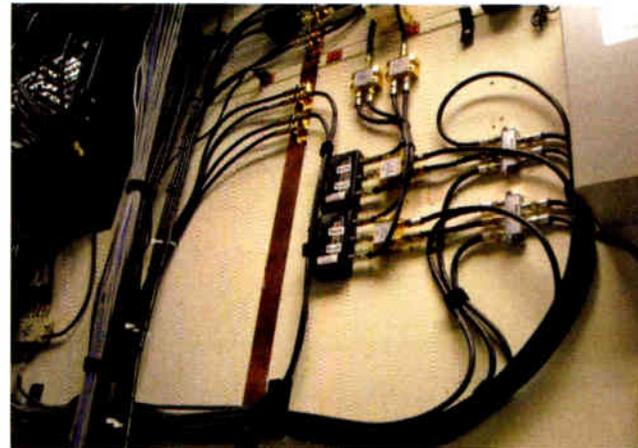


Fig. 2: Here's a neatly organized and labeled cable distribution system.



Fig. 3: Computers are located on sturdy industrial chrome wire shelving.



Fig. 4: Smaller shelves under the computers hold wiring.

# GR

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The CAP-DEC1, Gorman-Redlich is a stand-alone CAP-to-EAS converter for use with your existing emergency alerting equipment. This cost-effective device allows broadcasters to easily meet Common Alerting Protocol (CAP) compliance requirements mandated by the FCC without requiring the purchase of an additional encoder/decoder system or other costly

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computers in a single IT room, the environment can be controlled easily. By selecting heavy-duty industrial shelving, as seen in Fig. 3, all computers can be stacked.

The chrome wire shelving can be assembled without tools, and the shelves can be adjusted in one-inch increments. The open wire construction reduces dust accumulation, too. Visit the Radio World Links page, [radioworld.com/links](http://radioworld.com/links), for information on one supplier of this type of chrome wire shelving.

The modularity of this type of shelving means that a connector shelf can be installed beneath the computers, as seen in Fig. 4. In this way, access to connectors and associated wiring is from the front — no more crawling around behind the computer.

In the rack area, adjustable ceiling spotlights illuminate the equipment and are aesthetically pleasing, as in Fig. 5. Rack mount equipment faces one of the hallways. The black stanchions, Fig. 6, can be spread out to keep visitors away from the rack equipment. Simple, yet effective.

(continued on page 16)

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\*Optional 19" rack adaptor holds up to three units.



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# FEATURES

## WORKBENCH

(continued from page 14)

Paxton takes advantage of cordless phone technology, too. By locating an extension in the racks (Fig. 7), troubleshooting comes easy.

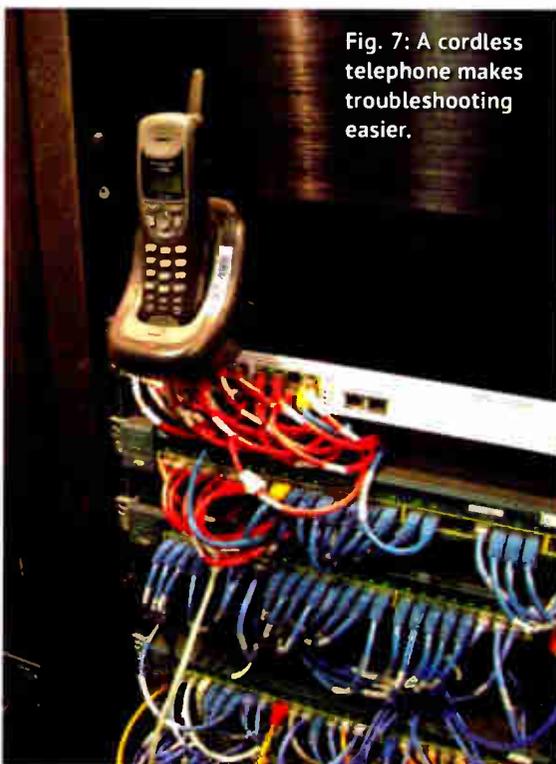
Cox Media Richmond DOE Dennis Sloatman is another believer in clean facility layout. Fig. 8 shows the Main Distribution Frame at the Richmond, Va., cluster. Taking the time to do it right has a major payoff as the facility changes or grows.



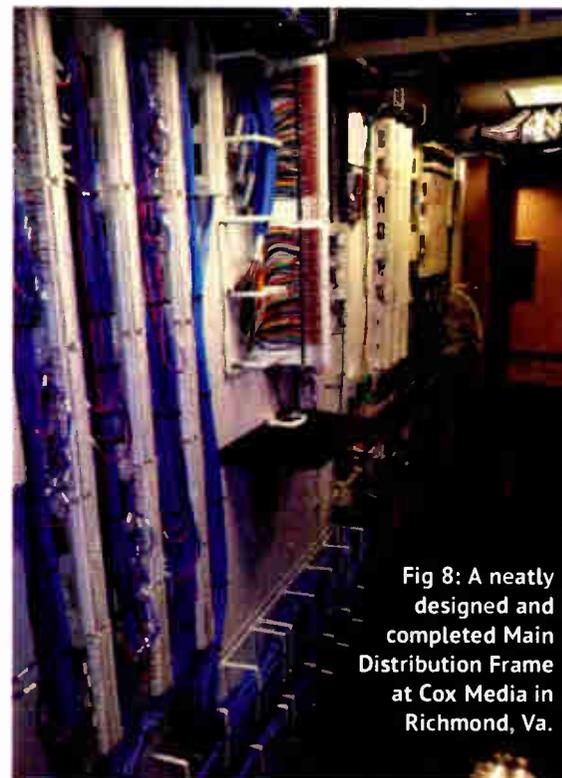
**Fig. 5:** Spot lamps illuminate equipment.



**Fig. 6:** Stanchions are used to keep visitors at arm's length from the equipment.



**Fig. 7:** A cordless telephone makes troubleshooting easier.



**Fig 8:** A neatly designed and completed Main Distribution Frame at Cox Media in Richmond, Va.

If Paxton and Dennis want an engineering challenge, they could spend the rest of their careers managing coax runs at the tower site shown in Fig. 9. What's interesting is that you can see the curved cable tray, with coaxial lines neatly in place. At some point, mayhem took over ...

*Contribute to Workbench. You'll help your fellow engineers and qualify for SBE recertification credit. Send Workbench tips to johnpbisset@gmail.com or fax to (603) 472-4944.*



**Fig. 9:** A site manager could spend his career managing this site.

## PEOPLENEWS

Ted Nahil has signed on with equipment distributor SCMS as a field sales engineer.

Antenna/transmission support manufacturer Electronics Research Inc. appointed Anand Kurup as director of sales for Asia Pacific.

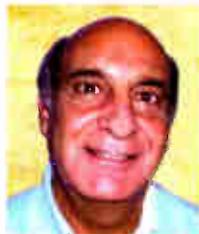
Julia Wierski joined the Prometheus Radio Project as its new director of development and communications.



Jennifer Rothschild



Raul Ries



Ted Nahil

National Religious Broadcasters announced that Raul Ries and Jennifer Rothschild will speak at the NRB convention in Nashville in March. Starting this month, Emma Carrasco will

serve as NPR's chief marketing officer. She was executive vice president of Republica, a strategic and creative agency specializing in multiplatform marketing in Miami. Also at NPR, Loren Mayor will assume the role of senior vice president of strategy for the organization. Mayor comes from PBS, where she worked most recently as vice president of strategy and ventures.

Becky Brenner, hired by programming consultancy Albright & O'Malley in January, has been promoted to a full partner. Forthwith, the group will be known as Albright & O'Malley & Brenner.

In November, the Nevada Broadcasters Association hosted 16 French-speaking broadcasters and journalists from 15 African nations.



Emma Carrasco



Loren Mayor

The representatives from Benin, Democratic Republic of Congo, Madagascar and Togo work in radio and had the opportunity to tour a Las Vegas radio station (Lotus Broadcasting) as well as a PBS television station.

Mark Bolke, VP and COO of music scheduling software developer A-Ware, will be leaving that company at the end of the year.

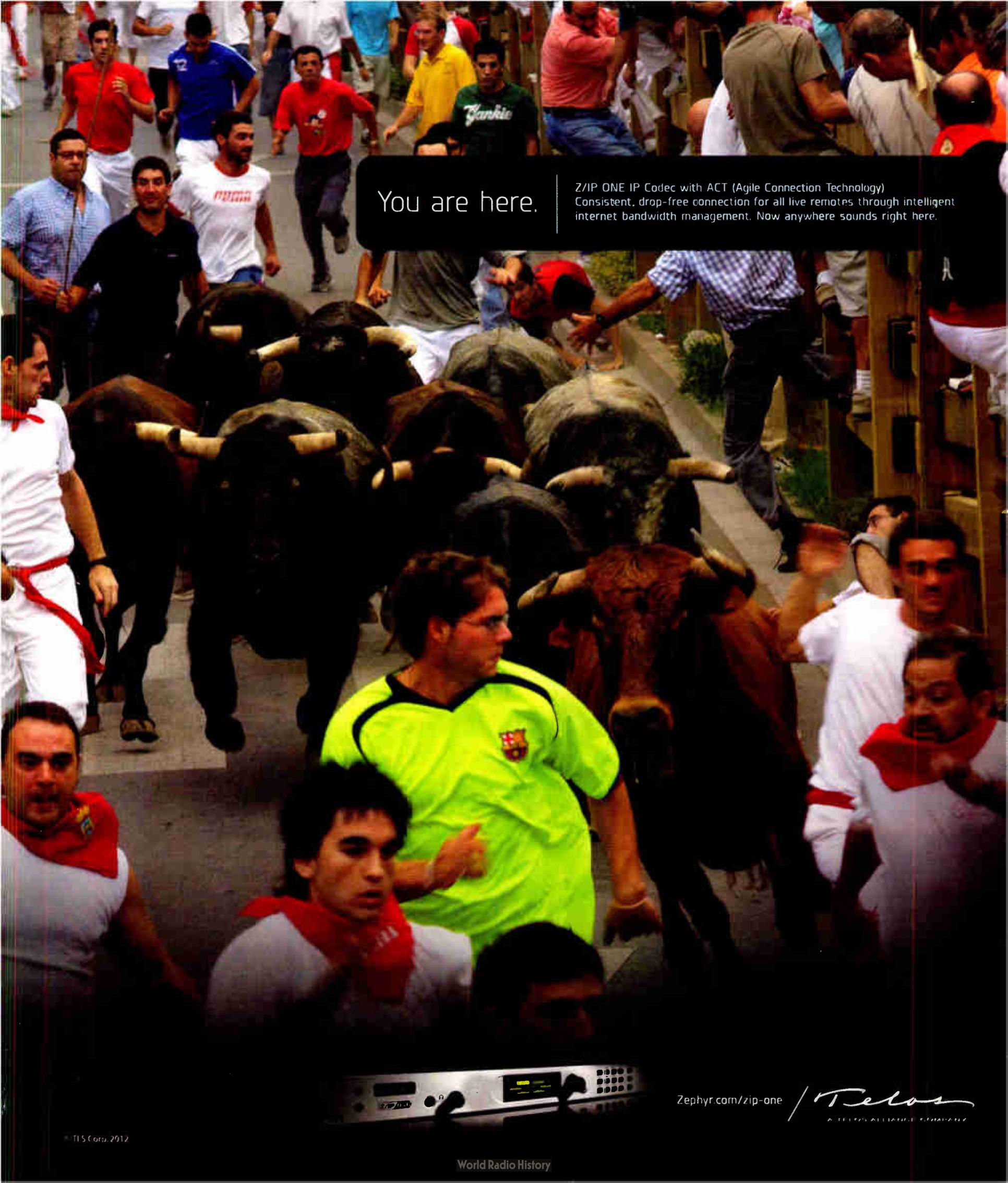
Industry consultant and broadcaster Bob Shannon has been named as the Conclave's new executive director.

Scott Hopeck, formerly director of sales for Clear Channel's Atlanta cluster, is moving to Phoenix to become market manager.

Send announcements to radioworld@nbmedia.com, attention People News.



Bob Shannon



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# Indeed, There's an App for That

The smartphone has become a handy app dispenser for all kinds of radio uses

BY DEE MCVICKER

Wouldn't it be great if they invented something like the laptop, only smaller, that fit into your pocket for when you needed to feed a news report back to the studio? Or change automation settings while you're sitting at a restaurant?

Maybe make a phone call?

Oh wait, they have. That hunk of silicon with the powerful user interface we call the smartphone has become a handy app dispenser for all kinds of radio uses.

Two years ago, we could count on one hand the number of smartphone apps for radio. Now, we can hardly keep up with the list of iPhone and Android apps making their way into everyday radio: audio codec apps for live reports; apps for controlling the station automation or traffic system; and even more apps for recording simple voicetracks, for editing on-air programming, even for adjusting the audio processing.

And, these are just the broadcast-specific apps that we know about. Last time we checked, there were another 700,000+ apps that you can download from Apple's iTunes store for turning your iPhone or iPad tablet into anything from a flashlight to a credit card reader.

## WHERE IS ALL THIS GOING?

The future of smart devices is anyone's guess. As consumer products go, iPhones, iPads, Androids and other



**Comrex ARC (for 'ACCESS Reporter Codec')**

similar devices already have a lot going for them. For starters, they have decent quality mics, generally regarded as good enough for most emergency reports. And for venues requiring better quality, it's a simple matter to plug in an external microphone. You can even get a mic adapter for the iPhone that lets you mobilize your favorite XLR micro-

phone, courtesy of Tieline.

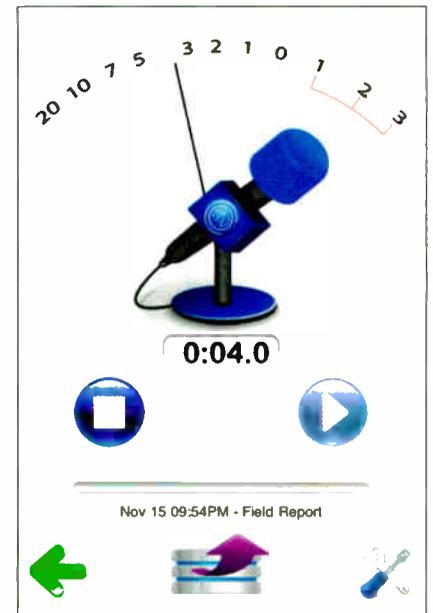
Apps that provide editing and standard coding like MP3 and AAC offer broadcasters tremendous "extend-ability" of existing audio gear.

"A \$4,000 piece of audio equipment isn't something you're going to feel comfortable putting in the hands of everyone on your air staff. But everyone has one of these phones, so say there's a helicopter crash on my way to work ... I can call in from the scene and it's not going to sound like I'm calling in from a tunnel or underwater," said Chris Crump, director of sales and marketing for Comrex, which makes a mobile app that connects over 3G or Wi-Fi to its new VoIP Call Management system.

Crump views the mobile device as not only a handy tool for station reporters, but also for man-on-the-street reports and call-ins by experts. "Our goal long-term is to provide this to radio stations so they can provide it to their guests," said Crump, of the mobile app developed by Comrex that integrates with its STAC VIP call-in system for 7 kHz or better live voice from the smartphone.

Ken Frommert, director of marketing and international sales for ENCO, is thinking along the same lines. ENCO came out with an iOS app recently for its DAD automation system that has audio send features for reporters covering events in the field. The app is part of ENCO's larger strategy to "make the world your studio."

"This isn't a fad. You see iPhones everywhere, even on TV where people and reporters are using them to inter-



**ENCO's iDAD app**

view. Right there in the middle of all those mics from Fox and NBC is the iPhone." Frommert observed.

Other opportunistic product categories now making good use of smartphones and tablets are transmitter, automation and traffic control systems. For manufacturers of these products, the move to mobile apps is part necessity and part natural progression. "In reality, our customers have been using phones — originally regular phones and then cellphones — to access our equipment for some time," said Jonathan Burk, vice president of Burk Technology, which has been making transmitter remote control systems for 25 years.

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9/11/2001  
WE STILL REMEMBER

**The smartphone gets away from those kinds of legacy control problems.**

— Jonathan Burk

Because of new apps offered by companies like Burk, broadcasters now can read and control settings through a visual mobile app rather than through a series of touchtones. "Ironically, a lot of cellphone equipment that used touchtone control in the past doesn't work as well as it used to. The smartphone gets away from those kinds of legacy control problems," said Burk.

## GOING FAST AND FREE

Most manufacturers are offering apps for their equipment free of charge



Burk app helps with facility control.

and that doesn't appear to be changing anytime soon, if for no other reason than market dynamics.

This year, more than 659 million smartphones will have shipped worldwide, up 33 percent from last year, with double-digit growth expected through 2016, according to a recent market research study by IDC.

These numbers tell only part of the story, though. Wireless communication is now entering the high-speed era of 4G LTE, and with this comes better services like wideband voice.

Wideband voice, also called HD Voice, expands the frequency response of calls to 7 kHz and beyond using VoIP and wideband codecs like G.722. With this, broadcasters can finally kiss those garbled-sounding cellphone calls goodbye; no more pseudo noise-encoding to squeeze several channels of audio onto those 3G or older generation networks — though Crump of Comrex noted that HD Voice within the cell network has limitations; it won't work outside of the specific cell provider's network. "It's cell-to-cell HD Voice only."

Earlier this year, Sprint announced its HD Voice-compatible smartphone, the EVO 4G LTE; and similar HD Voice-compatible models by Verizon and others are now available as well.

At the replacement rate of smartphones (currently estimated to be less than a year by some analysts) it won't be long before everyone is carrying wideband audio around in their pockets. And if that isn't motivation enough for broadcast equipment manufacturers, relative ease of app development gives

them that added push to get onboard with mobile apps. Apple and Google and any other company with a stake in smartphones make it relatively painless to develop and market apps for their platforms. They offer development kits at a fraction of the cost compared to similar kits for developing PC applications. Plus, with download sites like iTunes, getting those apps out to the end-user is a no-brainer.

Even the number one development drawback of having to program native apps for each platform, one for iOS devices like iPhones and iPads and

another for Androids, is hardly the stumbling block it used to be. Broadcast vendors are getting around those laborious and costly development cycles by developing one mobile Web app for all platforms.

This has been made possible by new HTML5 and improved JavaScript capabilities that essentially use the power of the Web browser to create the look, feel and function of a mobile app. And because these smartphone apps are born and bred like any other Web product, they're easily rolled into the same development effort as the manufacturer's

other browser-like products.

"Web development just makes it possible to get something out faster and to reach more people with it, which is why we took the web approach," said Burk of his company's multiplatform smartphone app for its ARC products.

Still, for all the promise of mobile apps, equipment makers say they draw the line at iPhones and Androids someday running the station. Said Crump, "I personally wouldn't trust a smartphone to do a four-hour football game, would you? Even if it's a high school football game. There's revenue tied up in that."

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**Meet the LX-24...Wheatstone's flagship, multi-award-winning advanced modular networkable console control surface**

The design initiative behind the LX-24 was to create the world's finest control surface. The result is a console that redefines the entire genre. The LX-24 is an intelligent surface that can store and recall all your settings. Its totally modular design lets you configure it exactly as you like - you can even hot-swap modules at any time without having to reconfigure.

Assign any source of any type anywhere on your network to any fader. Each input channel can be assigned to four stereo busses, plus four pre/post-selectable aux sends, a stereo CUE bus, four mix-minuses and the panel's own bus-minus. Full Vorsis EQ and Dynamics let you sculpt and control your sound with the quality of the finest dedicated outboard

processors. The visually-stunning meter bridge features up to four sets of bright, high resolution LED meters, as well as circular LED displays for auxiliary send levels and pan control. A digital count-up/count-down timer is also included.

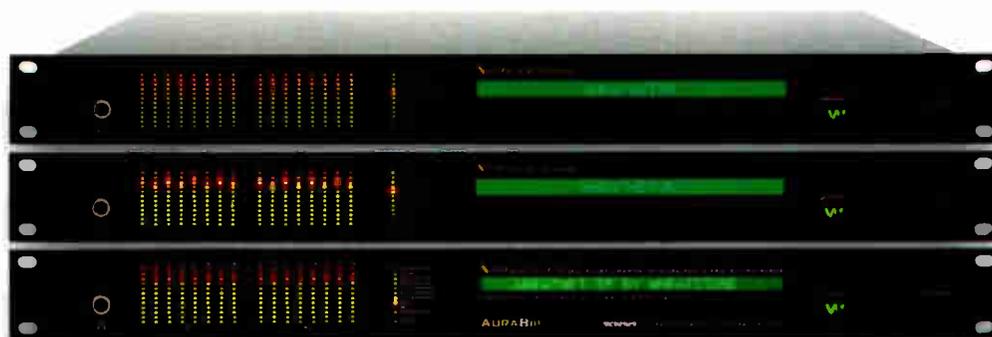
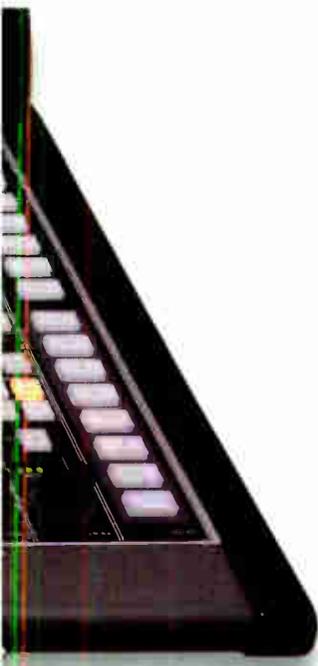
The LX-24 is advanced in ways that can make a HUGE difference in your capabilities. But it's also immediately familiar to anyone who has ever sat behind a board at a radio station. Use it to make your programming the best it can be. Just plug it into your WheatNet-IP Intelligent Network - with it, and the BLADES across the page, you can, dare we say it, rule the world.

**THE LX-24 CONSOLE CONTROL SURFACE FEATURES**

- Low-profile** table-top design - no cutout required
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- Control room and headphone outputs** with level control and source selection
- Two independent studio outputs**
- Stereo cue speakers and amplifier**, built-into meter bridge
- Onboard VGA and USB-Mouse connectors**
- Event storage** (snapshots) and recall

- Each input channel features:**
- Four stereo bus assigns
  - Four pre/post-fader aux sends
  - Four mix-minuses
  - Bus-Minus<sup>2</sup>
  - Source name display
  - A/B source selector
  - 2 programmable buttons
  - Vorsis EQ and Dynamics including 4-band parametric EQ, High- and Low-Pass filters, Compressor and Expander/Noise gate

price. it's called The WheatNet-IP Intelligent Network, and it rules.



**Our BLADES carry out your orders network-wide at Gigabit Ethernet speeds - no bottlenecks**

As an integral part of the WheatNet-IP Intelligent Network, BLADES interface, move, bend, shape, route and control everything you want to do with your audio. If it's audio, a BLADE will handle it - at lightning speed.

Use them organically with our control surfaces, run them from our Glass-E software wherever you have internet access, or control them from the front panels. BLADES make your life incredibly easy and secure.

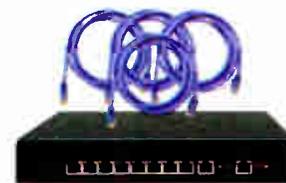
As you need more functionality, just plug in more BLADES - they come in configurations to handle whatever you need (analog, digital, a/d, mic, MAD). Each BLADE is self-configuring and has the DNA of the entire self-healing network.

With BLADES, you can do everything from a simple (or complex, if you like) snake to STL-over-IP to full-on multi-studio/facility networking - even processing. And because of Wheatstone's partnership with the top suppliers of automation and remote gear, you'll have control over your entire system right from WheatNet-IP. Ruling the world has never been easier.

**And this is ALL the extra stuff you need to wire-up the Intelligent Network:**

Four CAT-6 cables and a low-cost switch that handles the gigabit speed WheatNet-IP runs at.

Let's do the math - plug in eight connectors, power up a console and three BLADES, add your audio and you are ready to rock, roll and rule the radio world. Brilliant, you ask? Nah - just really, really intelligent.



**Want to know more?**

WheatNet-IP outperforms the other AoIP systems exponentially and is, by far, the most reliable network you can get. Log onto [wheatip.com](http://wheatip.com). There is a world of *real* information there. Or, give us a call. There's nothing we like better than talking about this stuff.



**EVERY BLADE FEATURES**

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**Front panel bar graph meters** switchable to display source input level or destination output level after gain trim

**Front panel routing control** - any system source to any destination on that BLADE

**Front panel headphone jack** with source select and level control - monitor any system source

**Flexible GPI logic** - 12 universal logic ports, programmable as inputs or outputs, routable throughout the entire system

**Built-in web server** so you can configure and control locally or remotely without having to run dedicated software

**SNMP messaging** for alerts

**Silence detection** on each output that can trigger alarms or make a routing change

**Silent - no fans** - can safely be located in a studio with live talent



# Radio's Archives Preserved Online

David Gleason's website *americanradiohistory.com* preserves long-forgotten historical gems

BY **KEN DEUTSCH**

Say you want to find out what year WJZ(AM), the forerunner of WABC(AM) in New York, went on the air. Simply go to the FCC archives online and do a search, right? Just one problem: The FCC well might not have what you want.

Instead, try visiting a free, public site called *www.americanradiohistory.com*, which is created and maintained by radio fan David Gleason.

There you'll find back issues of well-known publications like *Broadcasting* magazine and "The Broadcasting Yearbook," as well as less familiar titles like *Sponsor*, *Television/Radio Age*, *Radio Daily* and many others.

Also to be found are obscure technical publications featuring equipment that hasn't been in use since the potted palm era, and even station ratings not just from Arbitron but from the all-but-forgotten *Pulse* and *Hooper*. Near-complete collections of the *FM Atlas*, *White's Log*, *Radex* and *Vane Jones' Log* are there.

This collection comprises a narrative of our industry that no one else has taken the time to preserve.

"I started out with a personal collection going back 10 or 15 years," said Gleason, who spent more than 50 of his 66 years in radio.

"I found that I was becoming a source of answers for people who could not find this material elsewhere. Then I decided that I would upload it all as copy-protected, non-printable PDFs so that anyone could have access, just like a library."

Gleason scans all the material himself and makes most of his documents searchable. His archive now dates back to the 1920s.

"I bought some discontinued university library publications and got most of my *Broadcasting* magazines from an Air Force base in Alabama that was closing down its library. Since the word has spread, people just donate their collections and the more I put up there, the more I get offered."

## **BUSINESS MODEL, SCHMUSINESS MODEL**

For Gleason, there's no plan for making money with this site.

"Today, not everyone can say radio is good to them," he said. "But it was good to me, and this is kind of a payback."

As public libraries routinely jettison hard copies of seldom-referenced material, many of these artifacts are being

consigned to landfills. Gleason became concerned that much of the history of radio was going to be lost forever.

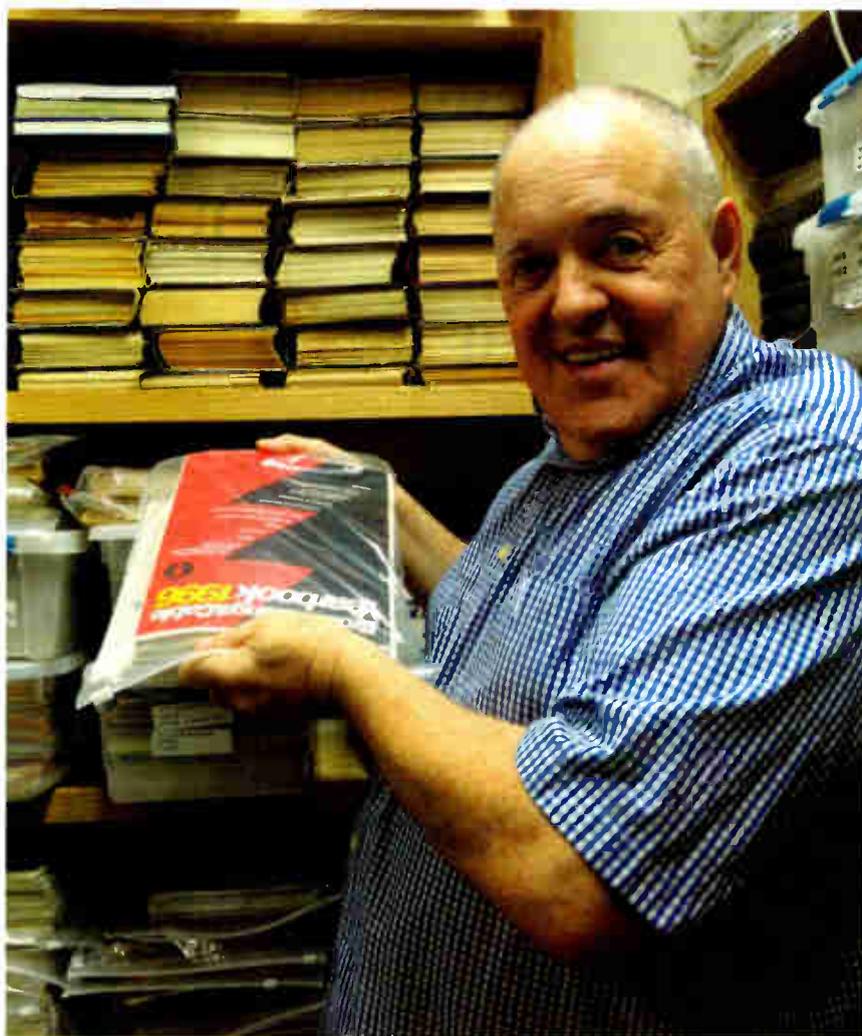
"I have talked to people who sought information on the Fairness Doctrine, for example. They couldn't find much on the famous 'Red Lion' case of the '60s. By making what I have available, these people are able to research things like that," Gleason said. (Red Lion

even when a given publication is no longer in business.

## **WHERE IT BEGAN**

In the early 1950s, Gleason's favorite radio shows included "Jack Benny," "Fibber McGee and Molly" and "The Lone Ranger."

"It was back when we lived in Cleveland and our family had this humongous mahogany radio in the living room. My father was involved in investing and, with his guidance, one of my first holdings was a couple of



Radio fan David Gleason stands in front of the *Broadcasting* Magazine section of his archive.

*Broadcasting Co. vs. FCC* was a case in which the FCC ruled in 1968 that the Fairness Doctrine enhanced the freedoms granted by the First Amendment. This ruling was repealed in 1987, meaning that broadcasters no longer had to provide both sides of an issue to maintain their licenses.)

There are now about 1 million pages on *americanradiohistory.com*, representing almost 189 GB of files. Not every publication is represented; there are permissions to consider, and not every company responds to his requests,

shares of Storer Broadcasting. I wanted to listen to every station they owned so I got into DXing. Then I started visiting stations, which led to my first radio job, at WJMO(AM)/WCUY(FM) in Cleveland, where I filed records and cleaned bathrooms. After a year of that, I started getting paid."

And what was he paid for?

"We had a personality around 1959 who liked to scream on the air," he said. "And every time he did it he knocked the transmitter off the air, so I'd turn it

(continued on page 24)



These RCA *Broadcasting News* covers are examples of the archival treasures found in Gleason's collection, stored at *americanradiohistory.com*.



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Paul, we couldn't be more  
proud. Cheers!



## ARCHIVES

(continued from page 22)

back on.”

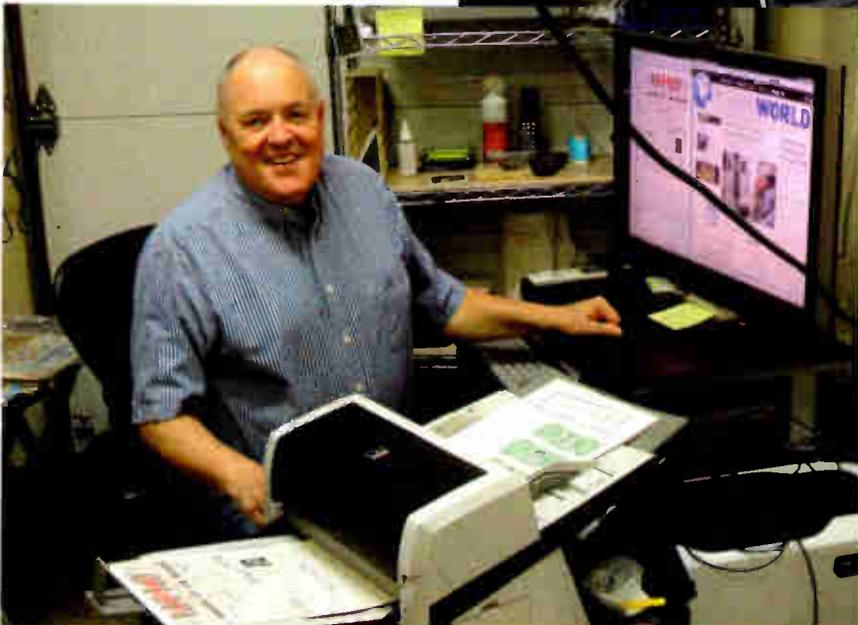
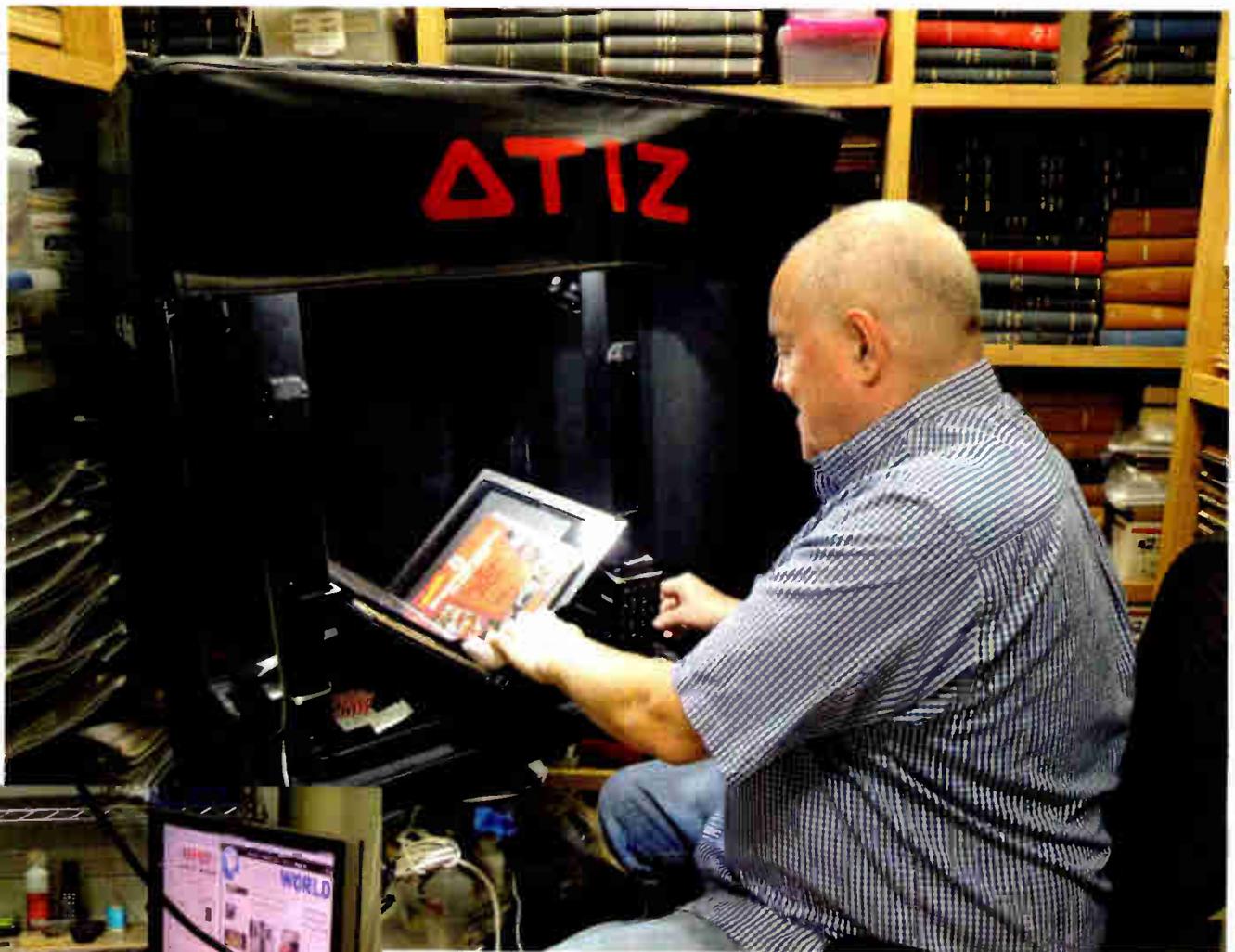
Gleason gained engineering experience and later built stations in South America. Eventually he got his “first ticket” from the FCC.

“When I was completing high school in Ecuador, I picked up a license for a full-time AM on 570. After I bought all the equipment, I found nobody there had experience with solid-state devices, and no one had ever seen a cart machine!”

“So while we were waiting for the studios to be built, I sped through several Cleveland Institute home study courses and, amazingly, was able to install the studios myself. From 1964-1970 I was chief engineer of what became a 12-station group.”

### THE MAN LOVES RADIO

Gleason is simply fascinated by the technical side of radio.



Hard at work with all the tools he needs: a computer and a Fujitsu fl6670 scanner.

**Ready to scan:** Gleason uses the Atiz Bookscan Mini for archiving, which includes a ‘darkroom’ hood.

“There was one magazine called Radio Digest, which was published from 1922–1927 which had articles about stations of the day,” he said. “That magazine was beautifully illustrated and written. Sometimes when I’m scanning things, it takes me four times as long because I stop to read the pages.”

In addition to amassing radio arcana, Gleason had to teach himself Web development.

“All the scans on my site have been OCR’d (converted using Optical Character Recognition) so that everything of significance has a searchable index. So if you are interested in WSM(AM) between 1940–1950, you type that in and see every reference from that decade. This is something that even a library doesn’t have available.”

In order to store all the hard copies in his collection, Gleason built a climate-controlled extension onto his garage. Some especially rare publications are sealed in plastic bags.

Radio World asked Gleason to name the one item he could never get, the “holy grail” he would like to add to his collection.

“The first 50 issues of RCA Broadcast News,” he said. “They are such beautiful magazines graphically. I’ve found several people who have large collections from the late ‘40s to when it ended in 1984. I would sure like to have the pre-1947 issues.”

Other magazines he would love to add are the earliest issues of Broadcast Engineering and BM/E (Broadcast Management and Engineering).

### NOW AND FOREVER

Gleason has given some thought to what will happen to his radio archives when he is no longer around to maintain it.

“I want to make sure there are custodians for the raw data,” he said. “And I am setting up an endowment to take care of keeping the server up in perpetuity. Also I need to find radio fans that care for and love what this represents.”

David Gleason wants to get the word out to anyone who has printed material that should be preserved.

“I’ll send them a shipping label, prepaid,” he said. “I can even scan the items that people have and send them back.”

Your donation is not tax-deductible, but Gleason said that is not an issue.

“We don’t yet have a non-profit set up,” he said. “But the kind of documents I have on the site have limited appraisal value, other than that derived from the contributor when he makes scarce things available to others for the future.”

How about it, Radio World readers? Write to [david@americanradiohistory.com](mailto:david@americanradiohistory.com).

*Ken Deutsch is a bit of a radio relic himself. He can be reached at [ken@kendeutsch.com](mailto:ken@kendeutsch.com).*

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**WHO'S BUYING WHAT**

**KLJY(FM)** in the St. Louis area added a new **Harris HPX** tube transmitter of 40 kW power level. Dave Obergoenner is director of engineering of the station, which goes by the moniker **99.1 Joy FM**. The station airs analog but Obergoenner told Harris he expects it will add HD Radio in the future. ...



The new Harris HPX transmitter at 99.1 Joy FM.

Axia Audio reported recent sales. California Lutheran University's **KCLU(FM)** in Los Angeles (Thousand Oaks) purchased two Element consoles with PowerStation console engine and routing hardware. **KRWG(FM)** at New Mexico State University in Las Cruces, N.M., ordered a DESQ console with QOR.16 console engine. **LKCM Radio Group** purchased two Axia 14-fader iQ consoles with QOR.32 engines, three DESQ consoles with QOR.16 engines and multiple xNode AoIP interfaces for Dallas/Ft. Worth FM stations **KTFW**, **KFWR**, **KRVF** and **KRVA**.

Sister company **Omnia Audio** said Omnia.11 broadcast processors are now in operation at **KBIG(FM)** Clear Channel in Los Angeles; at **WHKQ(FM)** in Orlando, Fla.; and at **KOJB(FM)** in Cass Lake, Minn. ...

Italy's **Radio Maria** purchased 38 Tieline Bridge-IT IP audio codecs to use as IP links. The codecs will distribute broadcasts to various transmission sites in Italy. Charlie Gawley, Tieline's vice president of sales for APAC and EMEA, said the product was tested at several sites over several months. ...

**Beasley Broadcasting** purchased several **Elenos 1** and **2 kW** transmitters as back-ups at its facility in Estero, Fla., according to Elenos U.S. Sales Direc-

tor **Mary Ann Seidler**. **KESH Radio** in Dodge City, Kan., purchased a 3.5 kW **Elenos** transmitter. And **Red Cap Catholic Radio** in College Station, Texas, has a new 2 kW **Elenos** transmitter. ...

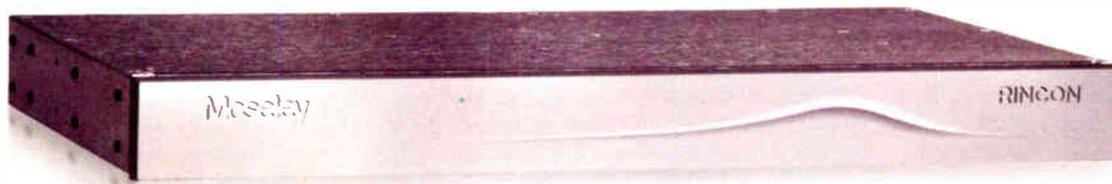
Canadian broadcaster **Rogers Media** selected **WO Automation** for Radio, from advertising management software provider **WideOrbit Inc.**, for its 55 radio stations. Kirk Nesbitt is vice president of corporate and radio engineer-

ing for **Rogers Media-Broadcasting**. ...

**Wheatstone** said **Astral Radio** (Gatineau, Canada) and **Radio Manawan** (Canada) ordered **Vorsis VP-8** digital audio processors through dealer **Marketing Marc Vallee**, Quebec. **Clear Channel** (San Diego) ordered seven **LX-24** control surfaces, 28 **Blades** and several **PC drivers** and **Navigator software**. **Clear Channel** (Portland) added to its **WheatNet-IP AoIP** system with new guest panels and a **Blade**.

**Northern Lights Broadcasting's KHTC(FM)** (Minneapolis) ordered a

**WheatNet-IP AoIP** system with **LX-24** control surface and two **IP-12** control surfaces. **CBC** (Charlottetown, Canada) purchased 10 **WheatNet-IP Blades** with routing utilities and **Navigator software**, while **CBC** (Edmonton) purchased 16 **WheatNet-IP Blades** with routing utilities and **Navigator software**. Both were through **Marketing Marc Vallee**, Quebec. **Fairchild Radio** (Toronto) added an **Aura8-IP Blade** and **PC drivers** to its **WheatNet-IP AoIP** system. **Beasley Broadcast's WNCT(FM)** (Greenville, N.C.) purchased a **WheatNet-IP AoIP** system with **E-1** control surfaces.



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MANUFACTURED IN THE USA

# Montreal's Divided, Vibrant Radio Industry

BY JAMES CARELESS

Two radio markets, one city: that's the best way to describe the radio industry here in Montreal.

Serving a mainly French-speaking metropolitan area that is approaching 4 million in population size, this cosmopolitan Quebec city is home to both French- and English-language radio stations. Each group serves its own advertising base and is governed by different government regulations.

Music and talk formats dominate. But Montreal is also home to specialty stations serving a range of niche communities. These include stations serving multiple language groups, the city's long-established Jewish community, Aborigines and gays/lesbians/bisexuals/transgenders.

That said, it is the French/English divide that defines Montreal into two distinct radio markets, collectively supporting eight French and five English stations. As defined by the Canadian radio ratings service BBM, the "average daily universe" for Montreal French radio is about 2.96 million, while the English audience equivalent is 843,000.

## TWO RULEBOOKS

"Language is the big thing," said Steve Faguy, a Montreal Gazette newspaper reporter who covers local media, and also blogs on the subject at fagstein.com. "This, combined with the fact that Montreal is the hub of French media in Canada as much as Toronto is the hub of English media, means that there's a lot of stuff that gets produced in this city," he said.

Tune across the Montreal radio bands — either on AM and FM — and you'll hear a mix of talk and music. Although the languages used are either French or English, the overall sound is the same. Whatever their mother tongue, Montrealers love engaging conversations and good songs.

Unfortunately, the rules are not the same for French- and English-language broadcasters. In a bid to protect the French language, the Canadian Radio-Television and Telecommunications Commission (CRTC) — Canada's version of the FCC — has decreed that French language stations must play at least 65 percent French vocal music. This high threshold is meant to protect Quebec's French majority from being overwhelmed by the English-speaking cultures of both Canada and the United States.

Meanwhile, in a bid to foster English Canadian music, the CRTC requires English-language stations to play at least 35 percent Canadian-made vocal content. Since the English language is not seen as being at risk, the content requirement is significantly lower than the 65 percent rule for French-language stations.

Like people around the globe, French Canadian listeners want to hear English-language songs, specifically the biggest hits coming from the United States and the United Kingdom. This poses a tremendous dilemma for Astral Media, which owns five radio stations in

Montreal. Two of these stations — CKMF(FM) and CITE(FM) — broadcast in French. The other three — CJFM(FM), CHOM(FM) and CJAD(AM) — broadcast in English.

"We own Virgin (CJFM) and CHOM (both music stations), and when we look at their numbers, between 65 and 70 percent of their audience are French," said Charles Benoit, EVP of Astral Radio (part of Astral Media). At Virgin Radio U.K., which Benoit describes as being Montreal's "big number one radio station," this works out to "more than a million French listeners."

## UNINTENTIONAL CONSEQUENCES

Unfortunately for Astral Media, the company's advertisers refuse to pay for its English stations' French listeners. That's the way things operate here: French listeners are to be reached only on French stations, and English on English. Any crossovers simply don't count — at least for the people who buy airtime.

**Despite unique challenges, Montreal remains a good place to do radio.**

That may seem counterintuitive in a city where most residents are bilingual, but it suits the advertisers. After all, this deliberately blinkered model means that they are actually paying less money to reach the same overall audience.

Mindful of this, Quebec's French-language broadcasters have tried creative ways to retain their listeners while playing within the rules. The most notable tactic is the "music montage," combining a series of English tunes into an extended segment. The montage is then officially logged as a single song, to legally stay within the CRTC's language quota.

Unfortunately for the broadcasters, the CRTC is cracking down on this loophole. As a result, Benoit expects these broadcasters to lobby hard to have the 65 percent rule changed when the CRTC next reviews its radio policies. "We'll try to fight the quota and get it down to a more reasonable 50/50," he said.

Despite these unique challenges, Montreal remains a good place to do radio. "The French language market is worth around CA\$102 million, while the English market is worth around CA\$44 million," said David Bray, a respected Canadian radio consultant and president of Bray & Partners. "Business-wise, these are vibrant markets."

Benoit agrees: "The average Montreal resident still listens to radio more than 21 hours a week," which is good by Canadian radio standards.



Most of Montreal's FM and TV transmitters are atop Mont Royal in the center of town.

## GOOD INVESTMENT

Montreal's radio markets are so good, in fact, that new stations are being started here. For instance, Tietolman-Tétrault-Pancholy Media has won a CRTC license to launch a new French-language talk station on 940 AM and is seeking an English language talk license for 600 AM. Adding new stations in the Montreal market is "a good investment," said Paul Tietolman, a managing partner with Tietolman-Tétrault-Pancholy Media.

If there's a moral to this story, it is that two radio markets can reside in the same city, with both making money while doing so. Granted, the Montreal radio industry is pretty unique by North American big city standards. But as a French-dominated city in English-dominated North America, so is Montreal.

Photos courtesy Wik Commons



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Dan Jackson, engineer for 92.9 FM in Perth, Australia was faced with a unique challenge. Breakfast hosts Paul Hogan and Lisa Fernandez would be cycling for hours in strong winds and pouring rain as part of the 92.9 Kids Appeal for Telethon.

The unique solution was to equip Dan's bike as a mobile production facility. The talent wore wireless mics AND in-the-ear monitors which communicated with receivers and transmitters in a rack bag on Dan's bike.



on-air feed as the trio traversed the winding roads of Perth. How did it all work out? Absolutely flawlessly – the show went on without as much as a speed bump!

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# ESPN Assesses Cross-Platform Behaviors

Arbitron and ComScore take a different look at consumer/media interactions across media

BY DEE MCVICKER

Just about the time we finally warm to the fact that our audience is tuning in, along comes a new breed of listener with a smartphone in one hand, an iPad in the other, an eye on television, an ear to radio and a PC within arm's reach.

## CROSS-PLATFORM

The changing habits and new devices of today's consumers are major game changers for radio broadcasters and other purveyors of advertising, who are looking to a new audience measurement project initiated by ESPN for answers.

Arguably the largest sports network around, with the broadest reach into all five platforms, ESPN has been studying multiplatform use for 12 years. In October, the network teamed up audience measurement pros Arbitron and ComScore to launch the first-ever five-platform audience measurement initiative.

### RADIO, 'FRONT AND CENTER'

Until now, cross-platform audience measurements from research companies like Nielsen largely have centered on television and online video use, with little if any measured consideration of radio use.

By enlisting Arbitron's PPM technology and ComScore's Internet and panel-measurement methods and technology, ESPN expects to gain insight into the behavior of its sports fans, who tend to be higher wage earners and loyal radio listeners as well as early adopters of new technology, according to Glenn Enoch, ESPN's vice president of integrated research in New York.

"We've done different studies that indicate something like one-in-six minutes that people spend with ESPN, they spend on an ESPN radio affiliate. Radio is very big in sports, and it's big for

ESPN in a way that it is not for other content providers. For us, it's front and center, and that's why it was important that radio be one of the platforms we study here," said Enoch.

The plan is to combine the tried and true measuring technologies of both companies, in order to arrive at overlapping behavior findings that will be useful to ESPN, and eventually to other content providers. They hope to discover how and when individuals are exposed to content while listening to the radio and using a smartphone or tablet at the same time (for example).

**It's the first initiative that has to do with unduplicated reach and frequency on a big scale.**

— Jane Clarke,  
Coalition for Innovative Media Measurement

"We already know that they're using iPhones and listening to radio," Enoch said. "The tricky part is figuring out the duplicated audience across the platforms. How many people are watching TV and using a PC? How many are listening to radio and using their smartphones, but not their tablets? That's the kind of measurement we don't have and we hope to get from this."

The trio finalized their partnership during Advertising Week in New York.

ComScore brings to the table critical Web data points and demographic information taken from the browsing and transaction behavior of approximately 2 million opt-in Internet users on PCs, mobile devices and TV set-top boxes. Arbitron brings to the table its "Portable People Meter" technology, covering some 70,000 opt-in people across the country.

For its part, ESPN contributes some 110 million weekly sports fans who reach across video, audio and display content on TV,

as well as online and mobile video, PC web, mobile Web, apps, tablets, digital audio and radio.

"We're watching this very closely, because it's the first initiative that has to do with unduplicated reach and frequency on a big scale," said Jane Clarke, managing director for the Coalition for Innovative Media Measurement in New York, a group of content providers and media agencies formed in 2009 to foster new media measurement technologies and methods.

She says the media industry has embraced multiplatform use as the new normal, citing one important initiative known as Touchpoints, now being used by Katz and other media buyers as an integrated channel-planning tool. But

what has been lacking is a way to measure cross-platform usage of individuals, or what Clarke calls a single-source, multiscreen measurement.

### FORMING 'TOUCH POINTS'

Explained Clarke, "This particular area of cross-platform research is really important because it's understanding how an exposure to an ad or content occurred across all these platforms in an unduplicated way. So for a certain

number of impressions for an ad, was it the same person that saw that ad a number of times across all platforms? Or, was it unique people across all those platforms that saw that ad?"

Of interest are 31 different consumer behaviors — 31 represents the number of circles drawn for each platform as well as their overlapping circles as they relate to each other.

Both Arbitron and ComScore did similar, yet separate, research on a much smaller scale under CIMM pilot



iStockphoto/Don Bayley

studies. The ESPN/ComScore/Arbitron partnership up-sizes the scale and scope of research and adds the fifth platform: Radio.

The two companies play on each other's strengths and weaknesses, too.

ComScore offers methodologies combining data received from its opt-in panelists with the server traffic data to get the scale needed for meaningful audience measurement. Arbitron's PPM offers both an individual measure of media consumption, as well as a mobility aspect that is hard to replicate with other methods.

"Arbitron has been so innovative with their PPM. Without that whole footprint for radio, we wouldn't be where we're at with this," said Clarke, who cited CNN, CBS and Univision as a few of CIMM's members interested in the radio findings of the multiplatform study.

Initial findings from the five-platform study could be available for industry consideration and use as early as next year, with phase two expected to follow soon after. Phase two will broaden in scope to measure advertiser campaigns and eventually could be available as a syndicated model available to advertisers and advertising agencies.

"This is about forming touch points with sports fan throughout the day. Twenty years ago if you advertised on ESPN, you were basically reaching TV audiences, mostly at home," said Enoch. "Now if you advertise on ESPN, you can reach fans the minute they get up in the morning to the moment they go to bed at night."

Dee McVicker writes regularly on the broadcast industry.





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# Bring Out the Best in Your Listeners

How to address negative feedback with grace and aplomb

Being dissatisfied about something is part of human nature; so it's not news that radio stations hear complaints from listeners on a regular basis.

It used to be that the vast majority of such complaints would funnel through the request lines in the control room. To music stations, most of the griping would be about the songs played: "Why do you constantly play the same stuff!" "That song sucks!" "You play that song every day at the same time. I can set my watch to it!" Et cetera.

If a caller sounded serious enough about an issue, the DJ typically would either take down the caller's number and give it to the program director, or ask the caller to phone the PD directly.

While complaints still do come in via phone, most are now showing up on Facebook, Twitter and email. Which means that often station managers tend to view complaints as a nuisance and a



**A complaint is an opportunity for a station to turn a detractor into a fan.**

waste of time.

However, I continue to believe that a complaint is an opportunity for a station

to turn a detractor into a fan. Because of the viral nature of social networks, it's more important than ever to have a standard operational procedure in place to deal with disgruntled listeners.

Let's look at a ways for you to develop your own plan.

## TRIAGE SYSTEM

Complaints range anywhere from trivial to a potential lawsuit waiting to happen. Staff members who respond to listeners via email or phone — and especially those who handle social media — must understand the difference and be able to triage a complaint so it can be processed quickly and appropriately.

Your "Level One" complaint might concern music repetition, talk show topics, the number of commercials and other mundane issues. PDs should of course be aware of these; but the talent and producers should be equipped to deal with such issues on their own.

"Level Two" complaints could center around poor reception or interference on-air or online; alleged on-air or online misinformation; or something said or written by a station personality.

"Level Three" complaints could be alleged personal attack, contest fraud or charges made against a station staffer. These are serious enough to warrant attention from your GM. Issues that fall into the levels two and three should immediately be forwarded up a notch to higher management so they get dealt with directly. These kinds of complaints also require supreme listening skills and communication finesse.

Set a station-wide time window for dealing with complaints. The method of response must also correspond to the medium used to lodge the gripe. For example, Facebook posts are most

## PROMO POWER



Mark Lapidus

relevant when they are fresh because they are more likely to be seen virally by more people. (Note that time can work against you when dealing with a viral tweet.)

Direct emails and phone calls, which are still one-on-one communication, can probably wait a bit longer; however, since our society's patience is diminishing, don't put off getting back to someone by the appropriate deadline. Typically, it just makes matters worse.

Ignore issues at your own peril, especially in the social space where pile-ons happen quickly and negativity spreads about your brand. It's amazing how many stations today have Facebook pages where listeners are just trying to communicate and nobody is responding.

Hello ... is anyone home? Or is a machine running your radio station?

## OUCH!

Here's the opportunity part: When you begin a dialogue with a listener and he or she senses that you care about his or her concerns, most of the time the listener will thank you. He or she will even say something nice about your station.

Remember, people listen and interact with your brand because they like you in the first place. If they didn't enjoy something about your product or what you're doing, they wouldn't try to contact you to tell you about it at all.

And then there are occasions when you have to extend yourself a bit to convert a temporary enemy.

Here's an extreme example, but one I'll never forget. I was watching a prize crew hand out CDs prior to a concert. One of the genius interns decided it would be more fun to throw the CDs, like they were Frisbees, into the crowd.

You guessed it: A CD slammed into a concertgoer's head, cutting him with its sharp corner. Fortunately, having served as witness to this sad state of affairs, I was able to rush over to the injured party. After buying him a beer and offering him free concert tickets to the next show at the venue, I had made a new friend who was prepared to forgive and forget.

Don't underestimate the power of a personal conversation, whether via social, email, phone or in-person. That "real" interaction allows us to connect as human beings — and with effort we can make friends and bring out the best in people.

The author is president of Lapidus Media and a longtime contributor to Radio World. Email [marklapidus@verizon.net](mailto:marklapidus@verizon.net).

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# MARKET PLACE

**'PROFOUND REALISM':** Audio-Technica is excited about its new, high-end studio microphone, the AT5040.

The 5040 is intended to be the first of the 50 Series of high-end studio mics. It celebrates Audio-Technica's 50th anniversary. Price: \$2,999.

A-T says the side-address condenser is notable for "remarkably musical high-fidelity performance ... profound realism and depth, presence and purity of sound." The company calls this model its "ultimate studio vocal microphone."

It uses four extremely thin (2 micron) rectangular diaphragms; the designers believe this approach gives it a combined surface area that standard round diaphragm can't offer.

The 5040 is suitable as a vocal mic and for recording acoustic instruments such as piano, guitar, strings and saxophone.

Info: [www.audio-technica.com](http://www.audio-technica.com)



**AQUIRA 2.0:** RCS released Aquira 2.0, the newest version of its traffic and billing platform.

Proposal and contract warnings are now displayed for inventory levels and accounts receivable status to alert approvers such as sales, AR and traffic. Client security can now be set independently for leads, prospects and clients. "Station group versions" allow you to configure changes to the station clusters in your radio business.

Also, rate cards and base rate cards have been enhanced to have allow more flexibility for managing rates and weekly half hour moveable/flexible spot format is now available.

Additionally, Aquira 2.0 can import master data from Excel and import an Airwaves booking from AirMail.

RCS also announced improvements for the Aquira Online program, a Web-based sales tool.

Weekly moveable/flexible spot formats are available. The system offers performance optimizing for the spot grid for larger proposals and contracts. Proposal and contract warnings are now displayed for inventory levels and AR status to alert approvers such as sales, AR and traffic.

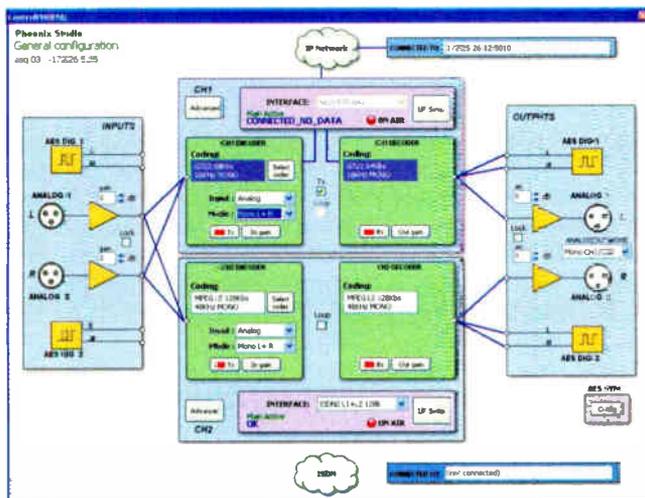
Client security can now be set independently for leads, prospects and clients. Station group versions allow users to configure changes to the station clusters in a radio business. Avails, budget, revenue, spot analysis and transactions report categories are now available.

Info: [www.rcsworks.com/en/](http://www.rcsworks.com/en/)



**PHOENIX ON THE MOVE:** AEQ released several new features for the Phoenix Studio and Phoenix Mercury.

The PhoenixControl remote control software, shown, allows users to manage and configure all AEQ audio codecs remotely — with the exception of the Phoenix Mobile — through any PC running on Windows. The software delivers additional functions such as



common and individual phone-book management with import/export utilities, events log, configuration save/load/reset, and remote high-resolution VU meters.

The new software permits the user to visualize each installation as a tile of individual control windows or as a list. AEQ provides a single-codec version of the PhoenixControl software as standard. Multi-codec management is available for download at an additional optional license fee.

The company also announced its advanced SNMP manage-

ment system, which authorizes Phoenix codecs to communicate with up to three clients, allowing integration into an existing system (including equipment from different manufacturers). The SNMP provides general alarms such as no audio, and loss of connection, and if a problem is detected, the PhoenixControl software can examine the faulty unit in further detail.

The new multiple-unicast feature means Phoenix codecs can now send IP audio streams to multiple destinations, using standard broadcast and multicast addresses within local networks or a predefined list of remote IP addresses. Thus the operator can select a single contributing source from a remote network location and send to a central station. This feature, says AEQ, is particularly useful since it allows the operator to send the same program to several regions or transmitters using a single codec for transmission.

Info: <http://aeq.eu/>

**TELOS VX SOFTWARE:** Telos updated its IP-based VX broadcast Ethernet phone system.

Updates are available for the main VX engine, Version 1.1.1 and for the VSet12 handset, Version 1.1.0.

According to a release the update should improve noise gating functions, improve caller ID functions, tweak NTP performance add DTMF tones in "on-air" mode and support Nortel CS1000 switches.

The VSet should now be able to be configured and updated via Axia iProbe network management software.

Info: <http://telos-systems.com/support/software.htm>



## WGN

(continued from page 1)

of the old one," Langmyer recalls of the phone call when he summoned the 67-year-old Carollo.

"I think my sales skills worked."

Carollo continued to work a part-time schedule in November and December of 2011 as he sketched out initial plans for the move. At the end of 2011, Tribune management signed off on the relocation, giving Carollo and his team just six months to clear out of their ground-floor digs.

"The nice thing about working for WGN is that you get to do the project the way you think it should be done, which you don't get to do everywhere," Carollo says. He prepared a budget for the move, which Tribune accepted without change, and the whirlwind project was underway.

"I had a lot to do in a short time," Carollo recalls. "By the time we got to April, it became pretty much a full-time thing. I was working from six in the morning until six at night, but we got it done."

Much of WGN's new space on the seventh floor had been occupied by offices for the McCormick Foundation, the charitable legacy of the long-time Tribune publisher, Col. Robert McCormick. The foundation moved out after McCormick's heirs sold the company, freeing the space for the radio station, which shares the seventh floor with CNN's Chicago bureau offices and the Campbell Hall meeting room, which was, fittingly, one of the original TV studio spaces.



Jim Carollo and former GM Tom Langmyer in the newly completed rack room.

Divided into three "pods," WGN's new home spans both the original Tribune Tower and an addition that was built in the 1950s for TV. An area on the north side of the TV addition now provides office space for WGN Radio's top management and its programming

staff, as well as three production studios. Down a corridor on the east side of the building, WGN's new sales and conference area enjoys a scenic view out to Lake Michigan a few blocks away.

Most of WGN's broadcast operations are housed in the third part of the facil-

ity, in the original Tribune Tower building facing westward out to the bustle of Michigan Ave.

Langmyer says the windows on the seventh floor make a big difference to a staff that had been deep inside the ground floor studios.

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Before: The old rack room.

“The studios and guts of the station were all inside the building, so you could be doing all these shows and people would have no visibility inside,” he recalls.

The new studio area includes a pair of air studios arrayed along a corridor across from a new rack room and a traffic studio. On the other side of the studio core, WGN’s new newsroom also enjoys the Michigan Avenue view as well as sightlines into a sports office/studio and an office/studio area for WGN’s iconic agricultural director, Orion Samuelson.

**THE SYSTEM**

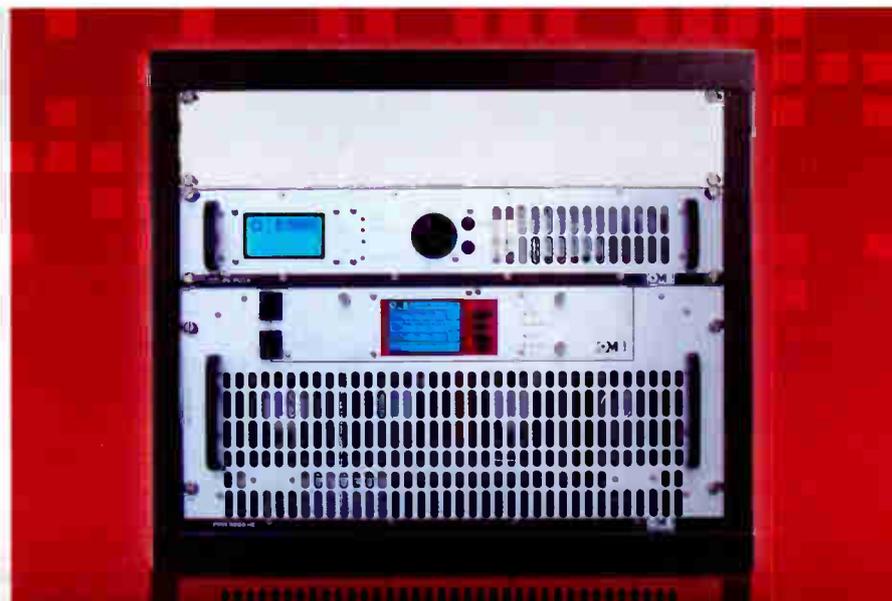
“The audio system is mainly Wheatstone,” Carollo said, which is also in place on the TV side. “Rather than reinvent the wheel, we wanted to be compatible with what they know there.”

For a station that’s heavily dependent on telephone talk, the choice of a phone system was a critical decision. “We had to replace the custom phone system we built in 1995. It came from Gentner, which of course is no longer in business. It was a purely analog system, which in today’s world no longer flies.”

In its place, WGN picked the Telos VX system. “It’s expandable, it’s digital and for the future it’s going to be what we need.”

*(continued on page 34)*

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# WGN

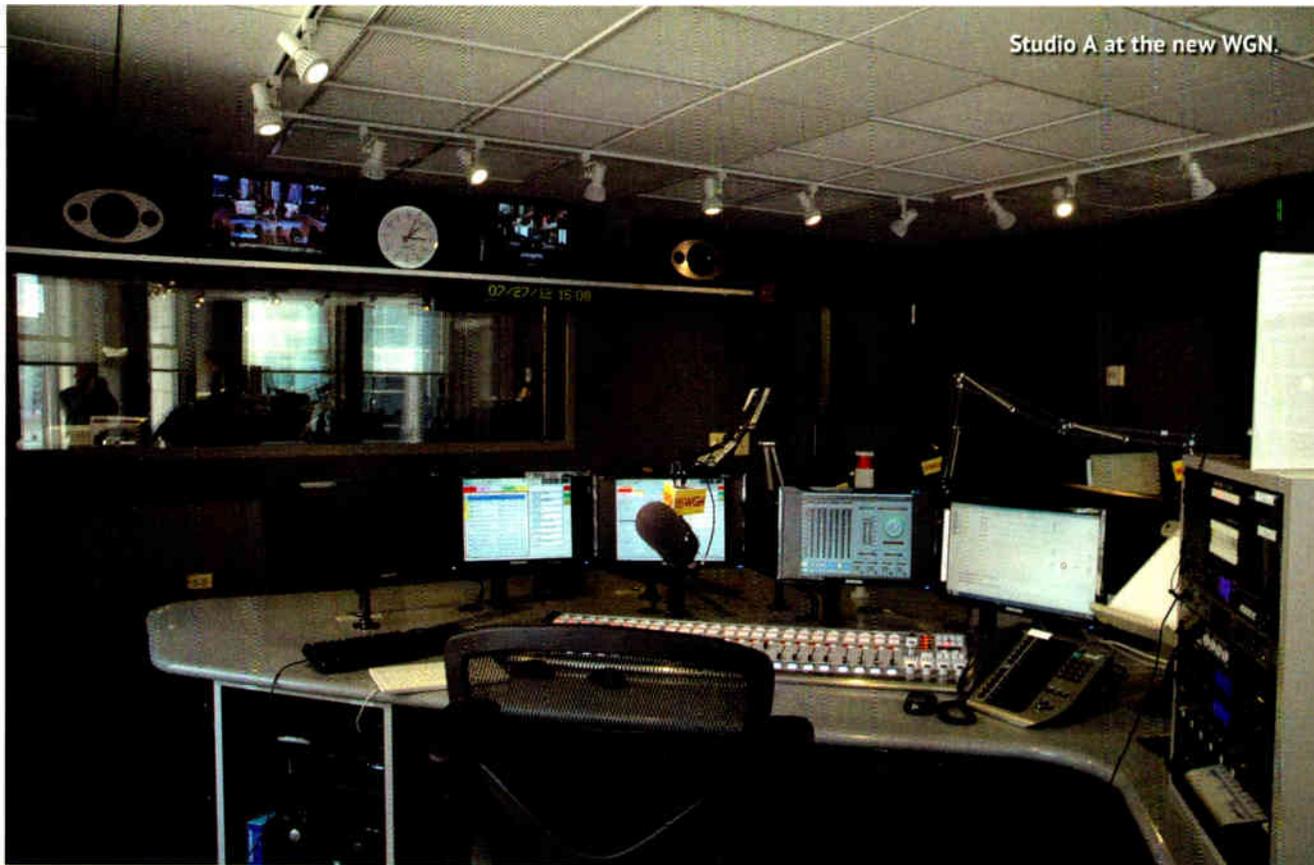
(continued from page 33)

Amidst the new consoles and phone system, Carollo decided to move one piece of the old facility essentially unchanged, sticking with the existing version of BE AudioVault that was running in the downstairs studio.

"We felt it would be too much of a shock to the engineering department and to the station to put in a new automation system, even just to move up to the current version of AudioVault," Carollo says. "We had enough redundancy in the system, with multiple servers in multiple rooms, that we could move the backup server to the seventh floor while we stayed in operation from the main server downstairs."

When you're moving a big-market station, the quirks of the air talent come into play, too, which is why a pile of older MiniDisc recorders made the trip upstairs.

"Some of the talent still like to use MiniDiscs," Carollo says, "but every-



Studio A at the new WGN.



Studio B at the new WGN.

where there's MiniDisc, there's also a new flash drive recorder, so we're getting them moved over."

The different needs of different talent are reflected in the new studios' layouts as well. The large "Studio A" at the end of the corridor is designed for combo operation and the large cast of WGN's Garry Meier morning show.

"About 85-90 percent of our programs run combo," Carollo says, "but for other shows, especially 'Extension 720' [WGN's evening talk show], we need a separate operator, so we had to have a studio that was designed to do that." WGN also holds the play-by-play rights for Cubs baseball, Blackhawks hockey and Northwestern University sports, which all require board operators but not necessarily studio hosts.

"So that second studio, Studio B, we divided into a dual-function studio so it can be a combo studio or an

operator studio."

When there are multiple sports teams playing at once, the production studios on the administration side of the building can also be brought into play, providing still more options to meet WGN's programming needs.

Adding the rebuilt Showcase Studio to the mix — it's in use most days from 9 a.m. until 11 p.m. unless WGN is running sports — gives Carollo and his engineering team plenty of flexibility for maintenance and emergency repairs.

Because the new studio layout did not allow for sightlines between the newsroom and the air studios, or between the traffic studio and the air studios, Carollo turned to high-definition video to link the rooms and provide continuity on the air.

"On the first floor, we had simple security-type cameras in every room so you could see the host, and just a 20-by-

20 video router," Carollo says. But the team wanted something more elaborate for webcasts and simulcast with the TV operation, so it put in HD cameras on the LAN. His colleagues on the TV side helped design that.

The new video system puts a split screen on the 24-inch monitors in each studio, allowing hosts and producers to easily see who's ready to go on the air, including the TV weather forecasters who deliver their reports from the TV studios several miles away.

icons such as Bob Collins had worked, was preserved intact as a donation to the nearby Museum of Broadcast Communications, where it will eventually be reassembled for display.

"We had about five days to move what we really needed into a part of the ground floor that wasn't being demolished," Carollo recalls. "The strangest thing was to walk into the space that had been a radio station just a week ago, and there was almost no trace that it had ever been a radio station."

**The nice thing** about working for WGN is that you get to do the project the way you think it should be done, which you don't get to do everywhere.

— Jim Carollo

As the clock ticked down to the July 1 deadline to be out of the ground-floor space on the south side of Tribune Tower, Carollo was working right up to the deadline to get everything ready upstairs.

"I turned it on June 30 at 10 p.m., two hours before that day ended," Carollo says. "I made July 1 by two hours."

Once the new studios went on the air on the seventh floor, Carollo had to move very quickly to salvage anything that was still needed from the old studios. Some peripheral equipment, including CD players and those MiniDisc recorders, was moved upstairs to the new studios. The contents of WGN's large main talk studio, where

Once the initial rush of the move was over, Carollo still had to oversee the reconstruction of the Showcase Studio, the last piece of the facility to be updated.

"It took about two months to fine-tune everything," Carollo says. On August 24, he celebrated his last day as a full-time WGN employee, but he still spends a day a week at Tribune Tower to make sure everything's functioning smoothly.

Langmyer says the result reflects the importance Tribune places on its lone remaining radio property. Without disclosing specific numbers, Langmyer says WGN spent "north of a million dollars for the studios alone," in addition to the cost of the office relocation.

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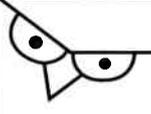
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Optimod 8100, BO; CRL left & right processors, BO; DeMark automation system for AM, FM, News, Productions and server, includes all cables, computers, BOB's, sound cards and two music libraries, taken out of service this year, \$6000. Bill Hearst, [clarionradio@comcast.net](mailto:clarionradio@comcast.net).

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## Radio World Talkback

*Comments shown were posted by readers to stories that appear at radioworld.com. For links to the original stories, see radioworld.com/links*

*"I program a 100 watt LPFM. With good propagation, it gets about 10-12 miles. With bad propagation, it gets about five miles. An LPFM should be able to be heard consistently 10 miles around its transmitter site. The NAB is advocating for the big broadcasters, yet their charge is to promote all of broadcasting. LPFMs should be allowed 250 watts, where stations will fit. It's not unreasonable."*

*"I'm wondering why does NAB and NPR always oppose anything about LPFMs? What are they scared about!? In LPFM new talents and programming could evolve, to make FM/AM radio exciting to listen, not like today's auto-jock-computerized-boring-radio. LPFM isn't a competitor to NAB and NPR. The competitors are services like Pandora, Spotify and the listener's own music on his/her smartphone."*

*— on "Channel Spacing Is Concern as FCC Crafts More LPFM Rules"*

**"Any proposal which requires the public to go out en masse and buy new receivers is probably doomed. Unlike with television, which could get away with such a plan because it offered unique programming, there is NO compelling reason for most of the public to invest in new receivers — everything found on the radio can be found through other media."**

*— on "A Few Points About Channels 5 and 6"*

*"Nice first move, Mr. Scarano: Take the greatest rock station in the entire southeastern United States, a radio institution in Atlanta since 1974, and turn it into yet another superfluous pop outlet. Here's hoping that experiment fails."*

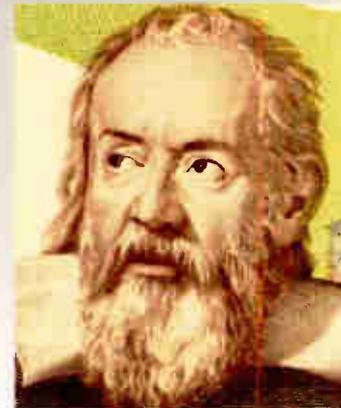
*— on "Scarano Takes Over CC Atlanta"*

*"The following quotes tells us humans how we really reason! :-)"*

*'Science advances one funeral at a time.' — Max Planck, the father of quantum theory.*

*'In questions of science, the authority of a thousand is not worth the humble reasoning of a single individual.' — Galileo Galilei."*

*— on "Twisted Waves Revisited"*



istockphoto/Georgios Kollidas

*"Great description of what can be a daunting process if you're not familiar with how it all goes together: the only change/addition I would make is to finish it off with adhesive-lined shrink tubing of the proper size over the cable/barrel end of the connector to add strain relief, and waterproofing if the connector will be exposed to the elements."*

*— on "Installing Connectors the Right Way"*



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**OPINION**

**READER'S FORUM**

**HEY AM: TV NEEDS ITS CHANNELS 5/6**

When discussing the proposal to fit AM stations into Channels 5 and 6 on the VHF band ("A Few Points About Channels 5 and 6," Nov. 7), I'm glad someone at the Broadcast Maximization Committee finally acknowledged this inconvenient fact: the FCC's proposed confiscation of 120 MHz of TV band spectrum and the repacking of thousands of DTV stations into 40 percent less spectrum.

This will obviously necessitate the need for Channels 5 and 6 by television broadcasters (yes, yes we all know low-band VHF is kinda lousy for DTV).

Speculation among low-power TV broadcasters and translator owners is that VHF will probably be our new home — and there are thousands of us.



But wherever LPTV and translators end up is beside the point. And the key point is this: Putting AM stations on another band does not solve the problems of the AM band itself.

As noted, assigning AM stations on Channels 5 and 6 requires new radios and FM translators that will never replicate an AM station's full coverage.

If Commissioner Ajit Pai is serious about an AM revitalization initiative, then the FCC needs to consider how AM stations can improve the listener experience within the band itself — not elsewhere. It may involve tighter regulations on unlicensed devices in addition to the boost in power that Mr. Pai suggested.

If all digital AM is the answer, then the commission needs to examine iBiquity's "annuity for life on the backs of radio stations" license scheme.

Whether iBiquity acknowledges it or not, their licensing arrangement is a major impediment to many stations adopting HD Radio, particularly in small markets. And given that there are relatively few HD Radio receivers in the marketplace, perhaps the commission still has time to consider another digital system for AM such as DRM, or to resurrect and mandate AM stereo.

And if another band must be considered, how about petitioning the FCC to open up the shortwave bands for domestic use?

Another problem AM station owners face is land-use issues regarding their transmitter sites. The land is often worth more than the towers sitting on it; and many people have taken a NIMBY approach to allowing transmitter towers into the neighborhood.

Can the FCC do more to encourage the development and rapid implementation of new, more compact antenna designs for city use? How about the use of a single-frequency network for AM?

Whatever can or can't be done in this area, the fact remains that unless the clouds part and a miracle happens in Congress or with the commission, television broadcasters are going to be forced into a much smaller slice of spectrum. And should that happen, we will need Channels 5 and 6 for ourselves.

Daniel Brown  
Owner/Station Manager  
KSLN(LD) Channel 46  
Morro Bay, Calif.

**AM CALL TO ACTION**

It's late Friday night and I just finished reading the latest round of thinking as it pertains to digital AM radio.

It was mentioned that there needs to be a change of thinking, to use the mostly vacant TV channels just below the current FM band. To be honest, I have beat that horse to death and have nothing to show for my efforts.

But what better way to offer some form of relief to AM broadcasters that is actually a plus? I know that some would say, "Wait, there are no receivers available to tune FM in the old TV channels." But with current technology, that argument just doesn't hold water.

In fact, I have a 20-year-old receiver that will tune the entire TV band and play stereo FM. With the advent of software-defined radios, there is no excuse not to consider this option seriously.

I understand that there is the government factor; but if they are as serious as they say they are about lending a hand to AM broadcasters, they have to change their thinking.

Unfortunately, all they can think about is broadband. How many Wi-Fi systems do they think we need? Yes, there is serious clogging of the 3G and 4G systems; but that's what happens when you mass-market something that will break your network. This was very poor planning. The same can be said for the massive growth of cell phones. Why was this growth a surprise?

There is still no excuse to refuse the idea that two TV channels could solve a world of problems, with little fuss.

My original proposal would give AM broadcasters a first shot at any new addition to the FM band that would be created. Obviously, some broadcasters would not move, but at least they would be offered the chance to advance their lot in life.

Currently, due to FCC policy, we have 15,000 radio stations. In quite a few markets, the dial is saturated with stations trying to survive in the radio forest.

We need to be serious about getting some room to thin out the herd of stations. If room was created to move AM stations into the VHF band, there would be room, and a level playing field for all. From there, it's a matter of what content makes the winners and losers.

Yes, a move would be a financial burden to a number of stations; but would the move ultimately benefit the station involved? In many cases, the answer would be a firm and resounding yes.

The other fly in the ointment is receiver manufacturers. No one can deny that they tend to drag their feet getting current technology to market. Again, with the advent of SDR technology, there is no reason for this to be the case.

It's up to the power brokers whether this change happens, or we are left in the same stalemate as we are now, trying to patch a fix.

Michael Payne  
Twin Falls, Idaho

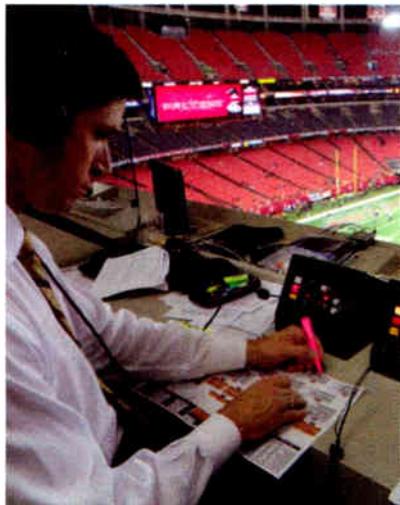
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Yellow Shirt, Alan Roach (left)  
White Shirt, Ed McCaffrey (right)



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