



RADIO WORLD

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ASK AND YOU SHALL RECEIVER

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IT KEEPS GOING AND GOING ...



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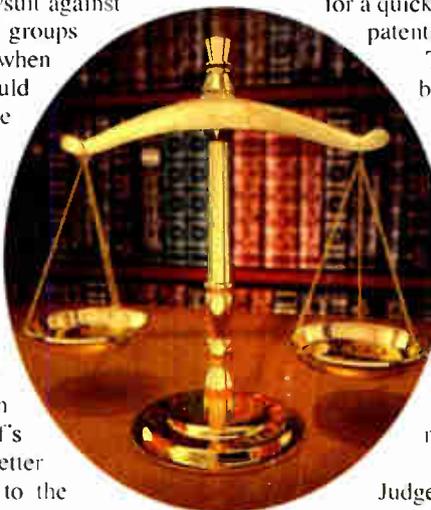
Patent Infringement Suit at Crossroads

Digital media storage/automation system patents to expire in spring 2014

BY RANDY J. STINE

WILMINGTON, DEL. — The federal judge presiding over DigiMedia's patent infringement lawsuit against a number of radio groups is still considering when and if the case should resume now that the question of patentability of the technology appears to have been settled by the United States Patent and Trademark Office.

The broadcasters think two rounds of patent reexamination have left the plaintiff's case diminished: a letter from their attorney to the judge states, "The reexaminations of the two patents greatly reduced the issues in the case and provide a path for streamlined, early resolution."



But the patents have not been dismissed in full, and DigiMedia is pushing for the trial to move forward. Observers agree that the company is likely hoping for a quick resolution, since both patents expire in 2014.

The patents — numbers 5,809,246 and 5,629,867 — target digital media storage and automation systems that radio broadcasters commonly use. The suit was filed by Mission Abstract Data in 2011. Court records indicate that MAD is doing business as DigiMedia.

U.S. District Court Judge Leonard Stark stayed the federal lawsuit in late 2011 following an ex parte reexamination request by Broadcast Electronics, which is not a defendant in the lawsuit.

After one round of reexamination, the USPTO ordered a second in 2012, because "prior art" not previously available had been presented. DigiMedia then agreed to cancel some claims; and the USPTO issued two reexamination certificates this year. Other claims within the patents were narrowed. Nonetheless, the patents survived; and the judge could at any

(continued on page 8)

IEEE BTS Symposium Moves West

AM pattern interference protection was an important topic at San Diego conference

BY JAMES O'NEAL

SAN DIEGO — The IEEE's annual Broadcast Technology Society Fall Symposium, Oct. 9–11, drew approximately 110 participants from the United States and nine other nations, according to organizers.

Although the majority of the event's focus was on television-related developments and technologies, radio broadcasting was not ignored. Audio transport for radio studios, audio codecs and digital connectivity for FM stereo were discussed. So, too, were new FCC rules to protect AM broadcasters from pattern interference caused by nearby structures and the use of voltage sampling units to facilitate AM directional proof-of-performance measurements.

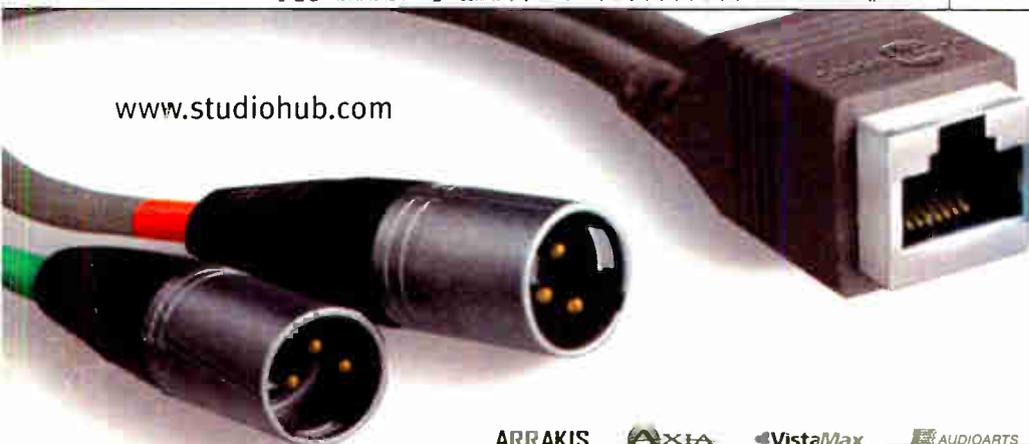
BAD AM NEIGHBORS

As the number of cellphone antenna sites continues to grow, so does the threat of pattern changes to nearby AM broadcast operations from signal re-radiation. However, there is hope for beleaguered facility owners. Ben Dawson, managing partner of Hatfield

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World Radio History



SYMPOSIUM

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& Dawson Consulting Engineers, discussed the situation in his presentation "The Effects of Nearby Structures on MF Antennas and the FCC's Newly Enacted Rules for Protecting AM Stations From Those Effects."

"The presence of possibly re-radiating structures near AM antenna systems has been a problem for a long time and the FCC's behavior with respect to those problems has varied over time," said Dawson. "But we have the benefit now of a newly enacted set of rules that we think that will allow the proponents of a new structure construction involving FCC licensing to at least to have a clear understanding of what's necessary to mitigate the possible deleterious effects on nearby AM stations."

Radio World reported on the changes in October.

Dawson presented a brief history of AM directional antennas — their implementation dates to the 1930s — and described some of the difficulties in making proper pattern measurements in real-world situations. He noted that this led to a petition to the FCC in 1989 to allow "method of moment" techniques in directional proofs, as well as for evaluating re-radiation problems caused by nearby metallic structures. The commission eventually acted on the proposal.

"It took them until 2008 to adopt the rules we suggested after a long series of industry discussions," said Dawson. "But one thing they didn't adopt was the technique for determining the effect of potential re-radiation from other licensed service providers."



Photos by James O'Neal

The warm California sunshine allowed several IEEE Broadcast Symposium events to be held outdoors. BTS President Bill Meintel, center, presents certificates of appreciation to event co-chairs David Layer, left, senior director of advanced engineering at NAB, and Paul Shulins, director of technical operations for Greater Media Boston, in a rooftop luncheon awards ceremony.

Dawson told Radio World that while the new rule will protect broadcasters from cell site or other licensed user re-radiation problems, it doesn't address other potential re-radiators such as permanently installed or long-term "temporary" construction



Man, they better get me down in time for that BSW interface sale!

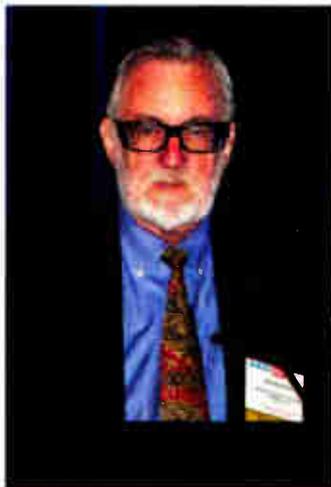
November is Interface Month at BSW!

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That determination was acted upon a few weeks ago; it was to take effect upon publication in the Federal Register, which was still pending. Once effective, AM broadcasters will be afforded protection from encroaching cell site towers and masts. Owners of such structures will be required to perform remedial actions such as adding detuning networks, within certain limits.

"For an omni[directional] antenna, the potential re-radiator has to be 60 degrees or more in height and within one wavelength of the AM antenna; for a directional it has to be within the lesser of 10 wavelengths or three kilometers from the reference coordinates of the antenna system and at least 36 degrees tall," Dawson said.

"If a new structure or the modified structure would cause pattern distortion more than ± 2 dB for a non-directional antenna, then it should be de-tuned. If it's a directional antenna, then the pattern distortion has to not exceed the value of the standard or augmented pattern for that station. If these thresholds are exceeded then the tower proponents are responsible for whatever detuning is necessary."



Once recently passed FCC rules go into effect, AM broadcasters will be afforded protection from encroaching cell site towers and masts, according to Ben Dawson of Hatfield & Dawson, shown.

cranes, bridges, power lines and, most recently, wind turbines. The commission has no jurisdiction over such devices and structures.

NEW VENUE

For more than 60 years, the BTS Symposium was in Washington. Last year, organizers said they would move the event to the West Coast in an effort to draw more and different attendees. The aim was also to make the event more accessible to Western states' BTS members.

San Diego was chosen for the conference after a number of options were explored, according to Paul Shulins, the co-organizer and director of technical operations for Greater Media's Boston cluster.

"In addition to being an easy-to-get-to and a desirable destination, San Diego is in close proximity to Los Angeles and several other large western U.S. markets where a sizable number of IEEE BTS members are located," said Shulins. "This venue provided many of these members an easy opportunity to

(continued on page 8)

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Radio Books Make Great Presents

Looking to stuff a stocking? Here are three titles you might consider

We haven't visited my book shelf in a while! With the holidays coming, here are three titles that would make nice gifts.

Jerome S. Berg was the court administrator for the Massachusetts District Court system until his retirement; but his career in law is not why I mention him today.

Berg has been tuning into the radio shortwaves for more than five decades; and he helps contribute to the survival of shortwave listening as a member of the executive council of the North American Shortwave Association and chair of the Committee to Preserve Radio Verifications.

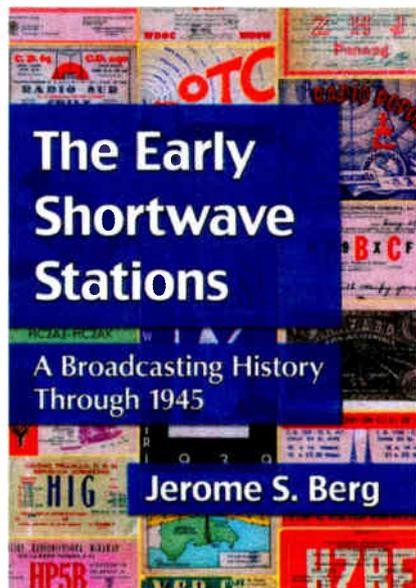
Berg has just authored his fourth and final book in a series about shortwave listening and broadcasting. "The Early Shortwave Stations: A Broadcasting History Through 1945" is published by McFarland.

The first in the set was "On the Short Waves, 1923-1945: Broadcast Listening in the Pioneer Days of Radio" and covered the early years of the medium. "Listening on the Short Waves, 1945 to Today" was about the listening culture, while "Broadcasting on the Short Waves, 1945 to Today" was a year-by-year account of stations on the air.

That third volume contained more comprehensive station information than the first had. So in this new book, Berg returns to the years 1923-1945 and applies the same year-by-year approach.

"Together, the two volumes present as full an account as there is of the shortwave broadcasting stations that were heard in the United States for nearly the entire period of the medium's existence," he writes in the preface, adding that all four books are from an American perspective.

Written in a straightforward chronological style, the book includes some



great photos and plenty of fun QSL cards. Any shortwave enthusiast or radio history buff would enjoy it.

"The Early Shortwave Stations" is 340 pages and published in softcover; it retails for \$45. Berg dedicated it in part to Dr. Adrian M. Peterson, another advocate of shortwave, whose byline has appeared in Radio World several times. Visit www.mcfarlandpub.com.

You may recall that I enjoy the "Images of America" series from Arcadia Publishing. Each book takes a topic in American history, often a very local one, and explores it through a series of wonderful archival photographs. Your hometown or neighborhood may very well be the subject of one of these books.

The series includes several about radio in various cities. The latest is "Seattle Radio," written by John F. Schneider, whose own collection of historical radio photos has often been featured in Radio World and who authored an earlier book

for Arcadia about radio in the Bay Area.

Schneider for many years worked in radio equipment sales in the Northwest and was chair of the SBE chapter there for a time. He acknowledges the challenge of trying to tell the story of "the thousands of important people and events that passed in front of the Puget Sound microphones during almost 90 years."

But he does a super job, and a reader can easily sense the love behind his labor. Here you'll enjoy photos of AM stations KING and KVI; of Vincent Kraft and Larry Nelson; of the Cobb Building and the Northern Life Tower; and of Roy Olmstead, "King of the Puget Sound Bootleggers." The engineering profession is well represented, as in a great shot of the KOMO-KJR

FROM THE EDITOR



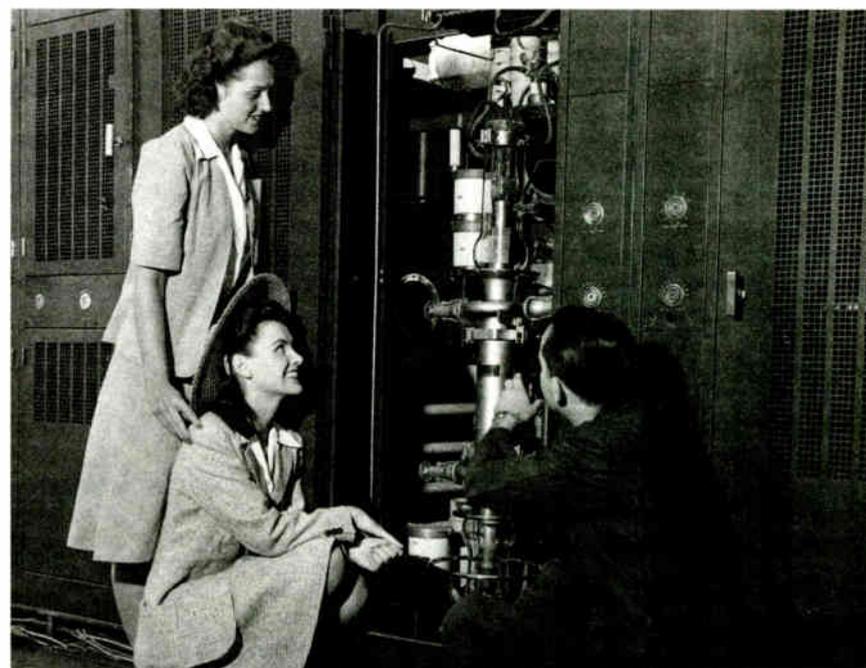
Paul McLane

transmitter staff, where we see a dozen men in suit and ties standing stiffly outside of their facility, and another of James B. Hatfield out on a boat on the open water measuring the signal strength of KIRO(AM).

"Seattle Radio" is from Arcadia Publishing and retails for \$21.99. Find it online, at a bookstore or www.arcadiapublishing.com.

And from prolific publisher Focal Press is a book that came out a year and a half ago but is plenty relevant: "Recording Studio Design, Third Edition" by Philip Newell. The author

(continued on page 5)



From 'Seattle Radio,' KIRO Chief Engineer James B. Hatfield shows one of the water-cooled tubes in the station's new transmitter to Doris Klemkaski, the University of Washington 'Queen of Queens,' standing, and Warner Bros. starlet Ella Raines at a dedication in 1941. Photo courtesy of Hatfield & Dawson.



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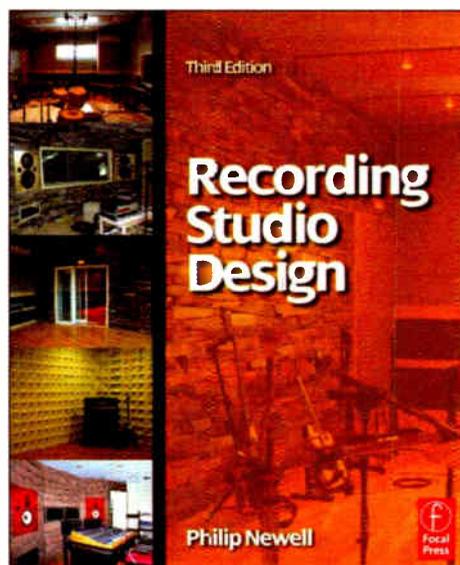
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NEWS**NEWSROUNDUP**

HD RADIO: A Delaware company has sued 14 radio groups alleging patent infringement for using its technology for their HD Radio broadcasts. Wyncomm claims the broadcasters using in-band, on-channel digital radio technology are infringing on its patents and lists Delaware Radio Technologies as the exclusive licensee for the side-channel voice and data transmission technology. The patent describes radio transmission techniques used in the IBOC standard, adopted by the National Radio Systems Committee in 2005. HD Radio developer iBiquity Digital is not named in the lawsuits, filed in U. S. District Court in Delaware on Nov. 1.

FCC: New FCC Chairman Tom Wheeler promised in a meeting with FCC employees that his team would "hit the ground running." Ruth Milkman, most recently chief of the Wireless Telecommunications Bureau, is Wheeler's chief of staff. Philip Verveer is senior counselor to the chairman. Verveer was U.S. coordinator for international communications and information policy at the State Department, and worked at the commission as chief of the Cable Television Bureau, the Broadcast Bureau and the Common Carrier Bureau. Gigi Sohn, former president and chief executive officer of advocacy group Public Knowledge, is Wheeler's special counsel for external affairs. Diane Cornell is the chairman's special counsel. She was a lobbyist at Inmarsat and CTIA, The Wireless Association. At the FCC, Cornell was a legal advisor for three commissioners and to the Wireless Telecommunications, International and Common Carrier Bureaus. Maria Kirby is a legal advisor with responsibility for issues in the Media, Consumer and Governmental Affairs and Enforcement Bureaus.

NEXTRADIO: In stores, Sprint is promoting its smartphone models that have the NextRadio app embedded. Promotions include signage near display phones, Muzak audio promotions and staff trained to demo the app. In November, Sprint also planned to roll out another five NextRadio-enabled smartphones, according to Emmis, the broadcast company that developed the app, which provides FM tuning to local stations plus enhanced data features. Emmis also reported early consumer reactions; a common gripe is the necessity of using earbuds or headphones, which double as the FM receive antenna. The NextRadio team says future downloads or updates will include an alert explaining why the hardware is needed.

*(continued from page 4)*

is a consultant on acoustic design and was technical director of Virgin Records.

In this hefty softcover he covers key principles of successful studio construction, starting with general requirements and common errors. How to approach sound isolation? How much space will you need, how much height, how much floor loading capacity? Then it's on to sound, decibels and hearing; room acoustics; designing "neutral" rooms and rooms with characteristic acoustics; operational considerations; the studio environment; loudspeaker considerations; control rooms; and numerous other practical audio-related topics.

This is essentially a textbook, illustrated with plenty of technical diagrams yet not overly esoteric. Its precepts will serve anyone who must build a studio in which audio quality is a concern, whether that's for broadcasting, video/film or music-making.

"Recording Studio Design" from Focal Press retails for \$89.95. Visit www.focalpress.com.

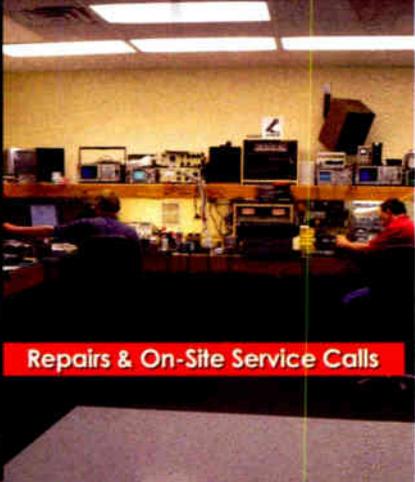
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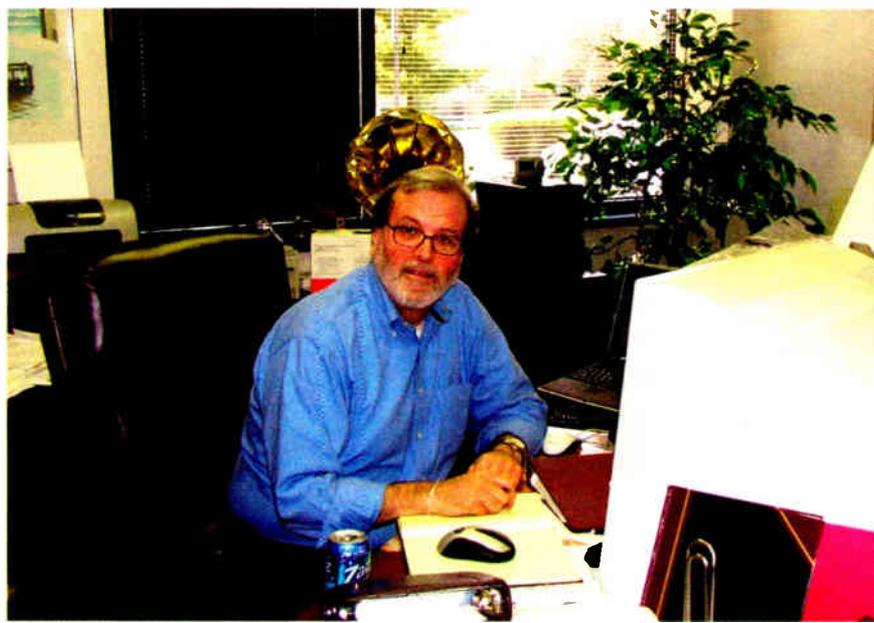
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Richard Mertz Dies at 65

Consulting engineer had pancreatic cancer

Broadcast consulting engineer Richard Mertz has died after a two-year fight with pancreatic cancer. He was 65.

The website of Cavell Mertz & Associates, a Virginia-based firm, reported the news that Mertz passed away Oct. 29 at home with his family; he'd been under hospice care.



Richard Mertz

According to a company biography, Mertz joined the firm in 1994 after already having worked for 25 years in broadcast engineering. His career spanned broadcast television and radio, cable television and communications. The company said he had recently become an authority on the TV "re-banding" rulemaking and in helping television clients with the transition to digital.

"Several projects of note involved field measurements to demonstrate that the FCC's interference model overstated actual station coverage," the firm stated on its website. "These measurements and experimental reports resulted in several high-band VHF stations being permitted to greatly exceed the maximum power cap in the Northeast providing an improvement with indoor reception."

He wrote for Radio World and authored numerous technical papers

presented at NAB and IBC conventions.

Mertz had worked in the Washington area as a staff engineer and project manager at Jules Cohen & Associates, P.C., as director of engineering for United Broadcasting Company Inc., and manager of technical operations for NBC's WRC(AM).

"Prior to coming to Washington, Richard worked at several of the major-market Jefferson Pilot Broadcasting radio stations," the company stated. "He was the technical operations manager at WBT(AM)/WBCY(FM), and the Jeffersonics audio recording facility in Charlotte, N.C." It said that under his guidance, WBT participated in testing AM stereo skywave performance, becoming the first station in the South to operate in AM stereo.

"Before WBT, Mr. Mertz was assistant chief engineer for Jefferson-Pilot Broadcasting's WQXI(AM/FM) in Atlanta, Ga., where he designed and built studio and transmitter facilities. ... He served on panels of industry groups covering subjects from AM stereo, multiple ownership and microprocessor systems, to RF exposure protection."

According to a 2011 Radio Show conference bio, Mertz held a Bachelor of Science degree in math and physics from Oglethorpe University. He was former chapter chairman of SBE Washington Chapter 37 and a member of the Audio Engineering Society and IEEE. He held an FCC General Radiotelephone License and was a licensed radio amateur (N3QJF).

A memorial service was slated for Nov. 3 in Washington.

— Paul McLane

NEWSROUNDUP

AM: The FCC released a Notice of Proposed Rulemaking intended to help revitalize the AM service. The action was one of the agency's last under Acting Chair Mignon Clyburn. In the item, the agency proposes short- and long-term strategies for improving the AM service. Perhaps most importantly, the commission seeks public input on a special window in which to allow AMs to seek new FM translators. The FCC also tees up modifications to the daytime and nighttime community coverage rules for existing AMs, something engineers and owners have long proposed. Commissioner Ajit Pai, who has taken up the AM cause, said the NPRM kicks off a "landmark" effort by the FCC to "energize the nation's oldest broadcasting service." Public comments to MB Docket 13-249 are due 60 days after Federal Register publication. More coverage in an upcoming issue.

WHEELER: Former telecom and cable lobbyist Tom Wheeler began his new job as chairman of the FCC on Nov. 4; Michael O'Rielly also began his stint as a new GOP commissioner. Wheeler said they would be joining a dynamic and dedicated team at the commission. Wheeler said that as acting chair for six months, Mignon Clyburn led the agency "with dedication and vision. ... The chairwoman, along with Commissioners Jessica Rosenworcel and Ajit Pai and the FCC staff, dealt with important issues that kept policy and the country moving forward."

EAS: A bill to reauthorize FEMA, expand training for state and local emergency authorities and establish regular testing of the national EAS passed its first congressional hurdle. The House Transportation Committee approved H.R. 3300 by a voice vote, sending the measure to the full House. The bill reauthorizes FEMA through fiscal 2016 and authorizes the Integrated Public Alert and Warning System. EAS is part of IPAWS, which disseminates alerts through several technologies. The measure establishes system requirements and IPAWS capabilities, provides a framework for IPAWS development, and ensures stakeholders — including federal, state, local and private sector entities — have a way to provide input through a temporary advisory committee. Broadcasters would be part of this committee.

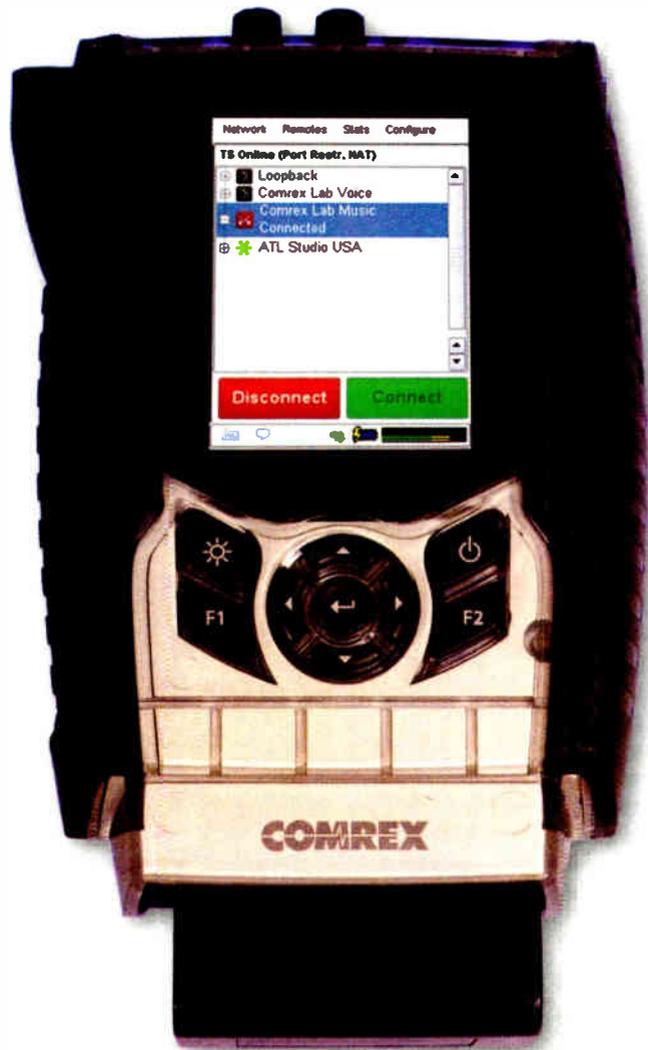
PANDORA: Internet audio service provider Pandora says its market share actually increased after Apple launched iTunes Radio. Pandora listening hours for October grew 9 percent over September, Pandora CFO Micheal Herring told a financial conference in November. Pandora reported its listening hours for October grew to 1.47 billion, an 18 percent increase from the same period a year ago. The company says it now has 8.06 percent share of total U.S. listening, a rise from 6.61 percent at the same time last year. Traditional radio companies have challenged Pandora data. Katz Media Group estimates Pandora's share of the total U.S. radio audience at closer to 4.4 percent, according to Entercom Communications President/CEO David Field at the RAIN Summit preceding the Radio Show. Broadcast radio has 20 times Pandora's listening, he said at the time.

INDECENCY: The number of complaints to the FCC about broadcast indecency fell in the first quarter. A total of 619 complaints were filed during Q1, most of those in February. Overall, the total for the quarter was down 39 percent compared to the same period a year ago. Also, the commission received 418 complaints about interference during the quarter; those are not broken out by radio and television. Interference complaints are among a total of 1,140 miscellaneous programming complaints the agency received in Q1. That also includes gripes related to issues like advertising during children's television and pirate radio.

SATELLITE: Sirius FM-6 finally launched into space on Oct. 25. The launch had been postponed several times because of "issues with the satellite ground station network" required for the takeoff and early orbital operations of the spacecraft, according to International Launch Services. As a precaution, SSL of California, which manufactured the satellite, and SiriusXM decided to take more time to evaluate issues related to required remote satellite ground stations. The Sirius FM-6 satellite is a high-power satellite with an expected 15-year geostationary service life.



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PATENT CASE

(continued from page 1)

time resume the infringement litigation, observers said.

Attorneys representing DigiMedia have sent letters to the judge asking him the lift the stay.

The radio defendants — CBS Radio, Greater Media, Beasley Broadcasting, Cumulus, Entercom and Cox Radio — asked the judge to schedule talks between the sides to discuss the viability of the suit continuing, according to correspondence from the defendants' attorney.

Unclear is whether broadcasters are more or less inclined to seek a settlement, given the outcome of the reexaminations. There is no indication the sides were meeting to discuss a settlement, according to court records; but the case remains in mediation before U.S. Magistrate Judge Christopher Burke, according to court documents. This leaves the door open for negotiations, observers said.

Judge Stark ordered mediation fairly early in the case: but it is non-binding unless the parties agree otherwise, according to legal observer Scott Daniels, an intellectual property attorney with Westerman, Hattori, Daniels & Adrian LLP.

He adds: "There is often a sense of 'going through the motions.'"

PATENTS TO EXPIRE

As a result of the patent reexaminations, DigiMedia will be limited on any past or future recovery for patent 5,809,246, except for any new equipment purchased from July 2012 until the patent expires in January 2014, according to documents filed by the defendants' attorney. That patent was the only one mentioned in the broadcaster attorney letter to the judge, though both patents were modified in some way.

"It is somewhat surprising that Judge Stark has not restarted the case," said Daniels. "On the other hand, the fact that these patents expire in the spring robs the case of its urgency."

Daniels said it is unlikely a trial would conclude before the patents' expiration, so that there is "no possibility of an injunction against future infringement," leaving money damages as the only possible remedy for the plaintiff.

"When only money damages are possible, judges feel that a case can wait," Daniels said.

A letter from DigiMedia attorney Sean O'Kelly to Judge Stark pushing for the stay in the federal case to be lifted lacked a sense of urgency, Daniels said. "The tone of the patentee lacks a certain oomph, suggesting that it might not believe that its prospects of a recovery at this point justify further litigation."

Emails from Radio World to O'Kelly

seeking comment on the case were not returned.

Bill Ragland, a patent attorney with Womble Carlyle Sandridge & Rice who is not involved with the case, said, "With patent expiration fast approaching, it remains to be seen whether [DigiMedia] will expend significant time and money to litigate the case all the way through a trial."

Nonetheless, the defendants will be able to better defend themselves considering the USPTO's move to cancel and narrow some of the claims in the patents.

"I think the outcome of the reexaminations greatly diminishes the value of [DigiMedia's] legal claims against the broadcasters," Ragland said. "If the case is not settled, I would expect the district court eventually to issue an order setting out the schedule for the case to proceed."

John Phillips Jr., the attorney of record for the defendants, wrote the

One legal observer said the fact that these patents expire in the spring 'robs the case of its urgency.'

judge in July and described the patents as "very narrow" with avoidable features of hard drive music systems. In this case, "avoidable" likely means that the claim contains a limitation that people in the business can easily dispense with, thereby avoiding infringement of the patent, Daniels surmised.

Attempts by Radio World to reach Phillips for comment were unsuccessful.

Radio World asked Thomas Ewing, a patent attorney and IP consultant for Avancept LLC, his opinion of where the DigiMedia patent infringement case goes now.

"Patent law allows for damages to be collected six years back from the finding of infringement. However, if the patents expire next spring, then it should be really tough for the patent owners to argue for an injunction. Trials, especially patent trials, move at a snail's pace. Among other things, the judge is hoping that the parties settle.

"I suppose that the defendants could ask for another reexamination after the patents expire — though once a patent has expired, then the claims can't be amended in any way during reexamination, which makes them extremely vulnerable to invalidation."

ON THE HILL

Meanwhile, there has been some movement in Washington on regulations targeting so-called patent trolls, companies considered by critics to be abusers

NEW DEVELOPMENTS

There are new developments in a second round of patent infringement lawsuits filed earlier this year by DigiMedia Holdings Group against four additional broadcasters, all with FM stations in Texas. They are Access.1 Communications, Tomlinson-Leis Communications LP, Hunt County Radio LLC and NM Licensing LLC, according to court documents.

As in the first lawsuit described in the accompanying story, the plaintiff claims to hold patents involving hard-disk radio automation systems used by radio stations.

Court records indicate that in August, those cases were transferred from the U.S. Bankruptcy Court Eastern District of Texas to the District of Delaware in Wilmington and assigned to Judge Leonard Stark, the same judge presiding over the DigiMedia suit against CBS Radio, Greater Media, Beasley Broadcasting, Cumulus, Entercom and Cox Radio.

Court records indicate all parties connected to the Texas suits agreed to the change in venue for the "convenience of the parties and witnesses involved."

John Phillips Jr., a patent attorney with Phillips, Goldman & Spence, P.A., is listed as lead defense attorney for the Texas broadcasters in addition to acting as counsel for all of the broadcasters in the original case.

Naomi Zeitlin, director of corporate communications for Intellectual Ventures, told Radio World previously that Mission Abstract Data had been owned by Intellectual Ventures but was sold prior to the tech patent infringement lawsuit being filed.

Several members of Congress have introduced legislation to combat patent trolls. FTC Chairwoman Edith Ramirez has urged an investigation and crack-down on patent abuses. In May, Sen. John Cornyn, R-Texas, introduced the Patent Abuse Reduction Act, a measure that aims to deter patent litigation abusers. More recently, Rep. Bob Goodlatte, R-Va., introduced the similar Innovation Act of 2013.

NAB Executive Vice President of Communications Dennis Wharton, while silent in regards to specifics surrounding the DigiMedia lawsuit, said: "For too long, U.S. economic growth has been stifled by 'patent trolls' who game the legal system with frivolous patent litigation. America's hometown broadcasters look forward to working with Chairman Goodlatte and other House and Senate leaders to pass legislation that will deter patent abuses that are a drain on American businesses."

of patent litigation. An expansive article earlier this year in the New York Times specifically mentions the DigiMedia patents and the legal maneuverings of its predecessor Mission Abstract Data.

The Times article focused on a company called Intellectual Ventures, which was co-founded by Nathan Myhrvold, former chief technology officer at Microsoft. Intellectual Ventures buys and sells patents and licenses them. The company commonly threatens or files lawsuits, according to the article, through a network of hundreds of holding companies.

Mission Abstract Data is identified in the article as being affiliated with Intellectual Ventures. MAD filed the original patent infringement lawsuit against the broadcasters, but the patents were later assigned to DigiMedia.

SYMPOSIUM

(continued from page 3)

see what a worthwhile event we hold every year."

Overall, the response to the new location was good, according to Shulins.

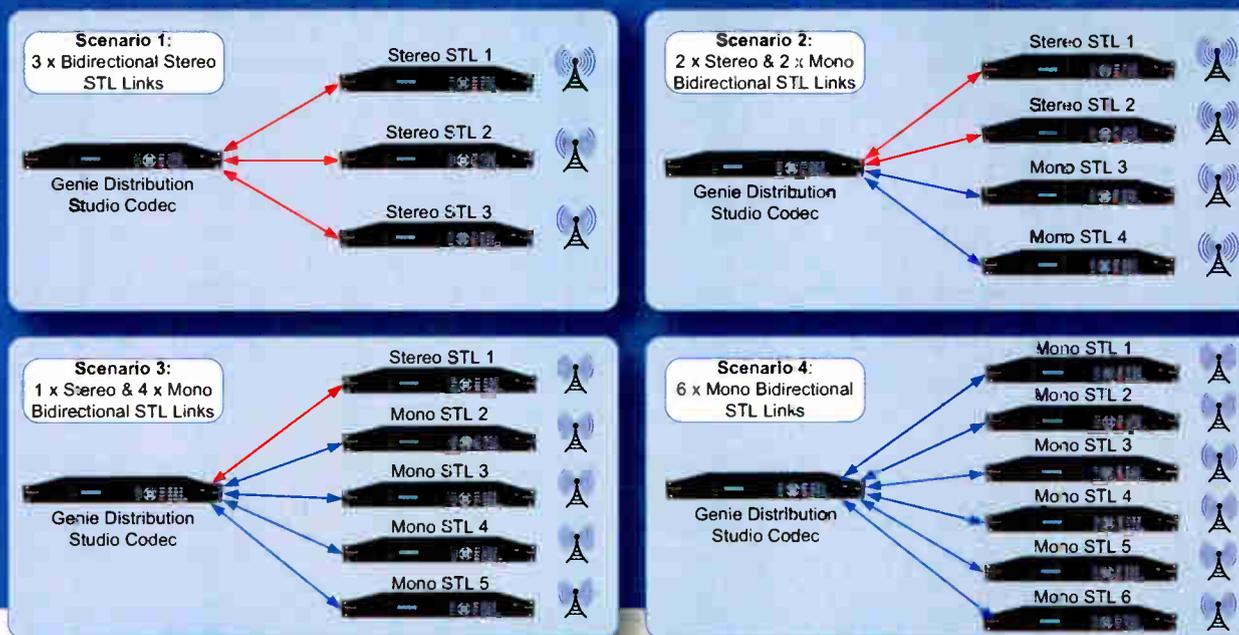
"This was a big experiment and we're very pleased with the turnout," said Shulins. "We're seeing a lot of familiar faces, but we're also seeing some new faces, which was our real goal — to expose the symposium to

some new people. The venue is wonderful and the people are wonderful here, and we're hoping to expand it again next year when we move it to San Antonio, Texas."

Find details about the 2013 symposium and future conference events on the BTS website, bts.ieee.org.

James O'Neal is technology editor of TV Technology and a contributor to Radio World. He also is a member of the symposium committee, representing his television equipment consultancy.

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Turn Old iPhones Into Security Cameras

Also: LBA Group helps businesses comply with new OSHA standards

WORKBENCH

by John Bisset

Read more Workbench articles online at radioworld.com

Bill Betlej handles all things communications and IT at Mary Baldwin College in Staunton, Va., and has contract engineering experience. He ran across a free app that you might enjoy.

The app lets you repurpose an old iPhone into a motion-detected security camera. It is called Presence and is produced by People Power, a Palo Alto software developer. Using WiFi, a second Apple device (like iPhone or iPad) can be used as a monitor. Presence can be programmed to record a five-second video clip when motion is detected, and send an email alert. Furthermore, you can set an unlimited number of Apple devices for motion detection.

The company recommends connecting devices to wall chargers so that they don't run out of power and stop streaming. Using old devices as plugged-in



Fig. 1: The Presence app from People Power turns an iOS-based device into a WiFi or cellular-connected video camera.

security cameras won't run up electric bills; at most, you can expect to pay an extra dollar if you use your devices this way for an entire year.

Even though the app is free, the company hopes users will go to the app's Store and purchase accessories such as device tripods and fish-eye lenses to enhance security systems.

Presence is available from the Apple App Store; an Android version is expected by the end of the year.

Repurposing equipment is a favorite subject of this column, so thanks, Bill, for sharing. Bill Betlej can be reached at bbetlej@mbc.edu.

The folks at phasor manufacturer and communications company LBA Group are offering training in OSHA liability,

a topic that has largely been ignored by broadcast management. There are important new chemical safety training rules; and few employers realize their establishments fall under these new

standards.

Even the use of benign chemicals, such as cleaning supplies, requires that companies provide workers with OSHA HazCom GHS training. OSHA mandates that all affected workers are to be trained to read and understand new safety data sheets and chemical labeling before Dec. 1 of this year or face major penalties.

To help you meet the deadline, LBA University offers comprehensive, online GHS training. In groups of five or more, the training costs less than \$40 each. For information, contact Bryan Dixon at LBA, (252) 757-0279, or visit www.lbagroup.com.

You can learn more about the requirement at www.osha.gov/dsg/hazcom.

In our column, many readers, including Southern California engineer Marc Mann, have mentioned the use of silica gel to slow the effects of moisture formation on tools. Wrapping tools in a cloth after dousing with WD-40 lubricant only goes so far. And what about corrosion effects on electronic equipment?

In a publication of industrial products, Marc read about a company that produces tablets that protect metals inside packages; it uses a technology that releases a "vapor phase corrosion inhibitor." Marc thought this would be



Fig. 2: An example of Cortec's corrosion protection products.

great but that what we really need is a product that can be placed inside of cabinets and housings that could provide this same protection to electrical and electronic equipment.

He called the firm, Cortec Corp., and spoke with Robert Kean. Marc asked if their product would work inside of operating, powered-up devices.

As it happens, Cortec manufactures a range of products that utilize this technology to protect valuable electronics from corrosion. Best of all, they do not need to be in a sealed bag. The "emitters" range from label-sized, self-adhesive-backed types to containers with breathable membranes to allow the area of choice to be protected.

They are non-toxic and safe to handle. They can be placed in just about anything from fuse boxes to telecommunications equipment — even inside of microphones. Marc foresees these being used in not only the transmitter plant but in remote equipment that will be exposed to moisture and high humidity.

If you're plagued with corrosion, this might just be the answer. Marc ventures to say a station engineer might never run out of places this product could be used, including tool boxes.

Robert Kean can be reached at Cortec Corp. at (800) 426-7832 and can answer corrosion protection questions sent to rkean@cortecvci.com. The website is www.cortecvci.com.

(continued on page 12)



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Gift-Ready Radios for Holiday Season

Here are ideas for the lover of vintage, portable and/or versatile

BY JAMES CARELESS

With the holidays on the horizon, smart shoppers are looking for unique presents with a "Wow!" factor. Below are some radios that nicely fit the bill.

Grace Digital Tuner

Here's an essential addition to any component-based audio system.

The advent of home entertainment systems has only enhanced the importance of component-based audio, be it for CDs, AM/FM radio, TV/DVD/Blu-ray, and now streaming video as well. But why stop with an AM/FM tuner? What every audio hound also needs is a proper Internet radio component that can be integrated into their home system.

Grace Audio Tuner allows users to tune into Internet radio stations and streaming services via WiFi.



The Grace Audio Tuner fits this specification: It is a low-rise, standard-shaped audio component that allows users to tune into tens of thousands of Internet radio stations and music services (like Pandora), via their home's WiFi router (wired or wireless).

The Grace Audio can be controlled by its own remote control, or Grace's iPhone app. The unit has a two-line LCD display, plus RCA analog audio connectors, TOSLINK and COAX Digital audio connectors, plus an FM tuner and FM antenna connector.

Buy for \$219.88 at www.gracedigitalaudio.com.

WORKBENCH

(continued from page 10)

Engineers have been fighting corrosion for years, especially near large bodies of water. Having a product that can be placed inside the equipment to be protected is wonderful news.

Reach Marc Mann at mrmco@san.rr.com.

Paul Sagi often has neat thoughts about topics we discuss in *Workbench*. Remember our parabolic microphone project, using a discarded satellite dish, for adding audio realism to high school sports events? Positioning a microphone on a parabolic dish. Paul noticed that the dish was shiny; so he pointed it towards a light and positioned the microphone so there was a bright spot of light on the end of the microphone element. He did this in a darkened room, pointing the dish towards light from another room.

It's a quick way to align the mike to the focal point of the dish.

Paul used a similar idea to position stereo speakers. Put a small mirror on each speaker. Now darken the room. Go to the listening position and shine a flashlight, looking for a reflection from both mirrors at the same time. Reposition the speakers as required.

Thanks Paul! Paul Sagi can be reached at pksga.i.92@gmail.com.

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

Author John Bisset has spent 44 years in the broadcasting industry and is still learning. He is SBE Certified and is a past recipient of the SBE's Educator of the Year Award.

Tivoli Audio SongBook

Portable radios have never led the pack when it comes to audio, especially smaller monophonic units. The Tivoli Audio SongBook breaks this mold: Although this book-sized single-speaker AM/FM receiver looks unassuming — despite the recent addition of high-gloss finishes in yellow, red, blue and white — the SongBook's exceptionally rich sound has to be heard to be believed.

The audio is full and easy to enjoy hour after hour, which is a credit to this radio's 2.5-inch magnetically shielded, treated full-range speaker. The Tivoli Audio SongBook has a monochrome LCD display, digital tuning, five presets, clock radio capabilities and the ability to bring in external audio (like an MP3 player) through its Auxiliary jack and setting. This radio uses six AA batteries, and comes with an external AC adaptor and telescoping antenna.

At \$239.99 at tivoliaudio.com, the SongBook is worth every penny. It's the kind of high-quality radio users will prize for years.



Tivoli Audio SongBook is a book-sized single-speaker AM/FM receiver that has great sound.

Eton's Grundig S450DLX Field Radio

This is an all-round portable performer.

Even before purchasing the venerable Grundig nameplate, the Eton Corp. had distinguished itself by producing quality, full-featured radios. The Eton Grundig S450DLX Field Radio carries on the great Grundig tradition, in this case as inspired by Panasonic's much-respected 1980s-vintage RF-2200 AM/FM/Shortwave receiver (which this writer owns).

Like the RF-2200, the Grundig S450DLX is a robust portable — with a big mono speaker — that receives AM, FM and shortwave (SW) broadcasts, the last covering from 1711–29999 kHz. This radio also has a big, hefty tuning knob, narrow/wideband filters, telescopic antenna and separate knobs for controlling RF gain, volume, bass and treble. However, in deference to the fact that this is 2013, the S450DLX has a big LCD tuning display, high-performance integrated circuits and MOSFETs to pick up weak stations (while suppressing distortion and interference), 50 station memories and clock radio functions.

Add a rugged case and strap-type carrying handle, and the Grundig S450DLX is ready for the great outdoors. Take it camping along with 100 feet of wire, to connect to the radio's external antenna input, to pick up faint SW stations from around the world.

Cost is \$99.99 at www.shopetoncorp.com.



Grundig S450DLX can receive AM, FM and shortwave broadcasts.

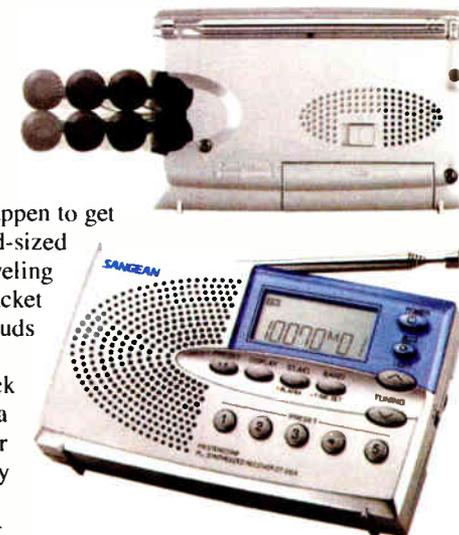
Sangean DT-220A

This is a great little pocket radio with retracting earbuds.

I like to have a radio with me wherever I go, just in case disaster strikes (which rarely happens) or I happen to get bored (which often happens). Either way, the hand-sized Sangean DT-220A AM/FM portable is a perfect traveling companion. Not only does it fit nicely into any jacket pocket, but the DT-220A works both with stereo earbuds (supplied) or its built-in 1-3/4 inch speaker.

The DT-220A also comes with a carrying case, clock radio functions, an LCD display, 25 memory presets, a 90 minute auto shutoff (to save batteries), a sleep timer and a cool auto-wind feature for the ear buds: They literally retract inside the case for easy storage.

All told, the Sangean DT-220A is a lot of radio for just \$45.22 (35 percent off its \$69.95 list price) at www.costcentral.com.



Sangean is a pocket radio with retracting earbuds.

(continued on page 12)

GET CONNECTED

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Offering an array of audio coding options, the IP Link codecs are suitable for use in Studio to Transmitter Links (STLs) as well as audio contribution and distribution networks. Support for IP multicast and multiple unicast streams enables one encoder to feed multiple decoders.

By incorporating dual WAN ports and a separate IP management port, the IP Link systems can provide a level of reliability not seen in comparably-priced codecs.

The IP Link audio codecs bring legendary Intraplex reliability to the IP codec market.



see more comments at harrisbroadcast.com/newsandresources/Testimonial.asp

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World Radio History

MARKETPLACE

GENIE MAGIC: It doesn't come in a dusky oil lantern or decorated long-necked bottle and it might not grant the user three wishes, but Tieline's Genie Distribution does have a couple of tricks up its sleeve, including WheatNet-IP.

The Genie Distribution codec with WheatNet-IP is now available. This allows the unit to be installed into a WheatNet environment and interface on the IP network with other compatible equipment.



Tieline VP Sales Americas John Lackness said, "The codec is capable of distributing three stereo channels or six mono channels of WheatNet-IP audio via a purpose-built rear panel and the Tieline WheatNet IP audio card." He added that the units "can now integrate securely and efficiently with the WheatNet-IP

Environment to provide a seamless IP distribution solution."

Additional features include two additional Ethernet ports that allow the codec to distribute up to 50 stereo multi-unicast IP streams simultaneously over external IP networks like the Internet, or connect up to six channels point-to-point.

A recent firmware upgrade adds four configuration options. These are 3 x bidirectional stereo connections; or 2 x stereo and 2 x mono bidirectional connections; or 1 x stereo and 4 x mono bidirectional connections; or 6 x mono bidirectional connections.

Info: www.tieline.com

LIQUID COOLING: Transmitter maker Rohde & Schwarz has a new liquid-cooled high-power FM transmitter, the THR9.

The THR9 ranges from 5 kW to 40 kW and is digital-ready. The transmitter is compatible with R&S' Multi-TX design. "MultiTX involves integrating multiple transmitters into a single rack. In combination with the liquid-cooling system, this helps reduce the amount of space required," a release explains.

The R&S THR9 concept makes it possible to accommodate as many as four 10 kW transmitters in a single rack.

A release says that a liquid cooling system can reduce space requirements by as much as 40 percent compared to conventional air cooling systems or more with multiple transmitters using the MultiTX configuration. "The cooling system of the R&S THR9 has two pump modules in active standby and a heat exchanger equipped with two redundant fans. This design ensures high availability of the transmitter cooling system."

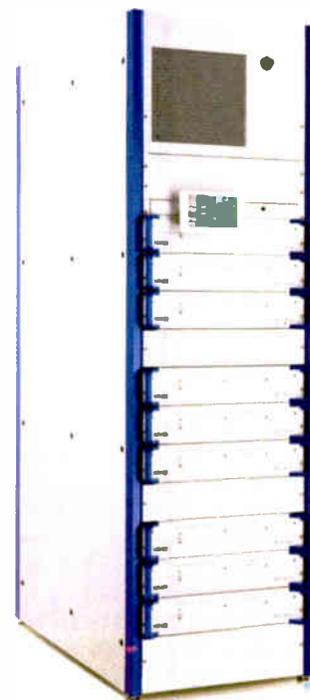
The THR9 supports dual-drive configurations, N+1 configurations or a combination of the two. System configurations of up to 3+1 are possible in a single THR9 rack. Internal components are designed to be energy-efficient.

Info: www.rohde-schwarz.com

What if your host can't de-fuse the next caller?



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MOBILE ENTRY: Web-based system RadioTraffic.com has added mobile device order entry capability.

In addition, new orders generate notifications to the sales manager, who can then approve or modify the order. Furthermore, the new functionality allows managers to work with RadioTraffic.com on their mobile devices.



CEO Dave Scott says, "The RadioTraffic tablet order entry and approvals app will help salespeople go from the customer's desk to submitting orders on their wireless tablet without wasting time driving back to the office." The company says Android, iOS and Windows devices are supported.

Info: www.radiotraffic.com

RADIAL ACTIVE: There are a lot of USB interface boxes for getting analog audio digitized and into a computer via USB where it can be recorded, processed and edited. But there are not nearly as many boxes dedicated to going the other way — passing the audio out of a computer to a mixer, analog recorder or mixer.



The USB-Pro from Radial Engineering is one such offering. Coming in Radial's standard "book"-style heavy-duty steel box, the USB-Pro DI offers left and right XLR balanced outputs, level control, mono sum, ground lift and a headphone output. It operates up to 24-bit/96 kHz.

It is compatible with Mac OS X and Windows XP, Vista and 7. Price: \$220.

Info: www.radialeng.com

REDESIGNS: Audio equipment maker Mackie redesigned the MRmk line of powered studio monitors. The family adds a 10-inch subwoofer, MR10Smk3 and a 6.5-inch two-way, MR6mk3.

According to Mackie, a new treat is a minimum diffraction waveguide for improved sound and directionality.

Each two-way monitor offers a polypropylene woofer and one-inch silk dome tweeter. Available woofer sizes are 5.25-inch, 6.5-inch and 8-inch. The onboard amplifiers are

Class A/B with powers matched to the individual model: 50 watts for the MR5mk3; 65 watts for the MR6mk3; 85 watts for the MR8mk3 and 120 watts for the subwoofer. The sub uses a 10-inch glass composite woofer.

The two-ways also offer two-setting bass boost and boost/cut for high frequencies. Inputs include XLR, 1/4-inch TRS and RCA.

Prices: MR5mk3 \$199.99; MR6mk3 \$259.99; MR8mk3 \$329.99; MR10Smk3 \$449.99.

Info: www.mackie.com



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WheatNet-IP: So Easy, an Audio Guy Can Set it Up!

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What he came up with is pretty astounding. And it's a great story with plenty of pointers.



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Meet the Logic BLADE

Admit it - you want total control over your environment. With the LIO-48, that control is yours.



Wheatstone's new LIO-48 is a high-density logic BLADE for the WheatNet-IP Intelligent Network that can handle all those new conditional logic functions needed by today's busy studios.

The LIO-48 provides 48 universal logic I/O ports, each individually configurable, for turning devices on or off by time or event, for automatically adjusting the audio processing settings when a certain mic turns on, and for any other logic control you need in your studio operation.

The LIO-48 has a logic I/O meter that lets you drill down to see the information for each of the 48 ports.

Get more information here: INN4.wheatstone.com



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BLADE HONING 101

Aura8-IP: How you can put Eight Stereo Channels of Vorsis Processing to Work for Under \$500 per Channel!

Placing a processor everywhere you'd like one has been costly and impractical. Until now. A single Aura8-IP gives you up to eight processors to use as you wish. Use it as a standalone processor with analog and digital inputs or make it a part of your WheatNet-IP network.



As a standalone processor, you get eight stereo channels of jaw-dropping Vorsis ultra high resolution processing power for under \$500 per channel. That alone is worth the price of admission. But, when you take advantage of Aura8-IP being a BLADE with its built-in utility mixers, web server, full logic, SNMP messaging and silence detection, and use all that with its 8-channels of processing, its power is really unleashed.

Get more information here: INN4.wheatstone.com

Codec Pre-Processing



Audio from codecs is subject to environmental conditions - at the source and through the connection. Processing with Aura8-IP can clean it up nicely.

Low Latency Talent Headphone Processing

Often, the key to talent turning in their best performances is what they hear in their headphones. Give them a sound that drives them to brilliance with Aura8-IP.



Remote Feed Conditioning



The great and hard thing about radio is that you can tie the world together on your broadcast. That means you can have audio flying in from all over. Aura8-IP is exactly what you need for all of it, at a price that will make you very happy!

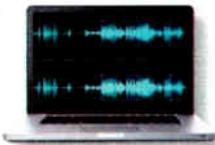
Talkshow Call-Ins

Processing can make a huge difference in the on-air quality of call-ins on your talk shows. Aura8-IP is up to the task.



Web Streams

Whether you are streaming now or getting ready to, there's no better investment you can make in your station than to ensure those streams sound great. That's exactly what Aura8-IP does.



Mic Processing

Every microphone does a better job when it's processed not only for the voice that's speaking into it, but for the path it's taking on the way to someone's ears. Aura8-IP does a superb job processing microphone audio.



Satellite Uplink Peak and Spectral Control

The key here is keeping signals under control. Aura8-IP is perfect for the job, keeping an eye (or ear) on the peaks as well as ensuring the spectral range stays consistent.



IFB Conditioning

Clear communications between director, engineering and talent is key to presenting successful sports and multiple-report shows. Aura8-IP is perfect for cleaning up IFB.



Automation Streams

Wheatstone enjoys technology partnerships with the leaders in broadcast today. Use the AGC in Aura8-IP to keep your automation streams clean and under control.



STL Pre-Processing and Protection-Processing



There are a lot of dedicated STL systems out there. Or, if you have a WheatNet-IP, it's the perfect solution. No matter HOW you handle STL, let Aura8-IP handle processing to ensure the audio is optimized for it.

Multiple HD Feeds

HD Radio gives you the option of broadcasting multiple audio streams of varying quality. Make the most of each by giving them processing that will make them stand out.



Sweetening Incoming Commercials and Newsroom Feeds

Keeping your revenue sources sounding compelling can really help with audience perception and acceptance. Aura8-IP is a cost-effective solution for ensuring your entire audio stream sounds SWEET!



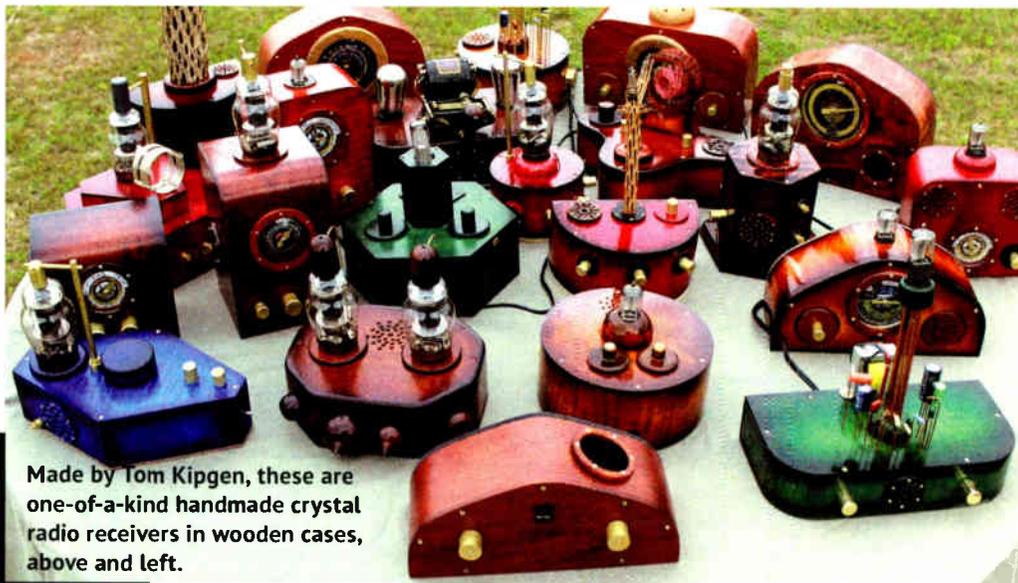
GIFT-READY RADIOS

(continued from page 18)

Tom's Designer Radios

As a longtime radio lover, I have a special spot in my heart for crystal radios, the original no-batteries/AC mains-required radios that pull radio signals out of the air and rectify them into listenable audio. Radio engineering artist — no lesser word will do — Tom Kipgen shares this passion, which he expresses through a range of unique crystal radios sold at www.kipgen.com.

These are one-of-a-kind handmade crystal radio receivers in wooden



Made by Tom Kipgen, these are one-of-a-kind handmade crystal radio receivers in wooden cases, above and left.



cases, using designs that harken back to radio's early days, plus actual vintage parts when he can find them. Some Kipgen radios are utterly whimsical, such as his B-1 Bomber Crystal Radio; so-called because this radio uses surplus aluminum plate left over from making B-1 bombers at Rockwell-Collin's Tulsa manufacturing plant. Kipgen makes custom tube radios as well; this writer predicts that his handcrafted radios will quickly become valuable collectors' items.

There is nothing like them anywhere in the world.

Crosley CR-44-CD Console

It's a genuine (reproduction) full-sized vintage radio receiver.

Once upon a time, before the Internet, mobile phones and even broadcast television, full-sized console radios were temples that the whole family gathered around. The Crosley CR-44-CD Console is a nod to those wonderful times.

Modeled after the great Crosley consoles of Radio's Golden Age, the CR-44-CD comes in a solid wood/oak veneer case and is equipped with an AM/FM radio, three-speed belt driven turntable (under the lid) and front-loading CD player. The CR-44-CD's tuning is achieved using an "Illuminated Electronically Assisted Airplane Dial Tuner," says www.amradios.com, where this unit sells for \$439.99.

Unlike the original console radios, this replica has dynamic full-range stereo speakers, a two-digit LED display, programmable 20-track memory (CD player) and an external FM antenna. You can also find this unit at www.bestbuy.com.

To add to the cool factor, you can purchase CDs of old-time radio shows at www.vintagelibrary.com/OldTimeRadio, to play back on the CR-44-CD for a truly authentic Old-Time Radio experience.

James Careless is a longtime contributor. He has written recently about pirate radio, iTunes Radio, SoundCloud and other topics.



Crosley is a full-sized vintage radio receiver.

WHO'S BUYING WHAT

WSOU USES ALCO PROFESSIONAL REPORTER

Popular college station **WSOU(FM)** in New Jersey is using an **ALCO Professional Reporter IP** audio software codec from **ATC Labs** to broadcast home and away games.

The station is licensed to Seton Hall University and covers basketball and baseball, men's and women's soccer, softball and volleyball. According to ATC Labs, the students take a laptop and a small mixer with two headsets. They connect to the studio via WiFi if available for an AoIP connection, or if not they use a hotspot from AT&T Wireless.

"We are no longer dependent upon finding a wired network connection or a POTS line, and it is just so much less equipment we need to take to a game," Chief Engineer Frank Scafidi told ATC Labs.

He added that students liked the ability to stay in contact with the studio via built-in text messaging because noise at the games makes it impossible to use cellphones.

Shown, Omar Ahmed in the studio directs the remote broadcast of a SHU men's soccer game on Oct. 16, while at the game, Ryan Flannery does the WSOU play by play.



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It was built by the world's largest broadcast software company, RCS - a trusted name by more than 10,000 radio stations worldwide.



Orban Streams for Rogers

Opticodec packages provide hardware and software, processing and encoding

USERREPORT

BY BILAL SHIRAZI AND
RICK DAL FARRA

Bilal Shirazi is associate general manager, Radio Division, Rogers Digital Media. Rick Dal Farra is director, Engineering Toronto Radio, Rogers Broadcasting Ltd.

TORONTO — Rogers Media Inc. was in the market for a best-in-class audio processing and encoding product for our 55 stations spanning news, music and sports genres.

After surveying vendors and competitive analysis, we needed a product that was reliable, worked with our CDN and our networking requirements and was above all highly reliable, especially in our PPM markets. After a short proof of concept, we selected products from Orban.

Rogers Media Inc. selected the Orban Opticodec 1211e package, a combination of the Optimod-PC 1101e DSP soundcard and Opticodec 1010PE software encoder. Where practical, the audio cards were installed directly into generic 3RU Intel rackmount computers. Markets requiring more streams than the motherboards accommodated received Orban's OptiEXP PCIe expansion option, a sepa-

rate 3RU chassis with capacity for an additional eight audio cards. Smaller markets with limited rackspace and minimal requirements use the 1RU, all-in-one Opticodec-PC 1511e solution.

All implementations proved solidly reliable. In our largest market we trust the main and primary streamers to automatically update Windows and reboot on alternate days unattended. We've yet to see an alarm.

Installation was straightforward thanks to Orban's comprehensive documentation, simple wiring and excellent processor presets. The system's architecture offloads audio processing to the card's DSP and stream encoding is handled by a separate software service. Our existing Windows 7 Core i5-760 machines were powerful enough to generate 10 streams from five sources with under 15 percent CPU utilization. Unlike many of its competitors, the encoder supports automatic authentication for distributors who require it.

The overall engineering experience was excellent. Replacing a mix of audio processors and devices with a single, powerful platform across the chain greatly enhanced the listener experience. All streams now have consistently high quality with uniform and competitive levels. Minor processor tweaks



A pair of easily identified Orban OptiEXP expansion chassis at the Rogers Broadcasting Toronto facility.

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SoundMax™
Q24 - 2111**

24 Band Audio Processor
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1:1 or up to 1:64 links

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were enough to satisfy our toughest program director, and the engineering department greatly appreciates losing the overnight encoder alarms. Orban's engineering and sales departments were excellent to work with over the course of this project, always accommodating and focused on getting the best from their product. They're clearly an engineering-driven organization.

We're delighted with Orban's streaming products and have no hesitancy considering more in the future.

For information, contact David Rusch at Orban in Arizona at (480) 403-8300 or visit www.orban.com.




VS Series
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300W - 3.5kW

Unlike any other transmitter

TECHUPDATES

STREAMING APP AND SHOW STATISTICS FOR IVIPLANET USERS

Internet streaming services provider iviplanet says it has added a radio and video streaming app for iPhone and Android that is easy to implement.

Called "Streaming at Hand," it can be accessed directly from the streaming user admin interface and requires no programming. The feature allows the admin user to submit the radio or TV station app by filling out the required fields including social media and station logos; an automated system will submit the app to the App Store and Google Play store. The app you create has a wake-up alarm and sleep timer.

This feature is free for all iviplanet customers.

A second new feature is "Show Statistics." This gives management instant traffic data for every show in the radio station. The user can define the shows by adding the start/end times and the days of the week for each show. The system logs the traffic per day for each show giving statistics of every show, besides traditional statistics based on last hour, last 24 hours, weekly and monthly.

For information, contact iviplanet in Florida at (305) 527-2619 or visit www.iviplanet.com.



ABACAST RELEASES SONG SKIPPING, MUSICSTART

Abacast said the beta version of a song skipping feature for digital streams is being used on Federated Media's WMEE(FM) in Ft. Wayne, Ind.; and it announced a new MusicStart feature. Both of these capabilities will be released to the market in Q1 2014.

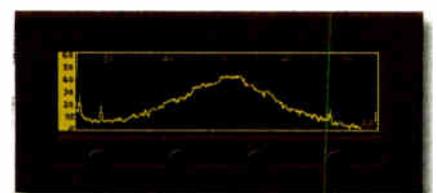
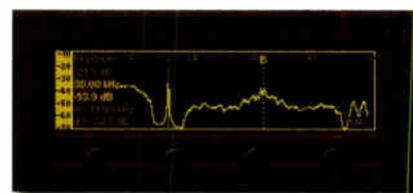
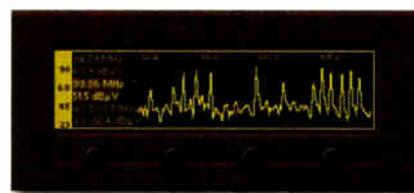
Song skipping (the icon is shown next to the stop button) enables listeners to skip a limited number of songs, much as can be done with Pandora and other playlist-type services but in a live stream. The technology plays the next content in a seamless, broadcast-like manner, Abacast says. The goal is to increase listening time — listeners can skip instead of changing the station — and to provide a feature many consumers now expect. Additionally, PDs can obtain usage data showing songs skipped and at what frequency, for programming planning.

MusicStart enables a broadcaster to configure its stream to play songs at the beginning of each individual session, combating stream abandonment that can occur when a user joins a stream in the middle of an ad break or song. When these initial songs are complete, the most recent "content segment" — a DJ talking, a song or an ad break — is integrated seamlessly, along with the rest of the stream. The result is a better listening experience from the beginning of each session, the company says.

For information, contact Abacast in Washington state at (360) 326-4798 or visit www.abacast.com.



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WABE Evolves With StreamGuys

Atlanta NPR affiliate impressed by features and customer service

USERREPORT

BY JASON PARKER
Digital Media Strategist
WABE(FM)

ATLANTA — Streaming media has long been viewed as an opportunity to diversify programming and build audience numbers, as well as loyalty. However, streaming media in our industry represents the evolution of radio as a signal platform. And as public radio stations like WABE(FM) seek to draw in new members through this evolving platform, it has become clear that there are opportunities to generate revenue through emerging technologies.

WABE is the NPR member station for Atlanta, reaching about 500,000 listeners per week over the air, along with a rapidly expanding online audience. As a dual-format station that offers news/talk and classical music, our Web presence gives us the opportunity to maximize that approach. Today, we offer three streams: a live stream of the terrestrial signal, and separate streams offering classical music and news/talk/information 24 hours a day. We also offer a mobile app that is a mashup of our radio streams and online news.

RESOURCES

With limited in-house resources devoted to our digital media efforts today, reliability in streaming is crucial in order to focus our attention on generating content and strategizing new digital media initiatives. StreamGuys have come through for us to serve as our content delivery network.

We first began working with



The WABE Studios

StreamGuys several years ago after being introduced at the annual iMA public media event, which brings together public broadcasters and supporting vendors and partners from around the country. StreamGuys' strong track record in the radio industry, including a loyal group of public radio broadcasters, seemed to be an ideal match for our station.

StreamGuys has helped to evolve our online strategy since launching our initial streams. This includes a transition from MP3 streaming to the higher-quality aacPlus format, which provides our online listeners with a more pleasant listening experience.

My job as digital media strategist is

to explore new opportunities that evolve how the station presents itself online. Collectively, we refer to it as "digital storytelling," but the initiative comprises several key advances that address the burning question: How do we make digital a more robust and revenue-generating channel for our content?

From a robust perspective, StreamGuys provides a stable streaming architecture at its core that provides a consistent online experience. Furthermore, its use of one-to-many server technology ensures that we can support many formats at reasonable costs — expanding our reach to iOS and Android mobile devices. Mobile audience growth is of major significance to our continuing strategy, and StreamGuys' support allows us to better serve listeners on the move.

The most notable recent development is our integration of AdsWizz digital ad insertion technology, which StreamGuys offers as a service within its architecture. It's our belief that this technology provides us and other public media broadcasters with a good opportunity to generate revenue through online properties.

We currently use the AdsWizz technology to support pre-roll advertisements. Our underwriting department — the department closest to the content — manages the AdsWizz operation, handling creative insertions, timing and all associated activities. The software offers an intuitive, easy to use interface for uploading and managing ads, as well as for monitoring performance.

To the latter point, AdsWizz offers 15 targeted reports that allow us to set specific parameters to measure the success of our online advertising initiatives and forecast future opportunities. This includes a planned extension into mid-rolls, which we see as the next growth opportunity revenue-wise.

Speaking of reports, StreamGuys offers several of its own to measure and monitor online audience statistics. To date, we have only used the very basics, notably leveraging SGReports software to generate and analyze raw audience numbers. We study the trends and leverage the numbers for quarterly reports to NPR. In the near future we expect to explore more of the audience measurement capabilities in the software, drilling down to more specific audience statistics that cover geography, time spent listening and other figures.

Moving forward, we also expect to explore opportunities that StreamGuys offer for on-demand audio as well as streaming video. We understand that online radio listeners relate to video, and when packaged intelligently it enhances the overall user experience.

One final point to highlight is the superior customer service that StreamGuys provides. Whenever a technical issue arises — and it's rare — StreamGuys is quick to respond and offer a solution. This past Labor Day weekend, I arrived home at 7 p.m. following a five-hour road trip and was immediately greeted by emails signaling a technical problem. We sent an email to StreamGuys and received an instant response.

We rely on this level of customer service and troubleshooting given our limited digital media resources. It was comforting to receive such quick attention in the evening hours of a holiday weekend — StreamGuys' assistance helped us pinpoint the problem in this case as a hardware issue on our end, which we were able to resolve quickly.

For information, contact Jonathan Speaker at StreamGuys in California at (707) 667-9479 or visit www.streamguys.com.

ABOUT BUYER'S GUIDE

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

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TECHUPDATES

MUSIC 1 MARKETS TO INTERNET RADIO

Music 1 says that it is the only professional scheduling and content management software that offers deep discounts and affordable rates to Internet radio operators.



"We understand that this pioneering movement is being driven by forward-thinking entrepreneurs, most of whom are working with very limited capital and cash flow," says CEO Steve Warren. "We decided

in early 2000 that the best way we could serve and participate in the growth and quality of Internet radio was to make Music 1 available for any and all. Today, more than 500 Internet stations in all formats around the globe use Music 1 daily."

Music 1 says that it has partnerships with Live365.com, Spacial Audio and other streaming host companies, and it can assist other companies

that are involved in Internet radio. The company says the most important tool for any Internet station, after the playout/automation system, is a dedicated content scheduler. While many

playout systems have some form of song rotation, the company highlights its task-specific Music 1 system for reliable control of music rotation and programming content.

Music 1 users can control content in various ways. They can determine how often songs in various rotation groupings will be scheduled. The software schedules voice tracks, jingles, artist drops and long-form programs. It is available with an optional traffic-and-billing module, Traffecta, a commercial advertising scheduler. It produces monthly billing and invoicing and delivers advertising affidavits for the station's clients.

For information, contact Music 1 in Texas at (512) 392-2415 or visit www.music1.pro.

RADIONOMY OFFERS STREAMING SOLUTIONS

Internet audio streaming services provider Radionomy says that for most small- to mid-size broadcasters, Internet streaming is seen as a cost center, but that the company's professional line of products enables stations of any size to build and monetize their global audience at no cost.



The ad-based solutions offer local, national and global targeting, along with unlimited high-quality connections, integration with existing automation and detailed metrics to understand audience behavior, it says.

According to the company, Radionomy for Broadcasters allows stations to monetize online listening hours without selling spots or losing existing sponsors.

Stations receive a share of the revenue generated by server-side in-stream ads, and can program any number of secondary streams (for which Radionomy picks up the performance royalty tab).

For information, contact Radionomy in California at (415) 722-9182 or visit www.radionomyforbroadcasters.com.

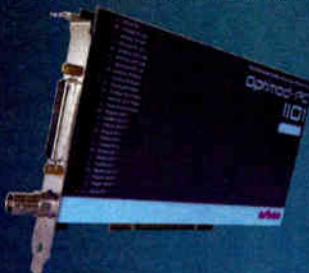
ENTERTAINMENT-GRADE STREAMING AUDIO

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What is HE-AAC?

HE-AAC (High Efficiency AAC, also known as aacPlus™ by the original developers, Coding Technologies), is audio compression technology that provides near-CD-quality using very little network bandwidth. It combines MPEG AAC and SBR (Spectral Band Replication) technology. This combination increases the efficiency of MPEG AAC, resulting in superior fidelity compared to MP3, Windows Media, Real Audio, and Ogg Opus at bitrates of 64 kbps and lower. (At 96 kbps and higher, pure AAC offers similar advantages over these older codecs.)



The Orban Optimod-PC Audio Processing Sound Card Advantage

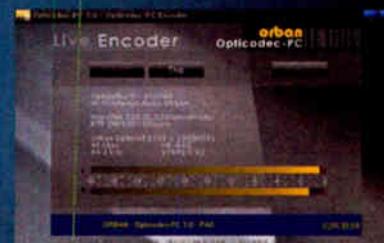
- All audio processors are NOT created equal. Broadcast-quality audio signal processing that controls levels, frequency texture, and peak levels automatically. Allows audio nuances to be adjusted for any format to give you a polished, produced, professional sound that shines and sounds big.
- Maximizes consistency and loudness for a positive user experience.
- DSP used for audio signal processing allowing several streams to be sourced from a single host computer.
- ITU-R BS.1770 "True-Peak" limiter prevents audible clipping distortion in player devices' analog circuitry. Cleaner audio keeps your audience listening longer.
- Future-proof BS.1770-compliant loudness controller: If your country's regulations require BS.1770 loudness control (or will in the future), Optimod-PC allows you to comply effortlessly.
- Network Control: Securely control Optimod-PC from across the room or across the world. <http://www.orban.com/products/streaming/optimod-pc1101/>

The HE-AAC Streaming Advantage

The next generation of MPEG-standard audio codec technology is here to stay.

HE-AAC (formerly aacPlus) has the following advantages over legacy MP3 or WMA; MP3 and WMA are dead, and here's why:

1. No streaming royalties required.
2. Lower cost to stream.
3. Lower cost to listen, especially for mobile data plans.
4. Higher efficiency.
5. Increased reliability.
6. Competitive, better, newer generation, and higher performance audio codec.
7. Natively supported.
8. AAC/HE-AAC – Beyond Stereo.



The Orban Opticodec-PC Streaming Audio Encoder HE-AAC Advantage

- All encoders are NOT created equal. Sonically superior using current generation reputable codec implementations.
- Reach the widest possible audience. Supports more standards-based streaming protocols and servers than any other encoder. No proprietary protocols. No special CDNs needed.
- Run multiple instances of encoders to reach multiple servers using single or multiple protocols.
- Fully licensed and DMCA compliant.
- Live real-time metadata injection for Stream Name/Description, Artist/Title, and dynamic graphics. <http://www.orban.com/products/streaming/opticodec-pc1010/>

Backbone Brings Festival to the Masses

From stage to stream made easy with Backbone Radio package deals

USERREPORT

BY CHARLES MCENERNEY

Principal
Layers Marketing

BOSTON — The Jamaica Plain Music Festival (www.jpmusicfestival.com) started in the Boston neighborhood of Jamaica Plain in 2011 when a group of musicians and fans decided to produce a local event that put a spotlight on music artists, bands, orchestras, ensembles and choirs that live or work in the neighborhood.

We wanted to find ways for more people to hear the artists we'd selected and thought about how we could bring the music from the field in Jamaica Plain to anyone who wanted to hear it from around the world. Musicians and their fans shared information via Facebook, Twitter and email about the stream from Backbone helping us get



Ben Maitland-Lewis interviews Boston-area recording studio owner Dan Cardinal at the Jamaica Plain Music Festival. The Backbone Network's control panel is on the computer screen.

for the guest. We used a Clear WiMax modem for Internet connectivity.

In addition to streaming the music from the two stages (where we rotate the music back and forth, so there is very little down time), we interviewed musicians, sponsors and festival producers. In 2013, we greatly increased the interviews, conducted by Boston radio personality Melissa Guadette and Ben Maitland-Lewis of Presskit.to. These interviews were terrific, giving a behind-the-scenes insight about the performers for listeners and giving the audio stream something to cut away to in between transitions between musical sets.

The Jamaica Plain Music Festival streamed broadcast worked so well that I used Backbone Radio with another client of mine, the Future of Music Coalition (futureofmusic.org), for their annual Future of Music Summit. The organization started in 2000 and is a national education, research and advocacy nonprofit for musicians.

The Future of Music Summit is a different kind of event, with keynote addresses and panels. We streamed more than a dozen panels at the Summit in 2012 and worked with Backbone again this past October.

With so much changing in the music industry, it is terrific that we're able to deliver the ideas and discussions from the summit to listeners around the U.S. and world who are not able to get to Washington for the event to be there in person.

For the Future of Music Summit, we took a stereo feed from the main control booth of a lecture hall at Georgetown University. Using Backbone's simple On-Air Studio software, it was easy to deliver the audio and reach a far greater audience with this event, a goal for any live event. It was simple using Backbone Radio.

For information, contact Paul Kamp at Backbone Networks in Massachusetts at (617) 848-1176 or visit www.backboneradio.com.

the word out around Boston and around the world.

STREAMING

While the Jamaica Plain Music Festival did not have a large budget, Backbone Networks helped make everything happen smoothly and professionally. It was easy to set up and work with the company's Backbone Radio streaming service. Using Backbone Radio we streamed the concert to 10,000 people around the world in 2012 and again had great listenership in 2013.

The ability to operate our station anywhere was critical. To do this for the JP Music Fest we took a stereo feed from the main mixer into a Mackie ProFX8 mixer. We had two Shure SM58 microphones, one for the host and one

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STREAMING FOR RADIO BROADCASTERS

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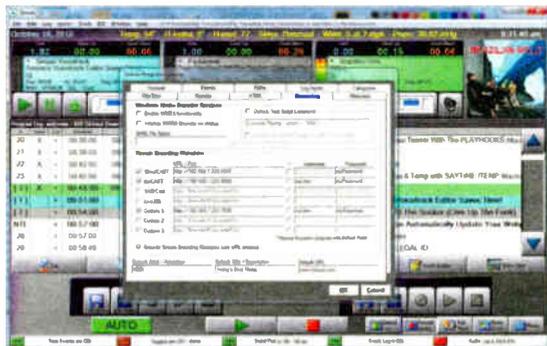
Broadcast Software International says that its Simian Pro and Simian Lite make streaming over the Internet easier than ever before.

Web-based stations can use their favorite stream encoding packages — Shoutcast, Icecast, Live365, SAMcast or others — to encode their station, while Simian simplifies the output of metadata with prebuilt templates so that listeners can see the artist and title information for currently-playing artists.

Simian Pro and Lite have an affidavit generator built in that analyzes the daily as-run logs, giving users a report suited for Sound Exchange. Simian 2.2 Pro also has optional remote clients for PC, iPad and iPhone, which allow your talent to connect to your studio and record voice tracks, create logs and more.

For stations that run a Web stream as a simulcast, Simian 2.2 Pro now has the ability to send software triggers to another Simian Pro 2.2 system via TCP/IP, so a secondary Simian system can replace terrestrial spots with Internet-only spots, perfect for generating extra revenue with Web spot packages for clients.

For information, contact Broadcast Software International in Oregon at (888) 274-8721 or visit www.bsiusa.com.



SOFTRON ONTHEAIR WORKS WITH SHOUTCAST AND ICECAST

Softron's OnTheAir Studio version 3.0 is the latest edition of the radio station playout solution for Mac OS.

It has built-in direct streaming to Shoutcast or Icecast servers. Shoutcast Radio offers thousands of free Internet

radio stations from DJs and broadcasters around the world. Icecast is an open source server that can be installed and configured on any server. Both streaming services allow users to stream a radio station easily and quickly. In OnTheAir Studio preferences, enter the URL, login and password of your server and you'll be broadcasting within seconds, Softron says.

Featuring playout automation with playlist logic, OnTheAir Studio is a 64-bit Retina-ready application that supports major audio file formats and can run playlists of unlimited duration, the company says. With built-in Web streaming in AAC+ format, users can automate and stream at the same time without additional equipment or software, making OnTheAir Studio a cost-effective solution for Web radios and music stations, Softron says.

OnTheAir Studio 3.0 can be controlled with any MIDI controller. Automatic mix point detection analyzes tracks and inserts cue points when levels drop below a predetermined level, to ensure clean track changes, and a waveform viewer makes it easy to adjust mix points manually. Automatic level detection guarantees that segues are even.

A built-in multiband compressor makes it easy to add ducking voiceovers, even without an external audio mixer, using any audio input of the Mac for the microphone. By adding the free OnTheAir Tools app, OnTheAir Studio users can set up unattended 24/7 playback, and generate as-run logs with data export for external reporting.

OnTheAir Studio is available in a demo version.

For information, contact Softron in Nevada at (702) 330-3232 or visit www.softron.tv.



WHO'S BUYING WHAT

ATOP NEW YORK, THAT'S SOME BIG ROPE

The largest Phillystran tower guy systems ever assembled are serving the steel spire atop the New York City skyline. The manufacturer said it designed, made and supplied eight aramid fiber High-Performance Tower Guy assemblies, each approximately 100 feet in length, to support the 400-foot mast atop **One World Trade Center**, the tallest building in the Western Hemisphere. That building has been topped off but is not yet open.

"These custom HPTG assemblies were designed to hold up in the most extreme weather conditions with a rated break strength over 1.7 million pounds," the company said.

Phillystran began working on the job in 2004 with a proposal for custom non-metallic guy assemblies to support the mast. It won the contract in September of last year.

"Construction of the eight HPTG guy assemblies ... began in the fall of 2012 and was recently completed in August 2013, taking nearly 48 weeks to complete," the company stated.

"This project was a challenge for Phillystran, requiring a specially designed tension monitoring system, and approximately 6-inch-diameter HPTG guy assemblies weighing in at nearly 12 pounds per foot, with a breaking strength of over 1.7 million pounds." Phillystran said its engineers and consultants monitored the installation of the assemblies from mid-July into early August.

The building is a joint project of The Durst Organization and the Port Authority of New York and New Jersey. Durst hopes to attract broadcast stations to lease space for transmitters atop the building. If it succeeds, it plans to install master TV and FM antennas on the spire.



PRODUCT SPOTLIGHT

ADVERTISEMENT

Audio-Technica BP894 MicroSet Subminiature Cardioid Condenser Headworn Microphone

With its innovative rotating capsule housing, the new BP894 Headworn Microphone is designed to produce an unparalleled level of intelligibility. Unlike its counterparts that face forward, the BP894's uniform cardioid element can be aimed directly toward the user's mouth, providing crystal clear sound while effectively controlling feedback and eliminating unwanted background noise — so it's the perfect choice for a wide variety of settings and applications. Each unit comes equipped with a dual-ear microphone mount for maximum stability and comfort.

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TECHUPDATES**WOWZA MEDIA SERVER
STREAMS EVERYWHERE**

Streaming software developer Wowza says that some 600 radio stations in the world rely on Wowza to stream their audio 24/7.



Wowza Media Server is described as customizable, scalable and secure software powering reliable streaming of the highest quality audio and video content to any device — PC, tablet, smartphone, set top box — and any size audience.

Wowza Media Server supports major encoders and ICY (Shoutcast/Icecast) servers, AAC, AAC-LC, accPlus v1 and v2, MP3, Speex, Nellymoser Asao, AC-3 (Dolby Digital), E-AC-3 (Dolby Digital Plus) audio along with H.264, H.263, VP6, Sorenson Spark, Screen Video v1 and v2 video.

Available on-premises or in the cloud, Wowza says its software allows users to create unique and engaging video and audio experiences, applications and services. Wowza systems integrate with back-end systems such as databases, billing systems and log analysis tools

Deployed in 150 countries, Wowza Media Server's core features and premium AddOns such as transcoding, digital rights management and file security allow organizations to customize streaming solutions.

For information, contact Wowza Media Systems in Colorado at (720) 222-4744 or visit www.wowza.com/media-server/broadcasters.

**STREAM MY STATION PROVIDES INTERNET
STREAMING AND SERVICES FOR RADIO**

Stream My Station, owned by Jim Barcus, founder and former owner of the DigitalJukeBox automation system and the inventor of the Radio Spider Audio Downloader, offers complete full service radio streaming packages. The company says it has over 500 radio and Internet radio stations around the world streaming currently.

Both monthly and yearly plans are available and at 25 percent discount.

Stream My Station is compatible with Shoutcast, Icecast, AAC+ and AutoDJ. Stations can stream at 32 kbps up to 128 kbps. Streaming software and guidance for set-up are available, along with an ad free pop-up player for a website.

The company says that its servers were up 99.8 percent of the time last year. Backup is also available for Internet failure at the station.

For information, contact Stream My Station in Ohio at 740-314-8040 or visit www.StreamMyStation.com.

ATC LABS OFFERS MORE OPTIONS

ATC Labs says it recently worked with Seton Hall University's WSOU(FM) college radio station to improve and expand the university's streaming profile. ATC says that the station had an abundance of programming along with access to some of the best sports teams in the Big East Conference.

Seton Hall chose the ATC Labs SoundMax Q24-4880, an all-digital eight-channel audio, 24-band audio processor and streaming encoder, to deliver new channels for mens and womens soccer, volleyball, a new jazz program, HD2 and still have room for other seasonal sports coverage. Each channel has its own processor profile and steaming parameters.

Adding eight new streams did require an update to the Web page (in process) but the new Web streaming universal player, loading directly from the page without downloads or dedicated app, was a real benefit. It keeps the listener on the WSOU page while they listen.

The Q24-4880 is one of a family of audio processor/streaming encoder products from ATC Labs. The latest is the SoundMax Q10-1101, a single-stream slimline 1RU, 10-band audio processor/streamer that comes as a plug-and-play solution for those adding one stream. The company says that a cloud-based content distribution network is included in the package for an extra monthly fee.

The SoundMax products offer a solution for one stream in hardware or software with additional streams via a Q24 Server software package that can create upwards of 16 streams per server. SiriusXM uses the Q24Server solution for their streaming audio offerings.

For information, contact ATC Labs in New Jersey at (973) 624-1116 or visit www.atc-labs.com.

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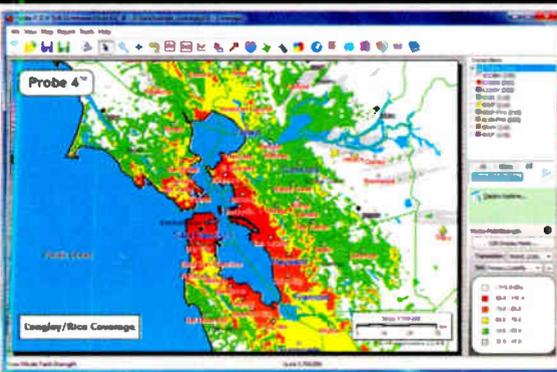
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Despite Bleak Predictions, Radio Persists

Radio isn't doing as terribly as you might think; here are some reasons why

COMMENTARY

BY THOM CALLAHAN

I've been reading about the "death" of radio for far too long, and would find it all most amusing if it were not so misguided and plain wrong. Each commentary is as dire as the next. Each story is the same and all you have to do is change the decade and the latest "threat" to radio and it all goes something like this:

1. TV is killing radio. "It won't be long now until radio is gone" (Billboard Magazine, 1960).
2. Cassettes and 8 track tapes in the car will "kill radio, why would you listen anymore?" (A music expert, 1970).
3. The Sony Walkman will "rapidly eclipse radio" (a major advertiser, 1984).
4. Betamax and VHS will "erode radio listening substantially" (local TV station, 1985).
5. The Internet will "destroy over-the-air radio listening" (various sources, 1990).
6. Consolidation will "turn off listeners in droves" (various, 2000).
7. Sirius Satellite "will soon replace traditional radio within five years" (various bloggers, 2007).
8. The iPod "will bring radio down ... once and for all" (various bloggers, 2008).

9. Pandora and "pure plays will cripple radio forever" (various, 2010).
10. In dashboard, "Internet radio" in cars "signals the death of traditional radio" (various critics, 2011-2013).

Yet for all its competition, known and imagined, from its long line of "expert" critics as well as its own weak PR efforts, radio is still having explosive growth in many sections of the U.S., and especially in Southern California. In fact, I would call radio's momentum a "re-birth" ... growing and adapting in ways all these critics have somehow failed to see.

These rants against radio reflect unprofessional journalism at a high level and are not the true state of the radio industry today. Rather than just offer my opinion, I think it would best if we all look at some undeniable facts about radio and why it is more popular with listeners and advertisers than ever before.

JUST THE FACTS, MA'AM

First, there are now more licensed radio stations in the U.S. than ever before: 15,300, up by 1,506 since 2004, when there were 13,794, according to FCC records from May 2004 compared to September 2013.



Thom Callahan

Radio listening for adults 12 and up in the U.S. continues growing and now reaches 243 million Americans every week in 2013. That's a reach of 93.2 percent of all Americans, as reported by Nielsen Audio, formerly Arbitron. In 2003, radio reached 224 million Americans, while today it's reaching 243 million, a 9 percent increase in audience in the past 10 years alone.

Listening to local radio stations through mobile/tablet devices and/or PCs is surging, with an 82 percent increase in listenership vs. a 19 percent increase for all "pure plays" like Pandora, Spotify, etc., says Triton Digital Metrics data. Radio's online listening growth percentage over the past 12 months is now more than double the "pure play" numbers, also according to Triton Digital Metrics. That's right, double. Online listening does not erode radio's audience, it enhances it.

And now, to really frame this debate to its proper form, please consider the following additional facts that showcase radio's ubiquitous strength and how difficult it will be, now or in the future, for any audio platform to overcome the evolving nature and tenacity of radio as a powerful and ever-present consumer choice:

Arbitron/Edison Research says that 84 percent of adults say they use "AM/FM radio" while driving and 58 percent say they use radio "almost all the time" in their cars. After 10 years of effort, Sirius/XM can only muster an 11 percent reach of all Americans. Radio stands at 93.2 percent and growing, according to Nielsen Audio.

Pandora has stopped growing. According to Triton Digital, Pandora's average active sessions (signing on to their site) from January through August 2013 have gone down slightly by 1 percent. A more ominous indicator is their Time Spent Listening, which has dropped during the same period from 37.8 minutes down to 35.4 minutes. This is not good news for a start-up spending more money than it brings in. Pandora will not discuss profit targets at this time.

Investment newsletter Motley Fool urged its clients in July 2013 to "stay away" from Pandora as more ads being inserted are costing them listeners and subscribers won't even pay a \$4 fee to eliminate the annoying ads. Their business model is just not sustainable long-term.

STOCK VALUE

If the "inconvenient truths" of the above facts are still not enough to turn your heads about the compelling power and business model of radio in 2013 and beyond, please consider this. As I write in late October, every major, publicly traded radio broadcast company is trading near or at its 52-week high. This clearly means that Wall Street and the investment

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OPINION

RADIO PERSISTS

(continued from page 29)

community are coming around again to the value of the free, ad-supported business model of real time radio.

It certainly helps to have a robust digital strategy in place as well, but clearly stock values are tied to perception of an industry and intended future growth, and radio once again has that "hidden value" quality for investors.

In July, Hubbard Broadcasting bought Sandusky Broadcasting and its 10 radio stations in Phoenix and Seattle for \$85.5 million. As a result of this sale, Hubbard will add 65-70 new jobs to support the two markets (Inside Radio, July 18).

Do any of these documented facts reflect a radio industry in trouble? Hardly. Indeed, the opposite is true. Radio is growing and the smart investors know it!

Oh, and one more thing: BIA/Kelsey is still projecting that total on-air and online advertising revenue for the radio industry will reach \$17 billion by 2017, or a 4.8 percent growth rate over 2013's estimated \$16.2 billion total revenue.

Imagine this for just a minute ... Radio's total revenue by 2017 still won't equal its all-time high of \$17.9 billion, set in 2007, but that was right before the great recession. Radio indeed rumbles

on, and by 2017, the industry will have climbed back to within 92 percent of its all-time high, and at a time when our strategy and approach to our digital radio assets are still in their formative stages.

Does any of this remotely sound like any industry in trouble?

Even to the most casual observer, it is clear that radio — with all its extending platforms of growing online PC listeners, mobile listeners, surging in-car listening, involving and local websites, rapid and loyal social media feeds, podcasts, thousands of mobile apps and a passionate listener base of 243 million people — is the king of all audio, regardless of its platform, location or technology.

WHAT'S IN A NAME?

And finally, have you noticed how that everyone wants to be in radio and call itself radio?

Pandora, Sirius/XM, Spotify and every other digital newcomer tags itself as "radio." They are not radio. They are playlists, nothing more. They do not inform, they offer no help to flood or earthquake victims, they offer no charitable work, they don't offer any news, information, chatter, personalities that interest us, and they don't tell us why we are stuck in traffic and that we will be late getting home to our families.

Only radio is radio: Engaging, local, informative, helpful and always willing to turn over its airwaves in a crisis, providing thousands of hours of community support to their towns, cities and states. And there are no subscriber fees, set-up costs or yearlong agreements to sign. It's been free to all our listeners and has been now for almost 80 years. Please, accept no substitutes!

I did say free, didn't I? Radio rumbles on, simply because it connects with humans on an intimate and consistent manner. Our strongest weakness is that we are such good friends and so easily accessible that our listeners consider radio as always being there, much like electricity. Can you imagine a day in your life without electricity or your favorite, local and free radio station?

We are in a golden age for radio, and based on all the facts listed above, a big, bold and robust future is ahead of all of us who are fortunate enough to work in this creative and compelling business.

Radio rumbles on like a sleek bullet train, powerful yet taken for granted, loaded with enormous assets and a time-tested delivery system for listeners and advertisers, and hurdling, ever forward ... towards its next destination. All aboard!

Thom Callahan is president of the Southern California Broadcasters Association. He is based in Los Angeles.

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T: +86-755-83862930/4050 | F: +86-755-83862920
CLASSIFIEDS: David Carson, dcarson@nbmedia.com
T: 212-378-0400, ext. 511 | F: 866-572-6156
LIST RENTAL: 914-925-2449, danny.grubert@lakegroupmedia.com

Radio World Founded by Stevan D. Dana

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READER'S FORUM
GIVE LPFMS A BREAK

In response to Scott Bailey's letter regarding LPFMs "not playing fair" (Reader's Forum, Oct. 23) — they have bills to pay, electric-phones-music license and such. They must receive funds from somewhere, and in most cases it is from underwriting, since they can't sell advertising like the "big boys."

As long as they follow the FCC rules on underwriting, why shouldn't they sound professional? I have been broadcasting for more than 50 years, working at very large stations as well as very small ones. I even worked at some AM stations, played discs by the armload, read spots live and more.

I grew up with radio, and then at age 70 retired and thought I needed to get away from radio for a while. How wrong was that! Now, at age 82, I am having a ball as manager of a 100-watt LPFM station. I have excellent help at the station, and we sound every bit as good as, or better than, several local commercial stations.

We are not getting rich, just enough to pay the bills. We are serving the local community with local news, weather, bake sales, yard sales and more that the commercial stations don't want to "clutter up" their fine programming format.

Maybe your city doesn't need an LPFM to add to the mix. After all, what can those grubby kids add to the air that you can't — or won't — do? "Local AMs like us was here first" ... Wake up man, and give 'em a chance. You might even learn from them!

Gene Kirby
Manager
WRPO(LP)
Russells Point, Ohio

TOM WHEELER A POOR CHOICE FOR FCC

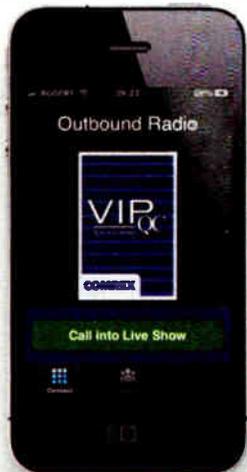
In my opinion, having former cable and wireless lobbyist Tom Wheeler as the head of the FCC is like putting a mouse in charge of security of a cheese factory.

Why would Mr. Wheeler care at all about terrestrial broadcasters after having years of representing cellphone/wireless interests and their spectrum requests? And what's the chance of cable customers finally getting a la carte packages after his years of representing the cable companies?

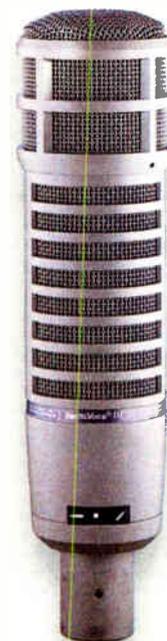
A broadcast engineer truly would have been the best choice for the FCC chairman position, not a lobbyist, a politico or a lawyer.

John Pavlica
Station Engineer
Toledo, Ohio





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