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## INSIDE

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• Relay logic, as simple as it is, can cost you a lot of troubleshooting time. — Page 18



### BUYER'S GUIDE

recorders and tphone apps ge the world mote gear. age 26



## Westergren Goes Where the Money Is

Pandora, He Says, Is 'Like a Big Radio Station in Every Market Now'

BY LESLIE STIMSON

**LAS VEGAS** — Pandora personalized Internet radio continues to grow. The company claims to have 68 percent of the Internet radio marketplace. It's now

### NEWSMAKER

in numerous devices; and an increasing number of automakers are including the app in their in-dash infotainment systems.

Detractors, including some in broadcast radio, say the company's business plan will fail, that it will be strangled by music royalty fees; and anyway, they say, it's not really "radio" but a juke-box-like service, lacking the personality or local service of traditional radio.

The majority of Pandora's 125 million users sign up for the free version, which airs ads, unlike the premium service. Pandora has been hiring sales people to sell against broadcast radio in local markets and is pitching spots to traditional radio advertisers like automakers, jewelry stores and grocers.

Pandora's efforts have driven debate about how to compare radio and online listening data. Arbitron's commercial radio clients asked the firm to calculate

how many hours per month Americans listen to commercial radio; the answer was 14.6 billion hours, or 43.8 billion hours per quarter. Pandora in January told investors its listeners logged 2.1 billion listener hours during the third quarter, hours it says are equivalent to an average 700 million listener hours per month.

Pandora Founder and Chief Strategy Officer Tim Westergren says personalized Internet radio is the future and that of all such services, Pandora is the best. He spoke with Radio World News Editor/Washington Bureau Chief Leslie Stimson at CES, surrounded by several

(continued on page 6)

## In Radio, the Forecast For the Cloud Is Unclear



Companies seem more inclined to look inward for what the cloud offers. Page 22

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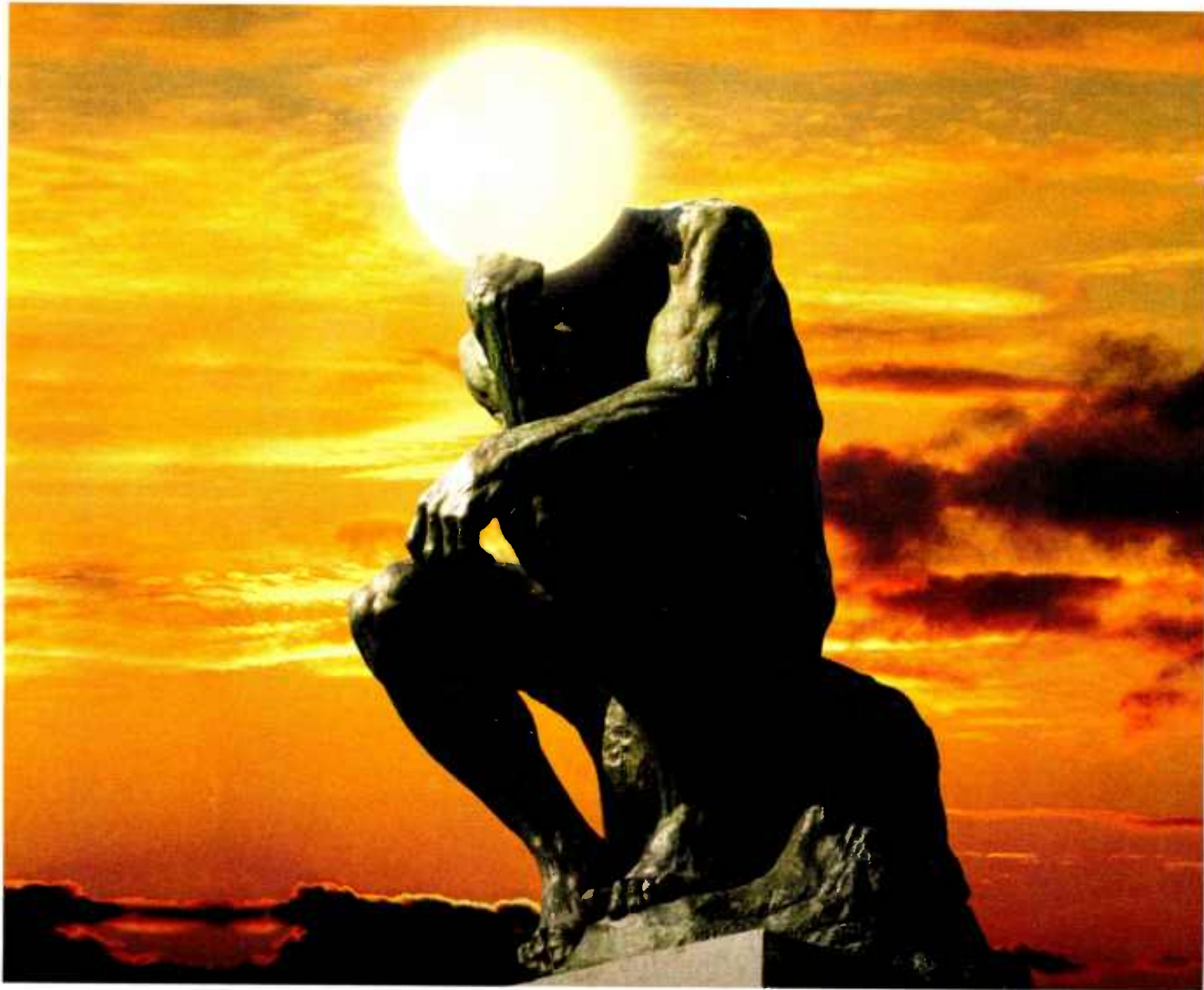


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Selected content from Radio World's "The Leslie Report" by News Editor/Washington Bureau Chief Leslie Stimson.

## HD RADIO AWARENESS REMAINS LOW

A study by audience research firm Mark Kasso & Co. seems to show that after five years of station on-air promotion, consumers still are confused about what HD Radio is. His takeaway: Stations need to do more to promote the technology.

Nearly half of 18-to-64-year-olds haven't heard of HD Radio. Too many of the rest don't know much, if anything, about it, according to Kasso.

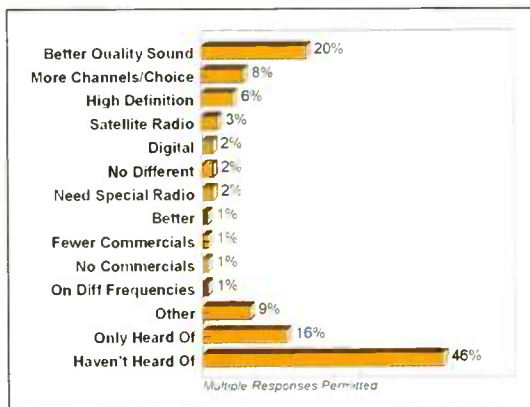
In a telephone survey, the company found 54 percent of participants had "heard of" HD Radio. That's going in the wrong direction; it compares to 67 percent in 2008, though it is up from 38 percent in 2006.

a laser-like focus on three aspects of HD Radio: it delivers CD-quality sound, it delivers more channels and choices; and it is free, unlike satellite radio.

While HD Radio promotion does get these points across, he said the website [www.hdradio.com](http://www.hdradio.com) is confusing for consumers, with mentions of several features like tagging and traffic.

"In general, the industry needs to increase the frequency and intensity of the highly-focused message," says Kasso, who suspects the decline in awareness of HD Radio, compared to '08, is because stations are promoting it less.

It is hard getting across what HD Radio is. It reminds me of the early days



Survey respondents gave these answers when asked what they associate with the term 'HD Radio.'

in order to demo the technology to potential advertisers.

"We're pretty much at mass adoption now with consumer electronics, retailers and automotive," Ferrara told me. "The next big hurdle is mobile."

Arggh, I've held this note for 5 minutes and I still can't remember what the next lyric is!



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Included in the 54 percent is 16 percent who have only heard of the technology, but don't know what it is. That 16 percent unfamiliar with the technology essentially is equal to 2008's 14 percent, according to the findings.

Kasso says the main "image" of HD Radio is that it delivers better audio quality, according to the findings. Twenty percent expressed that view, essentially flat from 2008. For many, better audio quality is something they infer based only on their knowledge of HDTV, he said.

Other indicators of a continued knowledge gap: Only 8 percent say HD Radio delivers more channels and choices, identical to 2008; and 6 percent have the misconception that HD Radio is satellite radio, again essentially flat from 2008.

The findings are based on 670 telephone interviews conducted in January.

Asked by Radio World what the industry should do, Kasso suggested

of satellite radio, when XM and Sirius were running 30-second ads in movie theaters before their respective launches. You saw a satellite hurtling across the sky, the name of the company, and the fact that something was "coming," but those left people confused.

Although the digital radio debate has been going on for more than two decades, and radio insiders are well familiar with it, others still consider HD Radio to be in its "early days." The FCC, for example, considers HD Radio to be a nascent technology.

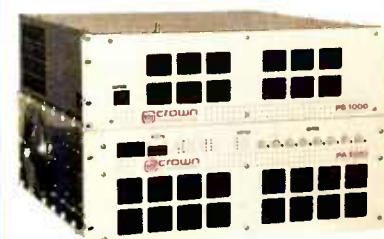
HD Radio Alliance President Peter Ferrara agrees with Kasso that more work needs to be done in terms of promoting the technology. However, he said, "We have done a very good job in moving awareness of the technology over the last five years." He reminded me that when the alliance began there were only two HD Radio tabletops on the market. While auto radios were out first, GMs were clamoring for tabletops

The alliance is supporting iBiquity's meeting with cellphone carriers with marketing plans for HD Radio, he points out, adding that alliance efforts have been there all along with auto-makers as well. Alliance members use their inventory to get deals done, he told me. For example, when iBiquity pitched HD Radio to Ford, it included marketing plans from alliance members offering the carmaker commercial time to help convince Ford to include HD Radio in its Sync communications/info-tainment platform.

Ferrara disputes the conclusion that the HD Radio website is confusing, saying it was redesigned a year ago and is receiving good traffic. "People come to the site and do what we want them to do," either using the search function or going directly to the buyer's guide and onto retailer's sites.

HD Radio progress needs to be measured in terms of the distribution channel, he summed up.

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# LPFMs Draw Small But Loyal Fan Base

FROM THE EDITOR

Paul McLane



The FCC published interesting data about low-power FM radio. The numbers came within a report to Congress about the economic impact of LPFMs on full-service commercial stations.

In brief, the study found no meaningful impact, a conclusion with which I must agree. But I also find it interesting to look at the charts within the report, the most comprehensive I've seen regarding LPFM as it exists in the marketplace.

For example, the table here lists the top 10 LPFM stations in the Arbitron ratings using three types of metrics. Perusing, we find that even the top-drawing LPFM doesn't have a huge number of listeners — 2,900 Average Quarter Hour Persons — and this was an outlier. The third-highest station had only 800.

But LPFM listeners apparently stick with their stations. Note the Time Spent Listening market rankings at lower right. Five LPFMs achieved the highest TSL in their markets, and 11 were among the top five, according to the study. (The highest TSL for an LPFM station was 2,115 minutes, or about 35 hours, per week.)

"The top-rated LPFM stations," the FCC found, "tend to have high TSL and low cume person values, relative to full-service stations. These measures suggest that the popular LPFM stations tend to attract a small but loyal fan base who tune in for long periods and/or switch stations less often than the average full-service station listener." This makes sense to me, having started my radio career at a small college station that aired a block format and had relatively few listeners but engendered a high level of passion in them. To me, LPFMs capture one facet of what radio is all about, or can be all about.

The FCC study in general found that LPFMs serve primarily small and rural markets and have geographic and population reaches "many magnitudes smaller" than those of full-service commercial FMs; that their ratings, if any, are

**Top Ten LPFM Stations In Arbitron Ratings, For Various Metrics**

Station	Arbitron Metro	Metro Rank	Format	AQH Persons	AQH Share	TSL	Market Rank
<b>Top Ten for AQH Persons</b>							
1	WIGV-LP	Providence-Warwick-Pawtucket	41	Contemporary Christian Religious	2900	18	18
2	WMDI-LP	Monmouth-Ocean	51	Contemporary Christian Religious	1200	28	28
3	WGVV-LP	Quad Cities (Davenport-Moline)	147	Urban Contemporary	800	13	13
4	KELS-LP	Ft. Collins-Greeley, CO	120	Adult Standards/MOR	700	23	23
5	WRES-LP	Asheville	159	Urban Contemporary	700	11	11
6	WUVS-LP	Muskegon, MI	237	Urban Contemporary	600	8	8
7	KOCZ-LP	Lafayette, LA	105	Variety	600	22	22
8	WJTW-LP	West Palm Beach-Boca Raton	47	Oldies	600	39	39
9	WSBL-LP	South Bend	179	Spanish Variety	600	12	12
10	WSWO-LP	Dayton	61	Oldies	500	26	26
<b>Top Ten for AQH Share</b>							
1	WWEZ-LP	Brunswick, GA	298	Adult Standards/MOR	3.5	8	8
2	WLCD-LP	Jackson, TN	292	Urban Oldies	3.4	10	10
3	WUVS-LP	Muskegon, MI	237	Urban Contemporary	3.3	8	8
4	KCSA-LP	San Angelo, TX	289	Oldies	2.9	9	9
5	KBOL-LP	Waterloo-Cedar Falls	251	Urban Adult Contemporary	2.6	11	11
6	WRES-LP	Asheville	159	Urban Contemporary	2.5	11	11
7	WSBL-LP	South Bend	179	Spanish Variety	2.2	12	12
8	WGVV-LP	Quad Cities (Davenport-Moline)	147	Urban Contemporary	2.1	13	13
9	WGAG-LP	Bluefield, WV	284	Oldies	2.0	13	13
10	WIGV-LP	Providence-Warwick-Pawtucket	41	Contemporary Christian	1.6	18	18
<b>Top Ten for TSL</b>							
1	WPJI-LP	Clarksville-Hopkinsville, TN-KY	201	Religious	2115.0	1	1
2	WIGV-LP	Providence-Warwick-Pawtucket	41	Contemporary Christian	1860.0	1	1
3	WFBM-LP	Sunbury-Selinsgrove-Lewisburg, PA	221	Southern Gospel	1170.0	1	1
4	KSKQ-LP	Medford-Ashland, OR	208	Variety	1140.0	3	3
5	WSBL-LP	South Bend	179	Spanish Variety	1050.0	1	1
6	WBYJ-LP	Greensboro-WS-High Point	45	Southern Gospel	825.0	4	4
7	WJTW-LP	West Palm Beach-Boca Raton	47	Oldies	720.0	1	1
8	KJIT-LP	Bismarck, ND	282	Religious	660.0	3	3
9	WCNH-LP	Concord (Lakes Region)	172	Classical	615.0	3	3
10	WRES-LP	Asheville	159	Urban Contemporary	555.0	4	4

Source: Arbitron Data.

Notes: Metro rank is 2009 national rank of metro by population. AQH = Average Quarter Hour, TSL = Time Spent Listening. Right-most column lists the rank of each station within its market, for that metric.

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negligible; and that audiences are far smaller than those of full-service stations in their markets.

You may feel differently. Comment to me at [radioworld@nbmedia.com](mailto:radioworld@nbmedia.com).

This discussion comes as industry anticipates another flurry of new LPFMs thanks to congressional action easing interference protections. If you're interested in LPFM and the impact of more low-power stations, read the FCC report. It summarizes the history of the service and the concerns of other observers, including the NAB, which argues that niche-formatted stations, particularly in urban areas, are likely to be hurt by an expansion of LPFM. NAB submitted a study concluding that full-service stations with niche formats generally have smaller potential audiences and low revenues, which make them especially vulnerable if they experience a decline in listenership.

Read the FCC report at <http://radioworld.com/LPFM-impact-study>.



## NEWSROUNDUP

FEBRUARY 15, 2012

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**LPFM WINDOW:** Prometheus Radio Project believes the FCC will open a filing window for applications for new FM's by year-end; the commission's original goal was mid-year. The FCC needs to decide how to handle the thousands of pending FM translator applications from the last window and release the "final" rules implementing the Local Community Radio Act, allowing the LPFM service to expand to third-adjacent channels.

Prometheus Radio Project Policy Director Brandy Doyle anticipates the agency will release a translator order soon, then complete the LCRA rule-making. "We also need some time between the publication of the rules and the window, for applicants to find their frequencies and prepare their applications," said Doyle.

**MEDIA OWNERSHIP:** Public comments in the FCC's media ownership proceeding must be filed by March 5 and reply comments by April 3 to MB Docket Nos. 09-182 and 07-294.

The FCC has proposed retaining the local radio ownership "tiers" and asks for comment on whether or how the rule should account for other audio platforms as well as the impact from the introduction of digital radio. The agency proposes to repeal the radio/television cross-ownership rule, and to eliminate the blanket ban on newspaper/broadcast cross-ownership, replacing it with a modified version that would allow one company to own a newspaper and a broadcast station in the same market in the top 20 TV markets under certain criteria.

**SIDEBANDS:** HD Radio proponents reiterated their request to the FCC to allow digital FM's to operate with asymmetric sideband levels as soon as practical. Allowing uneven power levels on a more routine basis would help more HD FM's raise their digital power and take advantage of data opportunities afforded by digital radio technology, like being able to transmit visual images synched with audio, proponents say. Higher power to enable digital coverage to match analog FM coverage also is critical to HD FM chips getting into mobile devices, they feel.

**APRE:** The Association of Public Radio Engineers is accepting nominations for its annual Engineering Achievement Award through March 5. The honor is to be awarded to an individual for "outstanding contributions" to the art and/or science of radio engineering that have made a "significant impact that on, or improvement in" the state of the public radio industry. Use

the award nomination form at [www.apre.us](http://www.apre.us) and direct questions to Gordon Carter at [gordon@gcarter.us](mailto:gordon@gcarter.us). The award will be presented at the annual NPR Labs/APRE Engineering Dinner in Las Vegas in April.



**CLEAR CHANNEL:** The renamed Clear Channel Media and Entertainment tapped music, entertainment and media executive John Sykes as president of Clear Channel Entertainment Enterprises. It's a newly created position.

This is the first major hire by Pittman since he came to Clear Channel last November. The pair worked together as core members of the team that launched MTV in 1981. Sykes has worked with Clear Channel in a consultant role since early 2011 on several projects; he assisted the National Programming Platforms team that created the iHeartRadio Music Festival. According to the broadcaster, Sykes will develop new businesses for the company across a range of media.

**NAB:** David Dzedzic, NAB senior vice president, business development, died of brain cancer in January; he was 49.

NAB Executive Vice President of Conventions and Business Operations Chris Brown credited Dzedzic for helping to make the NAB Show "one of the top trade



show events in the world." Dzedzic began his latest position with NAB in November 2006. He was responsible for most of the non-dues revenue of the association, including exhibit sales, sponsorship, advertising, member services, merchandise and publications. He joined NAB in January 1997 as senior vice president of advertising and services.

**LPFM INTERFERENCE:** Power Ministries-owned WRLE(LP) in Dunnellon, Fla. will have to pay a \$1,500 fine for operating without an FCC-certified transmitter. The FCC said the station interfered with FAA frequencies in Florida. The station convinced the agency to cut the fine from the original \$12,000 by submitting documentation of its inability to pay the larger amount.

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## WESTERGREN

(continued from page 1)

devices that now feature Pandora or will soon.

**RW:** I've heard you say you want Pandora to be everywhere: at home, in the car, wherever people are. You're also hiring salespeople, to sell in local markets. So you're going up against local broadcast radio?

**Westergren:** Absolutely, yes. We announced that we crossed over 125 million registered listeners recently. That translates into a pretty big audience, in every local market, once you get to that scale.

We're at a point where it makes sense for us to think about, "Okay, what do we do in Kansas City? What do we do in Detroit ... in Chicago, San Francisco, all these places, to take advantage of the local ad opportunity?" Because we are a big radio station, kind of everywhere now. It's kind of changed the complexion of the business, once you reach that size. It's not just a national service anymore.

**RW:** What kind of local markets are you targeting?

**Westergren:** We're starting with the bigger ones right now. It's kind of a way for us to create template and really refine the way we do it. But we'll, as quickly as we can, start to roll that out. We close to doubled [listening hours] in the last year. If we keep growing like that, the opportunity for us, it's here.

**RW:** How are you measuring your audience?

**Westergren:** There's two different ways. The one that's probably relevant is the monthly active, the comScore number [measuring] people coming each month. That's the active audience. That's the one we're really selling against for an advertising agency. ... comScore is measuring use. We have our own internal numbers, but they also are measuring use.

**RW:** What are they measuring?

**Westergren:** They're measuring unique access to the website and on mobile [devices].

**RW:** So they're keeping track of how



AQH Rating Adults 18-34 (Mon-Sun 6 a.m. - Midnight)	Jan 2011	Holiday 2011	Full Year Increase
New York	0.5	1.0	100%
Los Angeles	0.7	1.2	71.4%
Chicago	0.6	1.0	66.6%
San Francisco	0.7	1.2	71.4%
Dallas-Ft. Worth	0.6	1.1	83.3%
Houston	0.6	1.0	66.6%
Philadelphia	0.6	1.0	66.6%
Washington, D.C.	0.7	1.2	71.4%
Atlanta	0.5	1.0	100%
Boston	0.6	1.1	83.3%
Portland	0.8	1.2	50%

AQH Rating Adults 18-49 (Mon-Sun 6 a.m. - Midnight)	Jan 2011	Holiday 2011	Full Year Increase
New York	0.4	0.7	75%
Los Angeles	0.5	0.9	80%
Chicago	0.4	0.7	75%
San Francisco	0.5	0.9	80%
Dallas-Ft. Worth	0.4	0.8	100%
Houston	0.4	0.7	75%
Philadelphia	0.4	0.7	75%
Washington, D.C.	0.5	0.8	60%
Atlanta	0.4	0.7	75%
Boston	0.4	0.8	100%
Portland	0.6	0.9	50%

**Pandora in January published these listenership results and said it had reached an average quarter hour rating of 1.0 or more among adults 18-34 in the top radio markets.**

many times people are pinging the service, and for how long?

**Westergren:** Yes, they don't have time on-site. We look forward to the day when that becomes a well-known metric. We also just announced that the per-month average listening has gone up to 18 hours, average, now on Pandora. If you look at time spent, Pandora's one of the top destinations, period.

**RW:** Arbitron in December came out with a caution to advertisers and others not to compare its PPM numbers to audience numbers for Internet or personalized radio services because they're not the same. When you talk to potential advertisers, how do you describe your listening and measurement?

**Westergren:** For a while we really were bringing our own numbers, which is not ideal. Recently Edison did some work for us, some measurement themselves and published [it]. We've done this a few times now. So we've got a third party to come in and validate it. ... It's kind of our next best option.

Triton Digital has also; and Ando

Cume Rating Adults 18-34 (Mon-Sun 6 a.m. - Midnight)	Jan 2011	Holiday 2011	Full Year Increase
New York	13.4	22.2	65.6%
Los Angeles	16.8	27.2	61.9%
Chicago	14.3	23.8	66.4%
San Francisco	18.0	27.8	54.4%
Dallas-Ft. Worth	14.4	25.2	75%
Houston	14.9	24.6	65.1%
Philadelphia	14.8	24.8	67.5%
Washington, D.C.	18.4	27.7	50.5%
Atlanta	13.4	23.3	73.8%
Boston	16.1	24.8	54%
Portland	18.1	26.2	44.7%

Cume Rating Adults 18-49 (Mon-Sun 6 a.m. - Midnight)	Jan 2011	Holiday 2011	Full Year Increase
New York	8.9	15.2	70.7%
Los Angeles	11.3	18.8	66.3%
Chicago	9.7	16.6	71.1%
San Francisco	12.3	19.1	55.2%
Dallas-Ft. Worth	10.3	18.0	74.7%
Houston	10.4	17.4	67.3%
Philadelphia	9.8	16.9	72.4%
Washington, D.C.	12.4	19.1	54%
Atlanta	9.6	16.8	75%
Boston	10.6	17.0	60.3%
Portland	13.0	19.1	46.9%

Media has put up their ranker numbers. Those have been useful; and I think the aggregate of those three things has brought a lot of pressure to bear on Arbitron to react. Ad agencies now, and clients, are saying, "Wait a minute. Why isn't Pandora part of this, sort of, standard list of potential publishers, or radio services, for us to consider?"

I think that it's just a matter of time, because this is where the audience is going. The ad community wants an accurate apples-to-apples comparison. It's not surprising there's resistance to that.

**RW:** Do you publish your methodology?

**Westergren:** Yes, it's available. It's log files and interestingly, Pandora is required to pay royalties per song. We are legally obligated to produce accurate reporting data for every song we play to the government. We have no incentive to over report our numbers. We pay per song. That core data is what Edison is using. [Edison Media and Pandora released audience data for Pandora in 11 radio markets in January. Read that at [www.edisonresearch.com](http://www.edisonresearch.com).]

**RW:** I've heard that what Triton is measuring is server files, so if someone is listening on the computer, they're measuring how long they're leaving it on. How do you know how many people are listening to that computer and are they really listening that entire time that connection's open?

**Westergren:** ... The thing about Pandora is we "time out" if you're not interacting with it. It stops playing after 45 minutes if you don't do something with it. So there's some built-in mechanisms to prevent somebody from leaving it on and going on vacation.

**RW:** And getting credit for that listening.

**Westergren:** Exactly, because we're motivated to not play to an empty room, because we pay [royalties] per song. A significant amount of our revenue now is coming from traditional, local advertisers: car dealerships, grocers, the staple of local radio. It's taken some time but they recognize that it really is a viable medium for them to utilize.

(continued on page 8)



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



1876: Alexander Graham Bell's commercially viable telephone.



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



1920: Every home is working toward having a telephone!



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



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



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



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### COMREX



# WESTERGREN

(continued from page 6)

**RW:** Meaning you're taking market share away from local broadcasters.

**Westergren:** That's where the money is.

**RW:** What about satellite radio. Is that a competitor?

**Westergren:** In the scheme of things, if you just look at overall market share, broadcast radio is north of 90 percent. We're not competing with satellite. We're competing with broadcast radio for listener hours.

**RW:** Automakers have told me they like including software apps in their large-screen in-dash infotainment systems so they can swap the apps in and out as they gain or lose popularity, rather than making hardware changes.

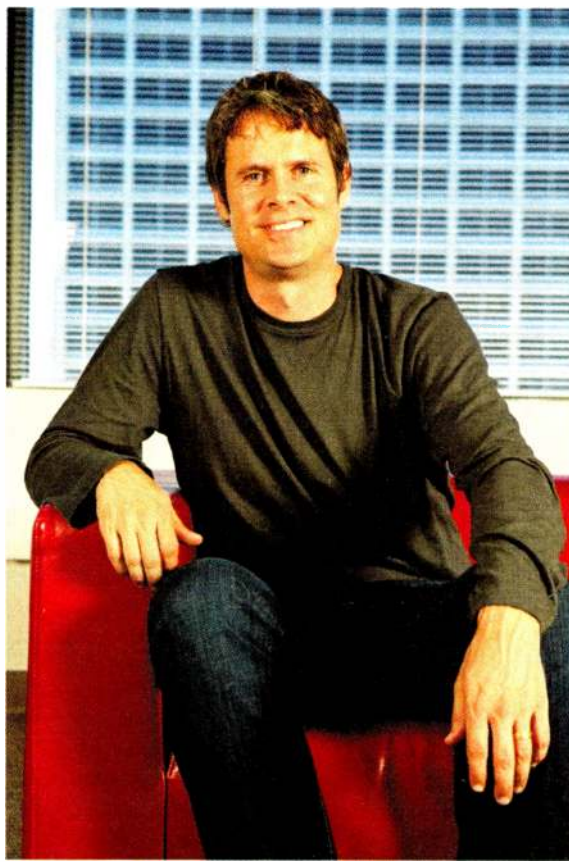
**Westergren:** Yes ... I think that's exactly what they want to do.

**RW:** How does that suit you?

**Westergren:** Just fine. We think we're the best at what we do. We're the best personalized radio product around. We've been at it for over 10 years, focused on just this particular thing. It's taken an enormous amount of work on the musical side. ...

The technology [underpinning] Pandora is a hand-built database. We've had a massive team of musicians analyzing music for years to build the Music Genome Project. And now we have a wealth of thumb data now from our listeners, billions of pieces of thumb feedback. That's all been kind of evolving over the years into this product now.

Playing personalized radio is a really, really dif-



Tim Westergren

ficult thing to do well. I think it appears simple to a user. You drop in a song, drop in an artist and *voilà*, out comes stuff you like. But getting that right, and getting it right for the first hour, and for the hundredth hour and the sixth month ... being able to do that consistently for all styles and all sorts of listeners is

really difficult. That's been our focus for a long time, so we are happy to be alongside other apps that have different options, whether it's an Internet radio service, an HD, a broadcast re-stream, we're happy to kind of compete directly.

**RW:** Do you have people programming your channels?

**Westergren:** We have some pre-programmed channels, genre stations, holiday music and so on. But the lion's share of listening are our stations that are built on the fly, based on a person's input. The way it fundamentally works is you type in a song that you like, and when you type in that song, it launches this playlist engine that matches songs and builds a playlist based on musical relationships. ...

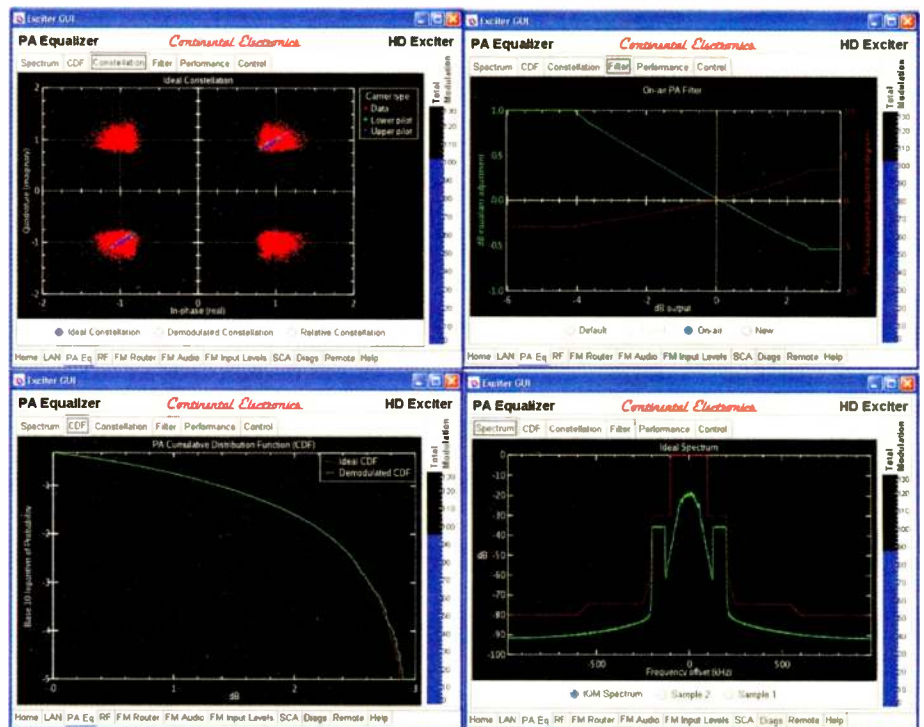
We've literally had musicians now for over 10 years listening to songs and scoring them along as many as 450 attributes per song, manually. [They're] capturing every detail, a melody, harmony, rhythm and form, instrumentation. It's like musical DNA. That forms a basis for kind of connecting one song to another in Pandora and sequencing a sensible playlist.

**RW:** Clear Channel's Bob Pittman [the CEO of CC Media Holdings] is not a fan. He has said personalized services like Pandora are not radio; they are basically jukeboxes. So, are you just a jukebox?

**Westergren:** I don't think it really matters what he or we say about our own services, really. What matters is what listeners want. The numbers kind of speak for themselves, I think. You look at our growth and the fact that not only are we growing like a weed, but the per-month average is growing. The number of

(continued on page 10)

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## WESTERGREN

(continued from page 8)

companies that want to embed Pandora is growing.

The reason car companies are putting Pandora in their cars isn't because the CEO wants it, it's because the people who buy their cars want it. That's the same thing for all these devices [*gesturing around the room*]. There have been studies conducted saying people won't buy a device unless it's Pandora-enabled. All this other kind of stuff is noise. Look at the numbers. That speaks loudly.

**RW:** You were at 75 million last CES, now you're 125 million listeners. How do you quantify the numbers?

**Westergren:** Those are registered listener numbers. That means people have come onto Pandora, listened to music and created an account. That doesn't mean they're actively listening now. It's the distance between that and our monthly unique, which you could argue is kind of the real material number. It's the number that matters to advertisers, for example.

But that number's growing just as fast. We know how many come onto Pandora, how long they listen, what they listen to every month. We have a pretty solid way to quantify listening. It's really notable that, on an audience basis, as near to apples-to-apples you can get, we're like a big radio station in every market now.

**RW:** You're concentrating your sales efforts in the largest markets initially?

**Westergren:** To begin with. I think you'll see that over time any place that has a reasonable advertising base, we'll go to.

**RW:** How many salespeople do you have?

**Westergren:** We don't break out our staff by function but it's a huge part of our headcount. [*Pandora has 400 employees nationwide.*]

**RW:** Are they coming from traditional radio?

**Westergren:** A lot of them are. We're big believers in borrowing the wisdom of the industry that's come before us. We have people, not only in ad sales, we also have people helping with our playlists that are radio DJs.



**RW:** So you think Pandora is the future of radio?

**Westergren:** I think personalized radio is the future and I think we're the best at it. That's what I'd say. And it's not an easy thing to do well.

**RW:** That's throwing down the gauntlet, there.

**Westergren:** I make no bones about it. The numbers say a lot. Listeners are

And we went from about 200 to over 450 devices in just a year, which tells you that there's a big appetite that these companies are racing to meet.

**RW:** How would you compare your company to a company like Jelli? They call themselves personalized radio also. *Rockets up, rockets down is their version of the thumbs up and down. It's also a social experience where the lis-*

### 'I think personalized radio is the future and I think we're the best at it.'

discovering it. When I use Pandora in a car — I don't drive a whole lot, but when I use it, I don't listen to broadcast radio much anymore, because now I can get the music I like in my car, in a radio experience, not my playlist, not like my MP3 collection, because you tire of that after awhile.

I can get a radio that I like, consistently in the car. I'm not going back. That's what we're seeing with listeners. Again, technology is enabling that transition now. The philosophy of this stuff is extraordinary. We went from four car companies to 16 since last CES.

*teners chat with each other over the Web and say "I like this one" and they can shoot a song up the list.*

**Westergren:** It's very interesting to incorporate the social element into the radio experience. I think just how best to do that is still an open question that people are figuring out.

We redesigned Pandora just a few months ago. Part of the incentive was to really put a much stronger social element to it. The thing about music listening is it's social but it's also very personal in a funny way. ...

It's less of an obvious social phe-

nomenon than people might think on the surface. Let's say you walk around, you've got your iPad on, would you want people to hear what's playing on your iPod? I'd say no, not really. That's the thing. Do you want people to see what your CD collection has in it? Not really. People are self-conscious about it in a funny way.

**RW:** When you meet with automakers, what do they say is important to them? I understand they're putting all this stuff in the dash because people who buy cars want it, but what do they tell you?

**Westergren:** "We want it yesterday," is one. And the second thing is, "How do we do it in a way that's elegant and driver-safe?" Those are important criteria. By elegant I mean easy, intuitive, simple to use.

**RW:** HD Radio and satellite radio and you are all in the dash. You're all vying for the listener's time and attention in the car.

**Westergren:** That's why we have a saying at Pandora: "It's the playlist, stupid." Ultimately — we're called Pandora so I should say "she" — she who delivers the best listening experience will prevail.

*Comment on this or any story. Send a letter to the editor to radioworld@nbmedia.com.*

## NEWSROUNDUP

**CONTEST RULES:** The FCC should allow stations to place contest rules on the Web or disseminate them elsewhere, rather than requiring licensees to include all of the "material" rules for each contest on the air, according to a proposal submitted by Entercom Communications Corp. The proposal is particularly timely because it followed a proposed \$22,000 fine against some Clear Channel stations for what the FCC said was a failure to broadcast all of the material rules of a particular contest on-air. Entercom says most Americans now expect to access information instantly on the Web. "Relying on broadcast announcements for material contest information may have been an acceptable way to attempt to inform the public about the terms of a contest when the contest rule was enacted in 1976, but it is certainly not the case today," the broadcaster stated.

**IEEE:** The content from the IEEE's fall broadcast symposium is now streamed online through a video-on-demand website at [bts.ieee.org/broadcastsymposium/virtual](http://bts.ieee.org/broadcastsymposium/virtual). Topics cover RF engineering and infrastructure, measurements, HD Radio and network distribution. Those already registered for the event can watch the videos for free; others are required to register and pay a viewing fee for tutorials and technical presentations; keynotes are free.

**IHEARTRADIO:** Two more prominent public stations will add their audio to iHeartRadio, as Clear Channel continues to grow that platform using content from other broadcasters including both commercial and public outlets.

Clear Channel Media and Entertainment — formerly Clear Channel Radio — announced that L.A. stations KCRW(FM), Santa Monica, Calif. and KUSC(FM), Los Angeles, Calif. will stream on iHeartRadio. Other notable streaming partners recently announced on iHeartRadio include Greater Media, Cumulus, Univision Radio, Educational Media Foundation and WYNC(FM), New York, N.Y.

**TAFT SNOWDON:** A memorial service was held Jan. 28 in Washington for Taft Snowdon, long-time FCC attorney who died in November at age 64. Snowdon was supervising attorney in the Audio Division of the FCC's Media Bureau and oversaw the processing of assignment and transfer applications in the division. He joined the commission in 1974. In lieu of flowers, the family suggested a donation to The Grace Outreach Committee (Grace's Table) at Grace Church, or the African Wildlife Foundation, in Snowdon's name.



**BGG:** The Broadcasting Board of Governors pushed ahead with its planned restructuring of U.S. international broadcasting. Among other things, it wants to consolidate administrative aspects of Radio Free Europe/Radio Liberty, Radio Free Asia and the Middle East Broadcasting Networks, though retain their missions. It also seeks authority to establish a chief executive officer and to target programming domestically. Brian Conniff, president of MBN, will act as project leader for the consolidation.



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# NRB Seeks to Keep Comm Ports Open

Parshall Talks About Priorities With the NRB 2012 Show at Hand

BY CRAIG JOHNSTON

When the National Religious Broadcasters annual convention takes place this month, nine state Republican primaries or caucuses will have taken place, but the March 6 Super Tuesday will still be in the future.

When Radio World asked Senior Vice President and General Counsel Craig Parshall about the NRB's concerns and priorities going into the show, the question of who would carry the Republican Party banner into electoral battle with President Barack Obama remained quite an open one, and seemed unlikely to be settled quickly.

"It's very hard to try to figure out, either by party or by candidate, how this election is going to turn out for us," said Parshall. "Our issues, free speech and telecommunication issues, tend to not get a lot of the ink, and the headlines in the broad policy statements in the debates.

"The Internet issues seem to be creating strange bedfellows," he said. "It's not a conservative vs. liberal, or R vs. D battle in a lot of these cases. The supported opposition seems to be coming from a kind of unpredictable conglomeration of folks on the Hill."

An exception is on the issue of network neutrality, in which "Democrats seems to favor net neutrality and the Republicans have some concerns about it. But even there there's not an absolute rule," he said.

One concern the NRB shares with the wider television broadcast community is that the U.S. government's push for "voluntary" spectrum incentive auctions, designed to free up broadcast band spectrum for wireless broadband use, will morph into "involuntary" seizure of that spectrum.

"As we look at some of the spectrum bills that are floating around the Hill right now, we're concerned that our television broadcasters don't get disadvantaged unfairly," said Parshall. His concerns include not only full-power television stations but also low-power licensees, which may be "shuttled to the back of the bus, so to speak — and, really, kicked off the bus."



Craig Parshall, right, NRB SVP/general counsel, talks with Speaker of the House John Boehner at last year's NRB convention.

He challenged the need to reallocate any broadcast spectrum, pointing to "research about some of these [broadband wireless] companies hoarding spectrum that could be applied to the use that they [the FCC] want, therefore alleviating the necessity of an auction altogether."

The Internet was not envisioned when the NRB formed in 1944, when electronic media of the day were radio and soon television.

"Now there are iPods and Web streaming, and cable and satellite, and iPhones, and cell phones with the ability to capture video and transmit it, texting and so forth," said Parshall. "And our mission has always been to keep the ports of communication open for the gospel of Christ in every possible technology platform."

The Internet is very much on the organization's mind.

## AGAINST NEUTRALITY

On the FCC's notice of proposed rulemaking on network neutrality, the NRB has testified in opposition. While many arguments for and against the concept and details of net neutrality come down to various players being economically advantaged or disadvantaged, Parshall said NRB worries about its effect on free speech.

"While the concept floated by the FCC purports to create a so-called open Internet, giving free and open access to citizens to the information [available on] the Web, in fact what it really does is create a complex mechanism of con-

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trol that, in my humble opinion, doesn't do anything to protect the freedom of expression rights of actual users of the Internet."

In fact, Parshall said of the rules proposed by the FCC, "Basically it's a defense for any Internet service provider to simply say or show, 'Well, we're using reasonable network management techniques as a way to run our Web, and our Internet platform.' And I can cook up several defenses that an Internet service provider could mount as an excuse for censorship, but could make look pretty convincing as a network management business decision. So there's really no free speech protection at all, and in fact, it may end up that this complex regulation will actually increase the amount of censorship rather than decrease it. So we're very much opposed to that."

He describes as "wrongheaded" the attempt to create a mechanism to supervise the Internet service providers.

"The philosophy should be, 'What can we do to protect the rights of access of each individual citizen?' And then go from there to say, 'What measures can be used to achieve that end, as well

as not stifling innovation, not impeding the commercial aspect of the Internet for these new media companies, and so forth?'"

## MILTON

Dovetailing his concerns about net neutrality, Parshall pointed to NRB's John Milton Project for Religious Free Speech, which catalogs what the organization sees as viewpoint censorship on new media platforms.

In its first findings, issued in September, NRB "revealed our 43-page report analyzing the risks of censorship for the average user, given the current paradigm of the Internet, who's controlling it, which companies have dominance and the innovation and the technology of new media companies right now.

"Out of all of these companies we looked at, only one of them really showed any strong interest in a principal of free speech," he said. "Companies like Apple, Google and Facebook are on our index of problematic practices and policies, and they rank on the high end of our concern. Twitter is the only entity that really got passing grades from us, in terms of not having any policies or practices that showed that they either have censored content in the past or plan to do so in the future, which we found surprising." (His November commentary in Radio World, "New Media Have a Free Speech Problem," is at [radioworld.com](http://radioworld.com), keyword Parshall.)

Parshall said that the Milton Project report has springboarded the NRB into suggesting that there are fundamental legal issues to be discerned about the Internet.

"We proposed an approach in that report where we first suggested that there are First Amendment rights at issue: the Internet is a public space, like a park, but the government doesn't control it the way a city might control a public park. But it certainly is not a private space, because if it were, one company could conceivably possess or buy up the entire space, if it's purely private property, which it isn't.

"So it's a hybrid, which means there aren't any clear-cut, easy answers; but it seems to me that we start with saying, 'How do we best protect the right of consumers to voice their opinions and gather information?' Not just receive information but to transmit information and viewpoints, without being censored."

He pointed to a short list of traditional First Amendment exceptions where new media companies have a right to screen out and block content. "For example, *incitement to violence* is a well-defined category that's an exception to the First Amendment." He cited pornography, obscenity or highly sexualized content,

(continued on page 14)





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## NRB

(continued from page 12)

which "could be blocked by these new media companies without any hue and cry from us or any other civil liberties organizations."

But, Parshall says, the list of such exceptions is short, "less than a hundred and less than 50, and they're pretty well recognized by lawyers and judged. But absent being in any one of those categories, I think these companies ought to err on the side of freedom of content."

The Milton Project is ongoing, he

said. "We're going to be looking at this again in 2012."

## SCOTUS

But while the NRB sees itself as an ardent defender of free speech rights, it treats on-air indecency as an exception. That issue is playing out in the nation's highest court right now.

Monitoring January's Supreme Court oral arguments in *FCC v. Fox*, Parshall was encouraged.

"I think that the FCC authority to regulate indecency, in a general sense, will be upheld," he said. "I know you

can't always judge by oral argument, but ... you can tell some things, even if you can't tell it all. I think that there is a general support for their authority to regulate indecency."

In particular Parshall believes Justice Antonin Scalia seemed to be moving beyond using protection of minors as the reason to regulate indecency on the air.

"Scalia was saying that the government, by reason of the fact that spectrum is licensed, has the right to say 'We're going to enforce the rules of civility on the air.' And so, within the support system of the court for these rules, Justice

Scalia [seems to be] saying, 'You don't even have to get into the protecting minors business; it's licensed and it's regulated, and this falls into reasonable regulations.'"

## ONLINE PUBLIC FILES

The FCC has filed a notice that will require television licensees to post their public files on the Internet. Parshall said that NRB is opposed to a particular provision, "the requirement that TV stations post, on the Internet, their political files and requests by issue advocacy groups to place advertisements on television."

NRB's argument is not that such information be excluded from a licensee's public files altogether, but that those files not be made available by a few keystrokes on the Internet, "which

**Our issues, free speech and telecommunication issues, tend to not get a lot of the ink, and the headlines in the broad policy statements in the debates.**

— Craig Parshall

we believe is rife with difficulty and could lead to retaliation."

He offered this example: "Let's say a pro-life organization might want to place an ad about pro-life issues. The current rule is that the names of the committees and their leadership of any group that requests that kind of ad has to be placed in the public file." Under the FCC rule change, NRB said, those names could be "splattered all over the Internet," even if their only contact with the TV station was to research ad rates and other information.

"We don't know, as an example, why a person in Nome, Alaska, would have the same interest, would have an interest in finding out the names of people in leadership of a Toledo, Ohio pro-life group that wants to put an ad on a local Toledo television station, let's say on an Ohio pro-life issue. We just don't see that, the necessity of a person in Nome, Alaska having instant access to that type of information. It should be in the station file, so the people with legitimate interests can access it."

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**NRB***(continued from page 14)*

As a real-life illustration, he pointed to retaliation against the California Proposition 8 Traditional Marriage Initiative campaign contributors, whose names were gleaned from the Internet and used "to create blacklist files of persons to be harassed."

**ISTANBUL**

In January, several intellectual properties bills before Congress had been delayed. Speaking prior, Parshall said

countries such as China have "an atrocious record of copyright thievery on the Internet, and that needs to be dealt with. But the current bills that are being floated around give us caution, because under the guise of enforcing copyright, you can end up closing down free speech."

For example, "I think it was Google that complied with the request of a religious sect to block a critique of that sect by some commentator, because the commentator was quoting extensively from their own materials. In many situations that constitutes fair use, and there

is a fair use defense that I think is a second cousin of free speech."

Parshall said NRB worries that the proposed legislation will make it easy for entities to claim copyright violation and obtain a court order. This would allow Internet companies to block content quoting from copyrighted material by saying "I was just trying to comply with this court order."

"Our communicators, our radio talk show hosts, and our pastors and preachers and publishers and writers, and others that we represent in our organization, need to be able to point to original

documents and original sources when making their case, whether it's comparative religion issues, such as what does Islam say about Jesus, as opposed to what the Bible says about Jesus. What does this group, that may be a cult, say about our faith, and what does our faith say about that particular religious group that we think is a cult.

"These are discussions that are going to be hamstrung considerably if we don't get this right on these copyright issues, because you can always say, 'Don't quote me because that's a copyright violation.' Well, suddenly now journalists can't quote the sources that they want to counter."

A United Nations initiative also has drawn concern from the NRB. It is called the Istanbul Process for Combating Intolerance and Discrimination based on Religion or Belief.

"Basically this Istanbul Process appears to be a substitute for a 12-year effort for an Islamic coalition to try to get the anti-blasphemy or defamation of religion resolution passed by the U.N.," said Parshall.

Though the initial effort in the U.N. was unsuccessful, "this seems to be the new permutation of that, and it requires members like the U.S. to participate in this new program of tolerance with very little thought given to the free speech implications of requiring tolerance of religious views. It almost creates an atmosphere where any criticism of a religious world view hits the tripwire of international tolerance standards."

NRB has not taken a formal position on the Istanbul Process; but Parshall said, "Both sides of the political spectrum, both liberals and conservatives, and civil libertarians, looked at this and are saying, 'Whoa, this seems to be a problem from a free speech standpoint.'"

**NEWS ROUNDUP**

**GUITAR WORLD:** Radio World parent NewBay Media acquired the U.S. music division of Future US Inc. The move brings publications Guitar World, Revolver and Guitar Aficionado to NewBay. NewBay's existing music and professional audio titles include Guitar Player, Bass Player, Keyboard, Electronic Musician, Mix, Pro Audio Review, Audio Media and Pro Sound News. Titles familiar to RW readers that have come to NewBay previously include TV Technology (like Radio World, a former IMAS Publishing title), Radio magazine and Broadcasting & Cable.

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World Radio History

  
**Logitek**  
Networked Audio Systems



# Tighten Relay Screws, Avoid Catastrophe

Even Small Amount of Vibration Can Cause Relay Socket Screw Terminals to Loosen

With many people installing new CAP-compliant gear, Jim Davis of Radio One Raleigh writes with an idea

## WORKBENCH

by John Bisset

Read more Workbench articles online at radioworld.com

of what to do with your old box. Connect it up to an off-air air monitor feed and use it as a confidence monitor to ensure EAS tests are sent and received.

In multi-station facilities, many engineers route their EAS signals through

switchers and routers, where a malfunction might occur.

The confidence monitor's paper tape will serve as a record of what has been received and what hasn't.

Jim reminds you to check the date and time on your EAS units periodically. It's also a good idea to check your receiver operation. Make sure the station is tuned to the correct LP-1 or LP-2 station. Remember you must show your required weekly tests sent as well as those received. If a receiver malfunctions, you may be missing received tests.

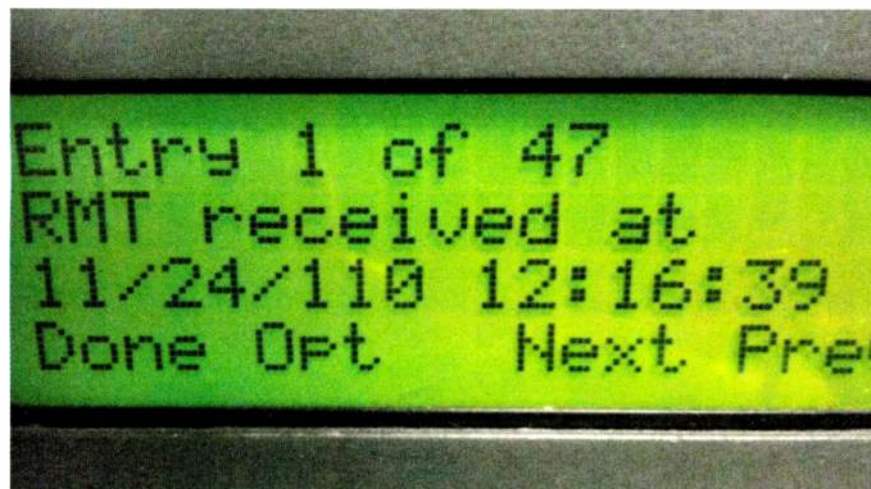


Fig. 1: Regularly check the date and time on your EAS equipment.

Relay logic, as simple as it is, can cost you a lot of troubleshooting time. Project and contract engineer Joe Stack paid homage to the relays, shown in Fig. 2,

that those devices were switched into the proper mode. Still, there was a day interlock open somewhere.

In this situation, we might suspect a bad relay. Joe followed this route and found all relays operating properly, except for the RF mute relay. When Joe inspected, he discovered that the screw

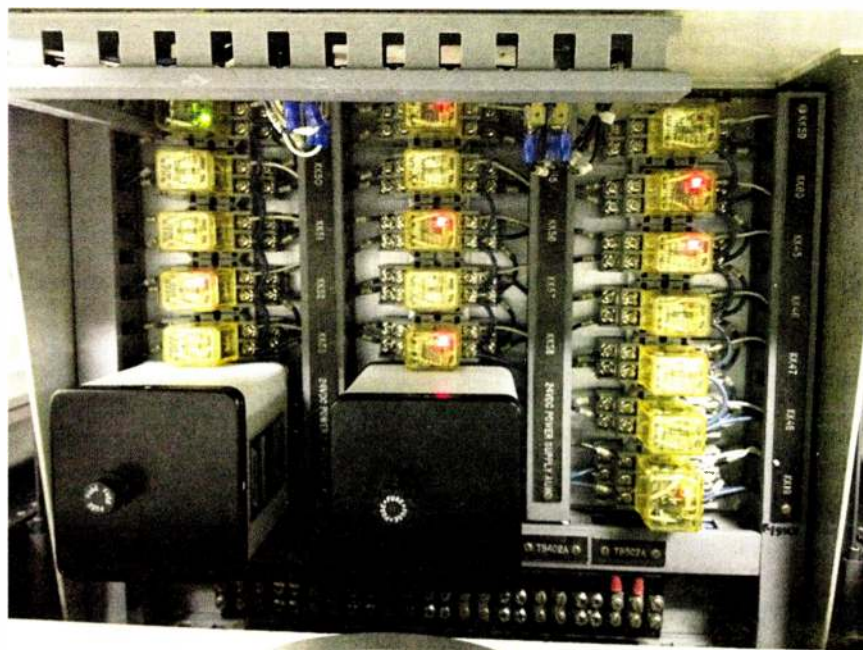


Fig. 2: Periodically tighten screws on phasor controllers. This view is looking down on a relay drawer that has been pulled out.

A phasor controller on which he had the opportunity to work started intermittently to mute the transmitter RF output when switching to day pattern. Night pattern was fine. All indicators for the contactors in the phasor and all tower doghouses were lighted. This indicated

terminals on three relays were loose (and as a result, so were the wires). These terminals were connected up to the latching contacts that connected the 24 V DC interlock voltage through to the transmitter RF mute relay.

After finding this, Joe went through all four phasor controller rack drawers and checked the tightness of all the relay terminals, just in case. Even a small amount of vibration can cause relay socket screw terminals to loosen eventually. The problem starts with intermittent operation and ends with failure.

Even if you have a full schematic of the phasor controller, Joe suggests you sketch out a block diagram or flow chart for each phasor mode you need to troubleshoot. It dramatically cuts down the number of relay contacts visible to you. (When troubleshooting, put stuff you don't need to see out of sight when you can; distractions only cloud the picture.)

When Joe is finished he puts his reduced diagram in his site documentation binder, noting the problem and solution, initialed and dated. Later, should something similar arise, he or the person responsible then will know what happened. Joe adds: Beware of 220 VAC in some phasor controllers. This may exist along with the 24 VDC relay voltage, so watch your fingers.

Fig. 2 shows just Drawer No. 3 of the  
(continued on page 24)

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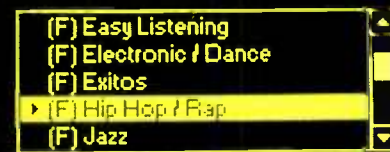
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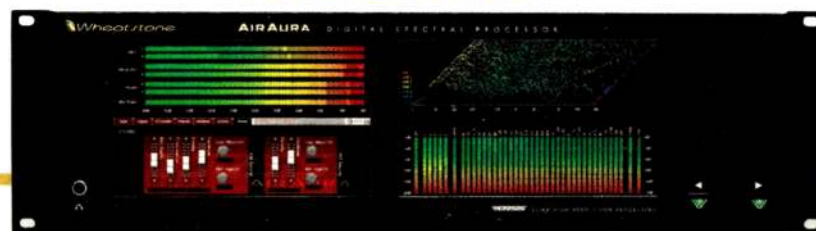
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World Radio History



# In Radio, Outlook for Cloud Is Unclear

## Companies Seem More Inclined to Look Inward for What the Cloud Offers

BY CRAIG JOHNSTON

In information technology-speak, the word cloud has long represented a part of system architecture that's taken care of by someone else.

### **RADIO IT MANAGEMENT**

On IT charts, the Internet has been referred to as the cloud, because you connect to it, send information into it and someone else takes care what happens on the Internet itself. (Prior to the Internet, the telephone system was depicted as a cloud on IT charts.)

The term cloud that's been generating buzz more recently is a system in which a company's data and/or applications are stored remotely, in an operation owned, operated and maintained by someone else. The concept often is compared to a company's relationship with the power company. You don't have to own and maintain your own power generation wherewithal; you are hooked up to the utility, get your electricity and pay for what you use.

An alphabet soup of acronyms is associated with cloud computing, and those have been discussed in part articles here. But in a broad sense there are two services provided by cloud computing vendors: storage of data (like email and business records) in the cloud, and access to application software (like Word or Excel) from the cloud.

#### STARTING WITH SOCIAL

At the risk of mixing metaphors, few radio broadcasters seem to be wading into the cloud puddle with both feet, based on anecdotal evidence.

"The broadcast industry is slowing moving toward cloud applications — more for television than for radio," said National Association of Broadcasters Vice President Technology John Marino. "Cloud applications for radio are primarily in the form social media technologies that are used to connect with listeners."

An executive with one large broadcast company who otherwise did not comment for this story said by way of explanation, "We are not really utilizing cloud computing."

In almost any conversation about the cloud, the subject of security will come up early.

"I'm security-conscious," said Cris Alexander, director of engineering for Crawford Broadcasting and a Radio World contributor.

"We like to keep everything in-house, behind closed doors so to speak, where we control everything. I think it's always our fear that we're going to lose control of something.

(continued on page 24)

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\*Data source: BIA/Kelsey Local Media Watch, March 28, 2010



## CLOUD

(continued from page 22)

"We have enough trouble letting go of our streaming, letting someone else take care of that for us. Letting someone else take care of holding on to our data, whatever it is, is kind of a frightening process for us."

Security is a concern for National Public Radio as well, said Marty Garrison, vice president of technology operations and broadcast engineering, though at NPR, security isn't as sensitive as it would be for a data broker dealing with SPAA — "Sensitive Personally Identifiable Information" — such as Social Security numbers, driver's license numbers, addresses and phone numbers, along with a name. "Other than our internal HR system, we don't really have a lot of that."

Garrison said the cloud's reliability is key.

"We've looked at [one vendor], for instance, outsourcing to the cloud our email infrastructure. And while it actually was actually slightly cheaper than doing it in-house, it was not enough of a financial gain to make the move."

It didn't help that the vendor in question suffered a massive email outage during NPR's evaluation period.

"So we are basically on our own virtual environment that we built at NPR. In many respects we built, in fact we are what we call a private cloud."

### CAUTIOUS APPROACH

NPR is not alone in operating its own private cloud.

"In our company, we really have the same kind of thing in terms of cloud

computing, if you want to call it that," said Crawford's Alexander.

"Our infrastructure is set up so that the cloud is located here in Denver for most things. We have a few things in Birmingham, but we're talking centrally located servers that everybody can search stuff from. The difference between that and outsourcing it to someone else is simply that we control the

**Security and reliability are the primary concerns today for cloud computing.**

— John Marino, NAB

keys, so privacy isn't a big concern, and security, while it's still a big concern, at least we're watching the store."

Alexander cautioned that bandwidth (a data pathway into and out of that private infrastructure) is critical to Crawford being able to operate its private cloud.

"Sometimes it's hard to get that bandwidth if you're trying to do it on your own. If you're a medium-sized company like ours ... it's not as difficult to buy the bandwidth to make it work. But if you get up into the bigger companies ... they've got to go to a server farm that's right on the backbone to make it work."

Garrison said that NPR is looking at incorporating the cloud into one part of its operation: iCloud for employees using

the iPhone and iPad. "Then they'll have a place to back up the thing in case they lose it, or it dies, or what-have-you."

Alexander said that Crawford has looked seriously into moving to the SaaS (Software as a Service) plan, where application software is accessed from cloud servers over the Internet rather than from an installed copy on an individual PC's hard drive.

"Just knowing that we do have outages from time to time, when that happens, everything comes to a standstill," he said. "Where if it's installed on a work station, you can at least continue to write copy, you're not back to a legal pad, where you would be in the other case."

"We're kind of edging that direction, but very cautiously. "And there may come a day where we don't have a choice.

If radio (and television) broadcasters' interest in the cloud is measured by the utilization of cloud services, and especially money spent there, it would be fair to judge such interest as low. But by another metric, broadcasters' interest is high.

"At the 2011 NAB Show we offered a half-day 'Content in the Cloud Summit.' It was standing room only," said Marino. "So, there is definitely an interest in any cost-savings that could be realized." With that SRO session in mind, NAB will return with a Cloud Computing Conference at the 2012 NAB Show.

"The tagline for this conference is 'Advances in Content Security and Reliability,'" said Marino. "Security and reliability are the primary concerns today for cloud computing and will be the main focus of the conference."

Tell *Radio World* your experiences with cloud computing. Write to radioworld@nbmedia.com.

## WORKBENCH

(continued from page 22)

phasor controller, which also contains the main 24 V DC power supply and spare power supply. There are 17 relays in this drawer. Each is mounted into a socket that brings the relay coil and contacts to screw terminals on the sides of the relay socket. There are 80+ relays within the four drawers of this particular phasor control system.

Years ago, I was called to a site where the phasor controller was not functioning. All equipment was new, which made me wonder what could be the problem.

On the floor of the phasor cabinet were all these shiny nickel-plated screws. It turned out that the vibrations caused by multiple contactor switch cycles, as the engineers ran their RF proof measurements switching from day to night modes, loosened many of the screws. Eventually enough fell out that the controller ceased to function.

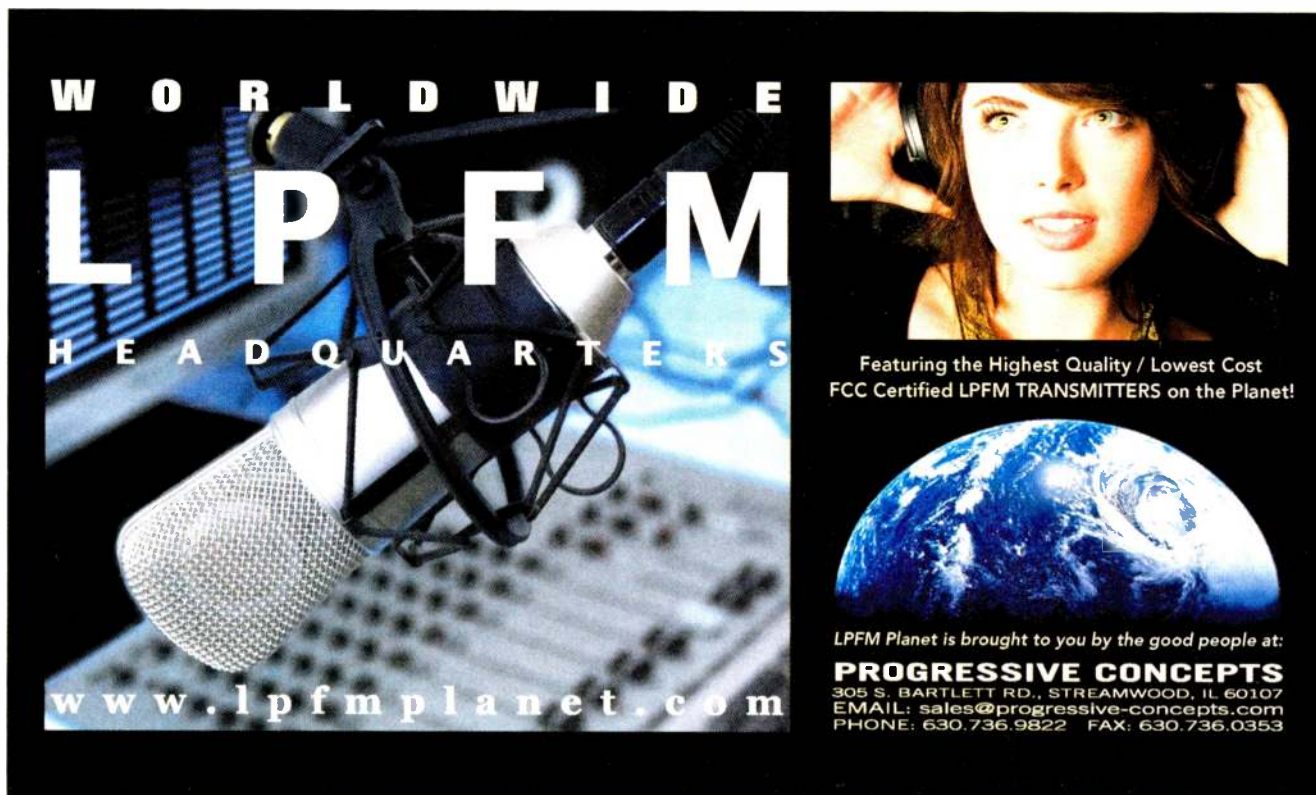
Joe's suggestion is to look first for the simple problems. Even the vibrations caused by heavy RF contactors switching twice every day will cause screw contacts to loosen. With the station and AC power off, tighten these terminals at least once a year.

**D**o you use an outside frequency calibration service to keep tabs on the accuracy of your operating frequency? If so, drop me a line with the name of that company and their contact information. If you make these measurements yourself, let me know that as well. We've had inquiries from engineers searching for this service. Let's see if we can help!

**M**arc Mann notes a video on YouTube that shows a square-hole drill bit in action; Radio World also noted the video in a recent NewsBytes email. Engineers who worked for hours with an aluminum nibbling tool and a small file, to achieve consistent square holes for pushbutton switches or indicators, will appreciate the efficiency and accuracy of this device. But, Marc adds, it won't fit in your tool bag. See [www.radioworld.com/squareHoles](http://www.radioworld.com/squareHoles) or go to YouTube, key phrase "square hole drillbit."

Marc Mann can be reached at [mmann001@san.rr.com](mailto:mmann001@san.rr.com).

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Wide Band: AGC, ST

AGC: 5 sliders

Limiters: 5 sliders

FM: B, M

HD: S, L

Output: FM, HD

Analysis

QUALITY MONITOR

0 25 50 75 100 125

3 kHz 7.5 kHz

Preset Wizard Basic **Advanced**

SL

Lim Thresh: 0.0 dB

SL to LO Sync: -12.0 dB

Attack Offset: 8.3

Release Offset: 5.6

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LO, ML, MH, HI, SH





# BlueDriver Goes Everywhere for GO Radio

JK's Bluetooth Technology Turns Cellphones Into Codecs for Remotes

## USERREPORT

BY FRANCIS NASH  
General Manager  
WGOH(AM)/WUGO(FM)

**GRAYSON, Ky.** — WGOH(AM)/WUGO(FM), GO Radio, has been using the JK Audio BlueDriver for about two years. It has been perfect for remotes, news and sports reports.

When we bought the JK Audio BlueDriver, we would often see other stations doing a remote, perhaps at the same event, talking into a cellphone and trying to interview someone by passing it around. Meanwhile we were interviewing people in a professional matter, using a quality mic with our call-letter flag. Some stations would approach us to ask about how the BlueDriver setup works.

Well, it's pretty simple. You connect it to the bottom of your microphone, get your iPhone, BlackBerry or other cellphone out, pair them up via Bluetooth and from that point, you speak into your mic, not the phone.

### BLUETOOTH

Different phones will have varying methods of finding a Bluetooth device. For example, when an iPhone is paired the first time it asks for a PIN number, then you are ready to connect the phone and BlueDriver. From that point on, your

cellphone remembers the BlueDriver and will show it as "JKBDRF31." The next time you are ready to broadcast, you select it and push your Bluetooth button on the BlueDriver to connect.

On remotes, we use a small earphone into the iPhone and dial the studio number to establish the line. When you are connected, the iPhone will ask

and set it on podiums for coverage of speeches.

While the BlueDriver can be paired with a headset, we use it exclusively with the cellphones. Each person at the station may have a different cellphone, but as long as the phone has Bluetooth it is paired with

**GO Radio** has a strong commitment to local news, local high school and college sports and community events.

your source — speaker, headphones or JKBDRF31. While dialing and talking to a control room, select headphones and you can talk and listen to get ready for the remote.

When the on-air cue is sent, you will hear it in headphone or on speaker if you have it selected. When ready to broadcast, we tap the JKBDRF31 source on the phone and start our broadcast.

The BlueDriver is great for on-site business remotes at businesses. It allows you to travel anywhere, phone in pocket, mic in hand, working a crowd or exploring the set. For spot news or sporting event reporting, it is quick, convenient and professional. We have covered parades with interviews as they march

the BlueDriver easily.

The BlueDriver has a mic trim to set volume sensitivity. There is a 3.5 mm output to go from the mic to a small recorder. You can carry a small digital recorder in another pocket with a connection to record your news story for later use. We have found charging the battery-powered BlueDriver for a couple of hours through the mini-USB port will give you plenty of power to use for a two-hour remote.

The only learning curve is understanding the Connect button procedure for pairing, then for simple connect and for shutting down. You might want to keep the small user guide handy the first few times.

The celloast era that unchained us from the slavery of phone landlines has been a blessing to broadcast radio. With the advent of cellphone remotes and Bluetooth phone connections, the JK Audio BlueDriver is a "must have" device for a station that wants to look and sound good, and keep it simple and



Francis Nash covers the news from the GO-mobile. He reports it and records it with JK Audio's BlueDriver attached to a cellphone and recorder in his pocket.

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easy "on the go" to remotes and news events and interviews.

GO Radio has a strong commitment to local news, local high school and college sports and community events. While we have many JK Audio devices, the BlueDriver is one of the most useful.

For information, contact Joe Klinger at JK Audio in Illinois at (815) 786-2929 or visit [www.jkaudio.com](http://www.jkaudio.com).



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# Tieline Helps Rural Station Connect

Smartphone Codec/Mic Adapter  
Makes Remotes Easier

## USERREPORT

BY TODD SCOTT  
Program Director  
KFLI 104.7 FM

**SEARCY, ARK.** — Our station is in a rural part of Arkansas, where a sense of community is important. By making remotes so much easier, Tieline's Report-IT has been a great tool to help us expand and deepen our connection to the local community.

The Report-IT turns your iPhone into a pocket-sized, portable 15 kHz-quality live IP audio codec and slim 20 kHz audio recorder. You can connect to the studio live at the push of a button and hear studio comms and program in real time. You also can prerecord interviews and FTP 20 kHz audio files to the studio without a codec. It's suitable for a remote broadcast, live report or two-way interview. We use the Tieline Mic Adapter to connect a high-quality dynamic microphone for superior audio.

We do about 125 remotes per year, and we're now using Report-IT for virtually 100 percent of them. In the past we had to schedule our remotes carefully because of all the equipment required. Now we can be more spontaneous and cover overlapping events seamlessly.

We also get more from each remote. I love it when

we cover local expos, chamber of commerce events and fairs. Report-IT is portable: I can go from booth to booth and record several clips during a single break.

### ON THE SCENE

We decided to give Report-IT to all our sales and management staff; it generated more excitement than any equipment we've added in years. All it took was a 10-minute meeting to introduce the app; they took to it eagerly. This has greatly expanded our ability to cover local events in real time. Another example, when a large fire broke out at a local retailer, a couple members of our sales team happened to be nearby. Within minutes, they were on the scene delivering live reports. Our staff frequently delivers breaking news stories, traffic reports and weather updates while they're on the road.

Speaking of weather, we're in the middle of the tornado belt here in Arkansas. While we certainly hope the tornados will spare us during the upcoming season, at least we'll be prepared if they do strike. Report-IT will allow the staff to help out with storm spotting, tornado chasing and helpful safety updates. That's a big part of how our station really can make a difference in our community.

I've always believed that a station's sound is important; Report-IT's audio quality is outstanding. Thanks to Tieline, we have the best-sounding remotes in our market. Now with the new Mic Adapter microphone interface hardware, this will take our audio quality to the next step.

I've been doing this for over 30 years, and I have



The author's smartphone rests in the Tieline Mic Adapter; a handheld mic is connected and provides audio. The codec can be seen on the phone screen. It feeds audio to the station or can record it.

to say Report-IT has been a great innovation in remote technology. I'd like to thank Kelley Sullivan at BSW for acquainting me with this worthy investment.

For information, contact Mary Ann Seidler at Tieline in Indiana at (317) 845-8000 or visit [www.tieline.com](http://www.tieline.com).



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# There's only one question on this iQ test: Where'd they hide the switch?

You've heard the buzz about IP consoles, and you love all the things they can do. Only one thing held you back: you figured you'd have to call Mr. IP Genius just to plug it in. Then you saw iQ, and everything changed. Axia deep-sixed your switch configuration worries by putting an Ethernet switch right into the console. Mixing engine, power supply, I/O, and a built-for-broadcast switch all in one neat, fan-free rack unit. There's zero switch configuration, zero finger-pointing from tech support, zero "kinda-maybe" compatibility issues. And only Axia does it.

iQ really passes the test. You'll be able to send audio instantly to any studio. Eliminate distribution amps, punch blocks, patch bays, sound cards — and that rat's nest of wire in the ceiling. Control everything with a browser, even over the Internet. Connect to scads of Livewire-ready broadcast gear with just an Ethernet cable. Solder? What's that? Yeah, building this studio will be more fun than a bucket of ping-pong balls on top of the News booth door. You pull the trigger and smile as you imagine the first of many weekends without a 3AM phone call. Smart guy.

**» Rugged, super-duty power supply with optional fully-redundant backup. No wall-warts on Axia gear.**

**» Plenty of professional balanced mic, analog AES and Livewire I/O in a fanless 3RU chassis.**

**» Beefy heat-sinks look cool and keep cool - no noisy fans here.**

**» Built-in Ethernet switch lets you network devices and studios easily.**

**» Two Telos DSP hybrids with DDEQ, wideband AGC and Advanced Echo Cancellation. Phones never sounded so good.**

**» Nobody does broadcast phones better than Telos. And Telos builds the iQ6 exclusively for Axia. This'll get 'em talking.**

**» High-resolution OLED meters with VU & PPM ballistics and peak hold. Switchable displays let talent meter 2, 3 or 4 buses at once.**

**» Time-of-day clock can slave to your NTP server. Event timer has manual or auto-reset option.**

**» 12-key dialing pad lets talent place calls without ever taking their eyes off the board.**

**» Push and rotate Options control to select source, adjust pan, trim gain and more.**

**» Avionics-grade switches with LED lighting.**

**» Rugged machined aluminum surface has anodized finish and markings that can't rub off. Backed with our 5-year warranty.**

**» OLED source / options display with audio confidence meter on every fader. They're sharp as a tack.**

**» Join multiple iQ frames with included hardware. It's desk-mount, so no need to cut the counter.**

**» Keep your eyes on the prize. Telco section OLEDs integrate hybrid control right into the board.**

**» Silky-smooth, side loading 100mm, conductive plastic faders feel great.**

**» Separate selection and volume controls for guest studio and control room monitors.**

[www.AxiaAudio.com/iQ](http://www.AxiaAudio.com/iQ)



Available in the U.S. from BGS: (352) 622-7700



**TECHUPDATES****VERICORDER HAS MOBILE APPS AND GEAR FOR AUDIO**

VeriCorder says its apps and hardware reduce the cost of production for news content and advertising.

VC Audio Pro for iPhone is described as a functional but simple full-service audio editing app that can replace a digital recorder and laptop-based editing suite.

It allows the user to record, edit and send to your station using iPhone or iPod Touch. Add a VCT XLR Adapter to record high-quality audio using any XLR mic; monitor the audio with headphones as it comes in. Multitrack editing is done with tools including volume curve, mixing and trim.

A second product of field and remote use is the VCT XLR Adapter. It connects a professional XLR connector microphone to the headset jack of an iPhone or other smartphone. It provides separate headphone output for monitoring the playback levels of the recording. The adapter includes a preamplifier circuit with 6.1 dB gain that allows a low-impedance dynamic microphone to be used as an audio source for recording on the iPhone. The preamplifier includes RF noise suppression circuitry to enhance quality. The preamp is compatible with self-powered condenser and wireless microphones.

For information, contact VeriCorder in British Columbia at (250) 448-4954 or visit [www.vericorder.com](http://www.vericorder.com).

**SHURE OFFERS SHOTGUN CONDENSER MICROPHONES**

Microphone maker Shure offers a range of professional shotgun microphones for use in a variety of situations.



The VP89 is a shotgun condenser microphone for use in broadcast and media production applications. Designed with interchangeable long, medium and short capsules, the VP89 models provide scalable, off-axis rejection for focus and flexibility in various on-site locations. The long, medium and short capsules are designed to fit production situations such as sporting events, talk shows with a live audience or field recording.

Shure says that audio quality combined with RF immunity, low self-noise and rugged metal construction make the VP89 suitable for studio as well as unpredictable outdoor environments. A range of suspension mounts, windshields and mounting hardware is available.

The VP82 is a professional short shotgun microphone for use in audio production and sound reinforcement. Compact and lightweight, the VP82 has a wide aperture for pickup of near-field sound sources. Its small footprint, weight, foam windscreen and carrying pouch make it suitable for various audio production scenarios that might be confronted by radio producers. It is an economical alternative to the VP89S, shortest of the VP89 group.

For information, contact Shure in Illinois at (847) 600-2000 or visit [www.shure.com](http://www.shure.com).

**GLENSOUND'S NEW ENG SOLUTION**

The new service called HD Voice, coming to Verizon Wireless, offers a 7 kHz audio link for the price of a normal call. Glensound Electronics in the U.K. says it has developed a product to utilize this for the broadcaster, the Recce HD.

The Recce HD consists of two components. The first is a three-input announcers' mixer. Three announcers at a sport or news event can connect two headsets and have their own gain and mic on/off control, with a third auxiliary input. A monitor section allows them to monitor themselves, an external input or the return from the second part of the system, a Glensound HD Voice cellular phone.

The Recce HD will accept a SIM card from Verizon Wireless (or further networks as it expands) and connect as a respectable 7 kHz audio link. A screen and keypad are included for the dialing functions. The unit runs on two D batteries or can be externally DC-powered. According to Glensound, users get a complete 7 kHz remote ENG unit at a cost of \$3,280.

Glensound HD Voice costs the same as a regular call. It is an enhancement to the 3G voice network, so does not require a data account or data usage.

For information, contact Glensound/GMA LLC in California at (818) 701-6201 or visit [www.glensound.co.uk](http://www.glensound.co.uk).

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# The future is calling. (It's for you.)



These days, nearly everything is networked. And now, so are your broadcast phones. Meet Telos VX, the multi-line, multi-studio, networked talkshow system.

VX uses standard Ethernet to connect all the phones, hybrids and consoles around your facility, transporting caller audio, mix-minus, PDH and control logic on one skinny cable. Connect to POTS, ISDN, PRI, or even BRI telco lines via standard gateways, and *voila*,

they're available for use anywhere in your facility. And if you decide you want to use VoIP services, VX can do that too.

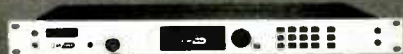
VX is so scalable, it can manage multiple simultaneous talkshows in the largest facilities. Yet it's cost-effective even for a few studios. Audio is clean and consistent, because dedicated, third-generation Telos hybrids manage each individual call. Even conferences are crystal-clear. You can deploy VX

"virtual phones" in production rooms, news workstations, or anywhere there's a PC with a USB mic and headset. Got a hot talkshow that suddenly demands more lines in a certain studio? Just a few keystrokes at a computer and you're set.

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PC Software for archiving and logging all of your stations audio.



**TECHUPDATES****AEQ PUTS PHOENIX ON PC**

Spain-based equipment manufacturer AEQ is putting its Phoenix codec brand name onto a Windows PC IP codec application.

AEQ Phoenix PC joins the Phoenix Mobile portable codec and a rack-mountable studio codec, with which it is compatible. It offers G.711, G.722, AAC and MPEG 2. Full duplex communication is available over RTP/UDP, SIP or proxy SIP servers.

Uses would include using a laptop computer to interface with a studio-based codec and transmit live or recorded material. AEQ provides a free public SIP server.

For information, contact AEQ Broadcast International in Florida at (954) 581-7999 or visit [www.aeqbroadcast.com](http://www.aeqbroadcast.com).

**A-T OFFERS NEW INTERVIEW MICROPHONE**

Audio-Technica says it has added a finely-crafted microphone for the interviewer's toolbox. With the BP4001 dynamic microphone, Audio-Technica said it has introduced its highest-quality cardioid interview mic, promising extremely clear and articulate reproduction of spoken words.

The BP4001 works for various aspects of broadcast and remote newsgathering including on-location interviews, ENG, EFP and sports applications. An extended handle accommodates microphone flags.

It was designed to provide isolation from handling noise. The microphone is rugged to withstand abrasion and jostling. Its cardioid polar pattern reduces pickup of sounds from the sides and rear, improving isolation of desired sound source. The microphone is available with an omnidirectional polar pattern as the BP4002.

The BP4001 offers a three-pin XLRM-type output connector and comes with a slip-on foam windscreen, vinyl carrying case, soft protective pouch and professional stand clamp.

For information, contact Audio-Technica in Ohio at (330) 686-2600 or visit [www.audio-technica.com](http://www.audio-technica.com).

**DIGIGRAM INTRODUCES CANCUN**

Digigram unveiled Cancun, a line described as "innovative and high-end mobile USB sound cards for on-the-go audio professionals and reporters."

The first two models are the Cancun 442-Mic and Cancun 222-Mic, with 4-in/4-out and 2-in/2-out respectively, simultaneous analog and AES I/O. Both offer 2 x 500 MIPS dual-core processing power embedded in a stylish casing.

Cancuns have a quality mic preamp, a professional analog level of +24 dBu max and a latency of under 3 ms.

The design incorporates a thin, durable touchpanel with LED lights beneath the surface as well as housing the required connectivity for serious work, such as a Neutrik XLR plug for professional microphones.

A companion software application presents the user with relevant information regarding the sound card (gain values, driver setup, current state, VU meters, locks, etc.).

For information, contact Digigram/Point Source Audio in California at (415) 226-1122 or visit [www.digigram.com](http://www.digigram.com) or [www.point-sourceaudio.com](http://www.point-sourceaudio.com).

**HENRY TALENT POD GIVES ANNOUNCERS CONTROL**

Henry Engineering is shipping the Talent Pod, saying it solves audio problems often encountered on remote broadcasts.

The Talent Pod is suitable for use at sports remotes and other on-location broadcasts. It's also well-suited for use in an announce booth or talk-show studio.



Talent Pod is a "mini-console" for use by an announcer. It gives the talent control of his or her mic and headphones. It lets the announcer turn the mic on and off and create a mix of local and return (IFB) audio in the headphones. The mic on/off button is illuminated to be visible in outdoor settings. The cough button momentarily mutes mic audio. These functions are compatible with any mic mixer.

There are two separate inputs for local and return audio, with a volume control for each. The local input is fed from the local (on-site) mixer. The return/IFB input is for audio that's sent to the remote site from the main studio. The announcer can control the volume level and mix of his headphone audio. To prevent confusion between the local and return audio, Talent Pod has two pan switches, so the announcer can position the local and return audio independently in the center, left or right channel of his headphones.

For broadcasts with multiple announcers, several Talent Pods can be used so that announcers can control their own mic, headphone volume, mix and pan settings. Headphone audio is fed to the first units only. The others are linked with Cat-5 cables, eliminating the need for multiple power sources, DAs and complicated wiring. Talent Pods are compatible with Henry Engineering's MultiPhones system. A MultiPhones Master unit can be used with Talent Pods, to add multizone talkback to the system.

For information, contact Henry Engineering in California at (626) 355-3656 or visit [www.henryeng.com](http://www.henryeng.com).

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**TECHUPDATES****MAYAH FLASHMAN II, SPORTY ADD FEATURES**

Mayah Communications has added features to its Flashman II and Sporty products.

The Flashman II (pictured left) adds the ability simultaneously to record and transmit the audio back to the studio. Flashman II records to SD cards and USB thumb drives and provides for a range of the most modern coding algorithms, including two new audio formats, MPEG 4 HE-AAC v2 and MPEG 4 HE-AAC.

Extremely small and light, the Sporty (pictured right) portable reporter codec can transmit from anywhere, to anywhere, while simultaneously recording to USB thumb drives or SD cards. Built to similar specifications as the Flashman II, Sporty is described as a robust portable studio. It also handles the codecs MPEG 4 HE-AAC v2 and MPEG 4 HE-AAC. Thanks to Mayah's FlashCast technology, Sporty is able automatically to recognize and connect to almost any audio codec and format available. That makes it suitable for situations where the destination codec is not known, according to Mayah.



The Flashman II and Sporty are open to new network connectivity by adding WLAN 4G hotspot support and Ethernet along with SIP N/ACIP compatibility.

For information, contact Mayah Communications in Washington at (360) 618-1474 or visit [www.mayah.com](http://www.mayah.com).

**TASCAM HAS A MICROPHONE FOR THE IPHONE**

Over the last year Tascam has developed several audio devices for the iPhone.

The latest is the iM2 (pictured below), a plug-in stereo microphone that should be cut above the standard onboard microphone. Tascam says the adjustable mics are the same as those used on its DR handheld digital recorder line.

The iM2 plugs into the iDevice's docking port and runs off of the device's battery. The onboard preamp, converters and limiter allow the iM2 to handle higher signal levels and deliver higher quality, according to Tascam. The converters output audio at 16-bit/44.1 kHz.

A USB port on the iM2 allows for iDevice charging. A free recording app is expected to be delivered by Tascam soon. The iM2 is compatible with iPhone 4, iPhone 4S, iPod Touch 4G, iPad and iPad 2.

On the free side is a new PCM recording app designed for Apple iDevices such as the iPhone, iPod Touch and iPad. Called Tascam PCM Recorder Application (pictured above), the app is designed to turn the device into a handheld stereo recorder. The GUI mimics a handheld recorder with the usual tape transport controls along with a small display. An EQ function and limiter are also included. The app is also functional with the recently release iM2 plug-on microphone module.

For information, contact Tascam in California at (323) 726-0303 or visit [www.tascam.com](http://www.tascam.com).

**COMREX DIALS UP ACCESS ON THE PHONE**

Comrex's Access Reporter Codec, AKA ARC, is a free utility that allows certain Android-based mobile phones to make wideband audio calls to Comrex Access and BRIC-Link codecs.

Once installed on an approved phone, the app displays the Access interface and outgoing call listing. ARC makes an IP call over the phone's 3G or Wi-Fi channel to your Access or BRIC-Link codec in the studio providing a full-duplex, wideband high-quality audio channel between the devices.

Users can do a quick cut-in from a breaking news scene or a quick hit from a concert or customer location with more than just a low-quality, cell phone call in.

In response to queries from iPhone users on how to bring the ARC to the iPhone/iPod Touch, Comrex has provided handy instructions at its website on how to use the Media5 Fone app with ARC. Such a configuration will bring the functionality of the ARC to the iPhone and iPod Touch.

For information, contact Comrex in Massachusetts at (978) 784-1776 or visit [www.comrex.com](http://www.comrex.com).

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**TECHUPDATES****AETA 4MINX PUT TO THE TEST**

The 4MinX from AETA Audio Systems (AAS) is a multitrack recorder and mixer for remote location uses.

To show its durability, AETA notes that the 4MinX recently was used by a researcher from the Institut Français to record tropical sounds in Costa Rica. Researcher Rodolphe Alexis said the environment was "with 90–100 percent humidity" and the unit performed flawlessly under "moisture heat and sunlight."



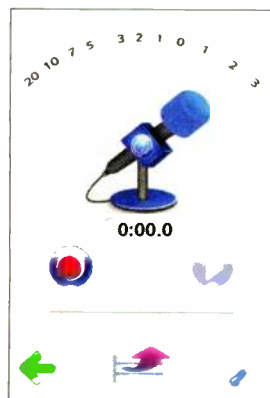
The 4MinX utilizes SDHC cards for recording and recording can be supplemented by external hard drives via the USB 2.0 port. An Ethernet port provides for file transfer.

Standard features are 48 V phantom power, low-cut filter, analog I/O, 24-bit BWF file recording and AES3 and AES 42 digital inputs (AES 3 output). Further features include M/S encoding/decoding along with timecode recording and synchronization. A 3-inch TFT color display provides information and menu choices. Rotary encoders, soft buttons and four programmable buttons provide navigation and operation.

The 4MinX has a small footprint and light weight. It is powered by a DV-type Li-ion battery (7.2V, NP-F970) and has an integrated charger.

It can be configured for radio acquisition, music recording, TV/film sync-sound or satellite mixing.

For information, contact AETA Audio Systems in France at telephone 011-33-1-41-36-12-61 or visit [www.aeta-audio.com](http://www.aeta-audio.com).

**ENCO UPDATES IDAD AND INTERCHANGE**

ENCO Systems Inc. rolled out a new version of iDAD. The iDAD is an app that works with any Internet-capable "iDevice" such as an iPhone or iPad and allows users access to two function sets from a remote location. Audio can be recorded, edited (using third-party editing apps) and delivered to the main facility's automation system via the Internet. Additionally, the iDAD application can control several functions of ENCO's DAD software remotely, allowing the remote user to do things such as start breaks, switch remote broadcasts to air, record feeds or initiate emergency off-air procedures.

According to ENCO, iDAD works with ENCO's Interchange appliance, a 1U rackmount server installed at the main facility that acts as a bridge between the

outside world and the DAD automation network. It connects to both networks simultaneously via its dual NIC architecture, which allows it to receive audio and command data from iDAD users securely and relay it to the appropriate DAD library or workstation.

iDAD is free, available through the App Store.

For information, contact ENCO Systems in Michigan at (248) 827-4440 or visit [www.enco.com](http://www.enco.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 [bmoos@nbmedia.com](mailto:bmoos@nbmedia.com).

**NEW NAGRA USES SD CARD MEDIA**

Audio Technology Switzerland, manufacturers of Nagra recorders, has introduced the Nagra SD handheld recorder.

The SD will record PCM linear (up to 24 bits/96 kHz), MPEG 1 Layer II and MP3 to a removable SD card media. Equipped with a wind noise filter for outdoor applications as well as a prerecording buffer and voice-activation operation, it can handle various recording situations. Using two AA batteries, the Nagra SD offers about 8 hours of operation.

The Nagra SD is in a cast aluminum chassis and uses a selection of four mono and stereo interchangeable microphone modules with various polar patterns. It is compatible with Nagra ARES accessories.

The unit is fitted with a mono/stereo line input for connection to external audio feeds. It has a USB 2.0 port and can be connected to a PC or Mac for file transfer. It is supplied with a 2 GB SD memory card, working case, mono microphone input cable, wrist strap and USB cable.

For information, contact Audio Technology Switzerland in Tennessee at (615) 451-4168 or visit [www.nagraaudio.com](http://www.nagraaudio.com).

**TELOS ZEPHYR XPORT IS RELIABLE**

Sometimes it's POTS or ISDN that you need to get the job done. For field work, Telos Systems offers the Telos Zephyr Xport, a POTS and ISDN codec.

The Xport gathers together efficient codecs such as aacPlus, AAC-LD and G.722 into one package. To sweeten the sound, Omnia processing algorithms are onboard. The Xport is remote controllable as well via the Web and its Ethernet interface.

The Xport is designed for road use with a metal housing and soft bumpers on the side. It is fan-free for silent operation in the field.

For information, contact Telos Systems in Ohio at (216) 241-7225 or visit [www.telos-systems.com](http://www.telos-systems.com).

**YAMAHA POCKETRAK W24 AND C24**

Yamaha has a pair of handheld digital recorders, the Pocketrak C24 and Pocketrak W24, that the company calls convenient, reliable and unique portable recording devices for capturing audio on the go.

The C24 includes an omnidirectional microphone and is suitable for most applications in schools, houses of worship and all-in-one recording. According to Yamaha this is the smallest 24-bit/96 kHz recorder on the market.

It includes a mounting adaptor and is light enough to attach to a mic or music stand. It plugs into a USB port, eliminating the need for an extra cable.

The W24 comes with a wireless remote controller and a scene memory function. It records for 27 hours in MP3 mode.

Both models come with metronome, instrument tuner, 2 GB of internal memory (with the ability to expand the memory with mini SD memory cards), a peak limiter and a high-pass filter that eliminates low-frequency noise on recordings.

For information, contact Yamaha in California at (714) 522-9011 or visit <http://usa.yamaha.com>.





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Radio broadcasts of Major League Baseball, NFL, and some college football games that are on cassette tapes,

approx 100 to 125 games, time period of entire collection os from the 1950's - 1970's, BO. Must purchase entire collection. Contact Ron, 925-284-5428 or ronwtamm@yahoo.com

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

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

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

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

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

Looking for KFRC signoff radio broadcast from 1930 Andy Potter, running time is 0:22 & also the KLX kitchen the program guest is Susanne Caygill, a discussion of women's affairs with a long promotion for Caygill's appearance at a local store. Anne Truax, Susanne Caygill, running time is 13:44. Ron, 925-284-5428 or email ronwtamm@yahoo.com.

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

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

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# Where's the Social Justice in That?

Honig Laments 'Abysmal' Levels of Minority Broadcast Ownership

## IN THE NEWS

David Honig is president of the Minority Media & Telecom Council. He spoke in January to the annual MMTC Broadband and Social Justice Summit. Excerpts:



David Honig

Despite the FCC's recognition that diverse participation is critical to broadcasting, minority broadcast ownership levels are abysmal and shrinking fast. Between 2007 and 2009, minority full-power commercial radio ownership dropped by 9 percent, and minority full-power commercial television ownership actually dropped by one-third.

So if the commission recognizes that diversity is an important tenet in communications policy, why is minority broadcast ownership being allowed to disappear? Is broadcasting no longer relevant?

The truth is that Americans continue to rely, overwhelmingly, on radio and television for news, entertainment and emergency information. The president's State of the Union address had over 25 million viewers, network news still draws 22 million nightly viewers, and 93 percent of Americans tuned in to AM or FM radio each week in 2010. Never is broadcasting more important than in times of emergency, when concerned Americans turn to television and radio over online news and other sources. Thus broadcasting couldn't be more relevant.

Further, in a multicultural and multilingual society, minority media ownership is the key to serving all Americans. Minority and non-minority audiences differ widely in their radio programming preferences. A 2011 FCC study found that while most minority-owned stations broadcast minority-oriented programming,

"most minority-targeted stations are not minority-owned ... [however] the presence of minority-owned stations in a market appears to raise the amount of minority-targeted programming."

One success story that we can point to is that in 2007, the FCC voted 5-0 to create the Advertising Nondiscrimination Rule banning "no urban dictates" and "no Spanish dictates" — that is, instructions from advertisers to their agencies saying "don't advertise on Black and Spanish

radio." Of course the reason for these instructions is that some advertisers don't want what they consider to be too many African Americans and Latinos in their stores.

That's against the law now. It took NABOB and MMTC 24 years to get it onto the books and three more years to get it enforced. The first federal civil rights rule of any kind ever adopted with no opposition! And right now, potentially the most far-reaching civil rights rule the FCC has on its books — a rule whose strict enforcement would deliver minority broadcasters about \$200 million in revenue that they earn each year, but never collect.

Did you know that the FCC has a cable procurement rule? Since 1993, cable companies have been required to reach out to minority suppliers for procurement. Have you ever heard of a case being brought under that rule? Don't feel bad if you haven't, because the FCC hasn't brought any.

We often get asked about the minority ownership initiatives like the Tax Certificate Policy, the Distress Sale Policy and the Telecom Development Fund. Everything's gone, including the Fund, which has been zeroed out in the federal budget. And several of the initiatives adopted in the 2007 Diversity Order are now gone thanks to the FCC's failure to adopt a meaningful

definition of eligible entities, despite the Third Circuit Court of Appeals' expectation for it to do so.

But the greatest danger to social justice is the negligence of those who profess to care. The negligence of people who ought to know better. ...

The people running the FCC now are very bright. They're sincere. They're idealistic. They're not racists. They're well-meaning. But they often wear blinders. What their blinders cause them to miss is the law of unintended consequences.

The media ownership rules provide the perfect backdrop for a demonstration of the law of unintended consequences. Unfortunately, many broadcasters have failed to recognize that consolidation has deeply diminished minority broadcast ownership. Because of the TV duopoly rule, half of the full-power commercial TV stations owned by minorities in 1999 are no longer minority-owned today.

Many solutions to the minority ownership crisis are on the table, and one that's especially promising is the "Incubator Proposal." Under this proposal, a broadcaster that finances or incubates a disadvantaged business — bringing a new voice in the marketplace — would be permitted to obtain a waiver of the ownership limits for one additional station. This race-neutral, win-win proposal has been pending before the FCC, without opposition, in six dockets for 22 years, so hopefully this year will be the charm.

The full text of Honig's remarks is at <http://tinyurl.com/rwnmtc>.

## HOW TO

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E-mail [radioworld@nbmedia.com](mailto:radioworld@nbmedia.com) with "Letter to the Editor" in the subject field. Please include issue date.


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Our readers have something to say


"From FCC news to the history of WLS, it's all there ... and seemingly for me! Radio has been my life, and Radio World my diary."



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Bob Sauter

Chief Engineer  
North Country Public Radio  
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Canton, N.Y.



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**READER'S FORUM****TALK TO YOUR TALENT**

Mark, just read your Promo Power piece about the need for PDs to work with their air talent daily ("A Radio New Year's Resolution," Jan. 4). I was a news anchor in Boston for years and *often* asked for feedback. The response? "Yeah, I wanna do that," or "We'll get to it." Of course, that never happened.

Additionally, I once worked for a guy (name withheld) who's an icon in the business, was way ahead of the curve, who also was famous for yelling on the phone, then hanging up — when he found out he was wrong! It was another of those learning lessons; but I agree with you that there are other ways of doing that and getting your talent on the same page. Your column is a great way to start the New Year.

Ron Hurst  
Nashville, Tenn.

**OH, FOR A DASHCAM!**

Several of our radio stations have been experiencing a lot of copper thefts. Yesterday I went into one (quietly, as usual) and finally caught someone in the act. He saw me and started running away so I dropped the Jeep into four-wheel drive and punched it. I called Dallas PD and excitedly screamed that we were being robbed, shots fired (I exaggerated, but anything else would be at least a 45-minute response), gave the address and hung up.

Soon I was chasing the guy around the field, occasionally getting close enough to almost tap him with the fender. He jumped the fence and ran into the next field. I followed him — through the fence.

We went back and forth like that for a few minutes, with him trying to hide in the brush and me heading straight through it at him. We finally ended up in a bit of a standoff. He was hiding and I couldn't see him; but I knew he wasn't going anywhere.

Air One arrived in about four minutes. I pointed to where he was and they went into a tight orbit over the spot. About that time a squad car pulled in and drew down on me until I showed that I was unarmed and identified myself as the complainant.

They directed another group of officers coming from the other direction. One officer almost stepped on the guy, he had buried himself so good.

After they carted him off we all congratulated each other and I followed them to the station to make a report.

The whole chase lasted six or seven minutes. It was an absolute blast. I'm sure he was more than a little shocked that some crazy bastard was trying to run him over and wouldn't stop chasing him.

The cops asked whether I'd been scared. I told them I climb towers, skydive and kiss sharks when scuba diving; I don't scare. They thought this was hilarious and said they needed more like me around.

So it was a great day. I haven't had that much fun in years. Maybe I can catch some more tomorrow.

PS: This is the guy's third felony bust so he will be going away for awhile. In addition to state charges of grand theft and damaging a transmitting facility, we are trying to get a federal

**CORRECTION**

The interview with NAB's Kevin Gage in the Feb. 1 issue was conducted by Radio World News Editor/Washington Bureau Chief Leslie Stimson, who was not identified in the text.

charge of damaging a transmitting facility added on (18 USC 1362, up to 10 years and \$250,000 fine). I like to be generous whenever possible.

Mike Vanhooser  
President  
Nova Electronics

**BUY CAP CONVERTERS WITH CONFIDENCE**

In a recent interview in Radio World, Richard Rudman made several claims about "legacy" EAS units and intermediary CAP devices ("In Alerting, Coordination Is Everything," Jan. 4).

He stated, "Considering the age of first-generation EAS SAME equipment, problems with their power supplies, printers, etc., purchasers of CAP converter devices may have just postponed the inevitable: purchase of a 100-percent CAP-capable box."

I would like readers to know that Gorman-Redlich stands behind our equipment without putting an end-of-life date on it. For example, we still maintain and repair customers' weather radios and antenna monitors that we manufactured over 35 years ago and I am confident that this EAS equipment will continue to perform well into the future.

Given the fact that current-generation EAS equipment has numerous printing and logging options and easily serviceable or replaceable external power supplies, this tired rhetoric also has no teeth.

Some people in the trades continue to make claims that intermediary CAP devices will not be able to perform as required; and each time these claims turn out to be false.

First, there were claims that intermediary devices would not be able to handle GMC message (note that these claims came before there was even such a thing as a GMC message). Now that it is confirmed that there will be no such thing as a GMC message, this message falls on deaf ears.

There were claims that intermediary devices would not be able to pass FEMA IPAWS Conformity assessment testing. The Gorman-Redlich CAP-DEC 1 has passed all applicable portions of the testing (including CAP, IPAWS and ECIG) and is listed in the FEMA RKB.

Next, there were claims that intermediary devices would not be able to handle maps associated with CAP messages. There are several problems with this, including the fact that there is no specification for delivering maps or other images in the ECIG or other documentation and, even if there were, there is nothing that would preclude intermediary devices from processing them, as we demonstrate at various trade shows.

Currently, claims are circulating that intermediary devices will not be able to generate the enhanced CAP text required by the ECIG (and, therefore, the fifth FCC Report & Order). As our CAP-DEC has passed conformity assessment, it has also passed testing to determine that it does, in fact, generate both the FCC required text as well as the enhanced CAP text. This text is displayed on the unit's interface and can be output to character generators, signboards or other devices via USB, RS-232 or other means as needed. Examples of this functionality can be seen in action at the NRB and NAB shows this spring.

As a final note, I would like to add that our CAP-DEC 1 "intermediary device" has been connected to the FEMA IPAWS alert feed since it has been online and has correctly received, processed and logged all CAP messages therein. Units that are currently shipping are capable of connecting to the FEMA feed and software updates are available to current customers who have versions from before the FEMA feed came online.

Jim Gorman  
President  
Gorman-Redlich Mfg Co.

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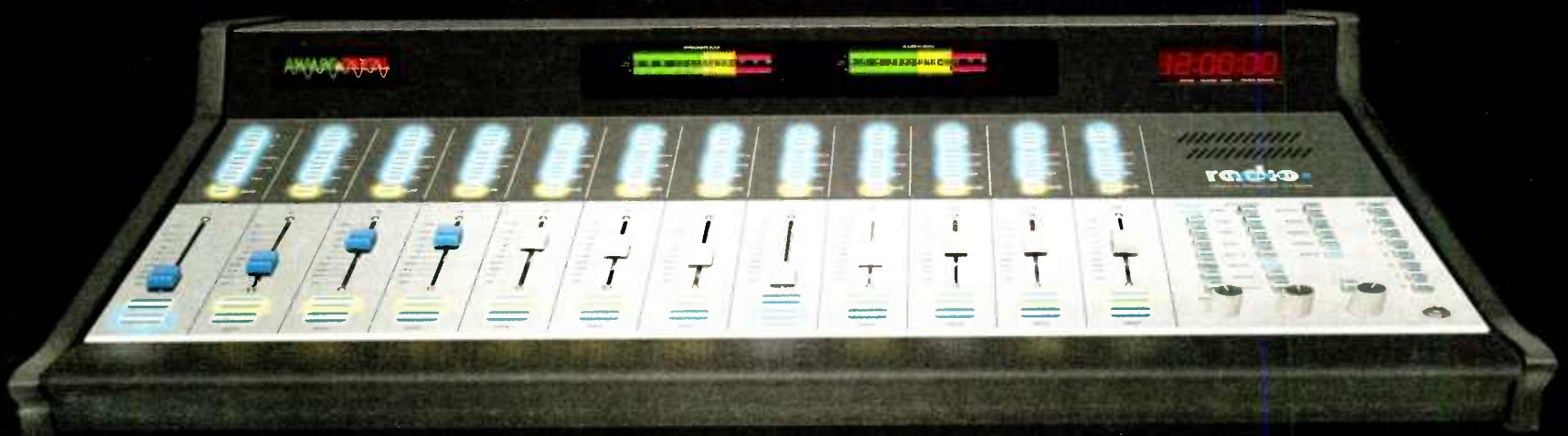
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