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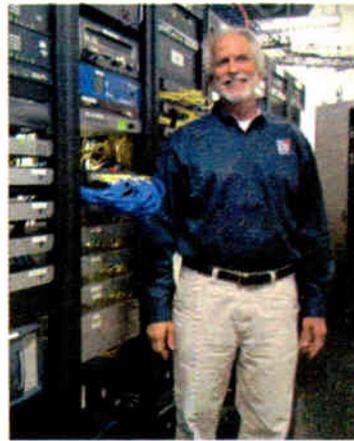
Dan Mansergh helps us make sense of metadata.

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Mountain Routing

Chris Karb and CC Asheville put IP audio and other innovative solutions to work.

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Radio World

\$2.50

The Newspaper for Radio Managers and Engineers

March 12, 2008

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HD RADIO NEWS

▼ Amanda Alexander evaluates the Dual XHD6420 HD Radio tuner.



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AUDIO SESSIONS

test drivers try out the JK RemoteMix 4 Portable Audio Mixer and the iKey Plus Audio Recorder.

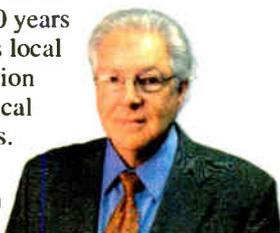


In This Issue

VISION

Freeman has been around R since its ng 10 years says local entation critical ccess.

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NEWS ANALYSIS

Radio: 'We Already Do Localism'

Proposed Regulations Are Seen By Broadcasters As Simply Turning Back the Clock

by Randy J. Stine

WASHINGTON Radio broadcasters and broadcast advocates claim that some of the FCC's localism proposals are onerous, particularly for smaller broadcasters, and in some cases could force stations off the air in overnight periods.

The commission's Report on Broadcast Localism touches on nine broad issues, including some recommendations to address what the commission believes are "deficiencies" of many broadcasters in serving their local communities.

The recommendations include requiring stations to establish permanent advisory boards and to carry a mandatory amount of public service programming.

Specifically troubling to broadcasters are the tentative conclusions that radio stations be attended 24/7 and that main stu-

See LOCALISM, page 6 ►

FIRST PERSON

Let's Go Shopping: HD Radio in Cincy

One Man's Buying Experience in Ohio Suggests The Receiver Push Is Having Mixed Success

by Thom Moon

There has been any number of stories in the trades about the lack of HD Radios at retailers and retail people who know

little or nothing about the technology. Radio World suggested that I see if that had changed any recently.

So I made the rounds of stores that sell See RECEIVER, page 10 ►



Another retailer sent me to Best Buy but I left a bit disappointed that the person in an Alliance-featured retailer knew less about HD-R than I do.

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◆ NEWS WATCH ◆

Clear Channel Corp. Engineers To Skip NAB Show

SAN ANTONIO Clear Channel's corporate radio engineering team will not attend the NAB Show this spring.

Executive Vice President of Distribution Development Jeff Littlejohn said he made the decision to trim costs as the company's first quarter did not meet expectations.

"It's a short-term reaction to what we hope to be a short-term problem," he said. Roughly 20 to 60 engineers have attended

in years past, according to Littlejohn.

The decision affects corporate engineering managers, though the cost-cutting emphasis at Clear Channel is likely to limit attendance by local station engineers as well.

The NAB Show is in Las Vegas in mid-April.

CCR Okays \$22 Million Fire Settlement

PROVIDENCE, R.I. Clear Channel

Radio tentatively approved a \$22 million settlement with survivors and victims of a 2003 nightclub fire. The deal is one of several related to the fire in West Warwick, R.I. that killed 100 people and injured 200 others.

All the plaintiffs and the federal judge overseeing the case need to approve the settlement for it to become effective.

Victims' attorneys said in court papers that Clear Channel Providence station WHJY(FM) promoted the Great White concert and gave away free tickets, the Associated Press reported. They also alleged that station personality Mike Gonsalves — who died in the fire — could have stopped or delayed the con-

cert for safety reasons but did not do so. AP reported the fire began when fireworks used by the rock band ignited flammable foam used as soundproofing on the club's walls and ceiling.

"While Clear Channel had no role in causing or contributing to this fire, we are pleased to resolve these claims and, hopefully, contribute in some way to a sense of resolution for the affected victims and their families," said the broadcaster in a statement.

Maryland Courts NPR

SILVER SPRING, Md. Maryland's Montgomery County is trying to entice NPR to move there.

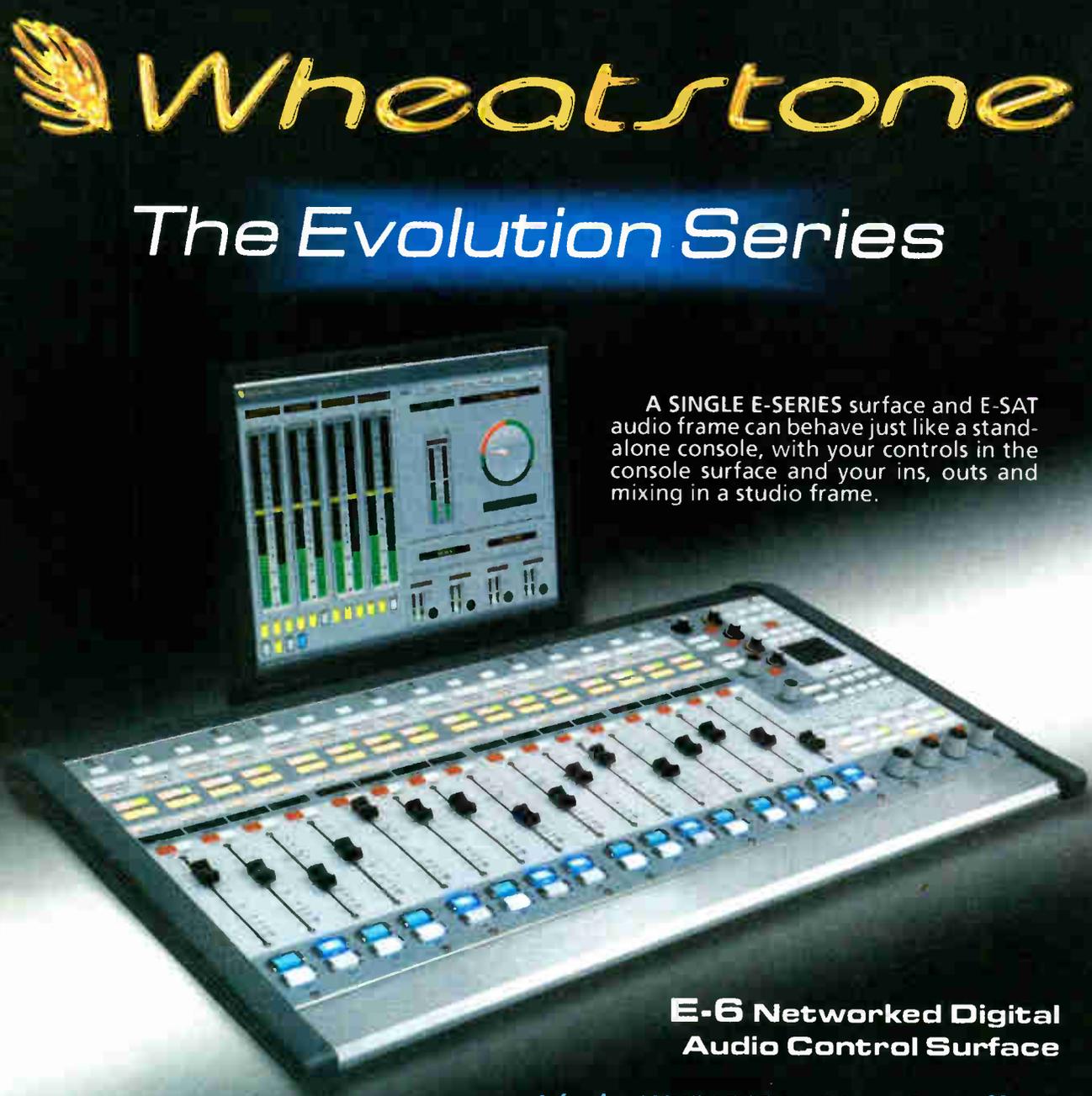
NPR, which has outgrown its present space in the District of Columbia, is looking for some 400,000 square feet for studio and office space and is considering several sites.

The Montgomery County Gazette reports the county made an offer to NPR and quotes an official as saying when the network might make a decision is unclear.

NPR wants to consolidate its offices, now spread over two buildings. The network is also considering two sites in D.C., one in Northwest and the other in Southeast, the Gazette quoted a spokeswoman as saying.

The county offered NPR a site in downtown Silver Spring.

Montgomery is the county north and west of the District of Columbia.



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In Small-Town Pa., a Long Road for HD-R

Survey Finds Small-Market Stations Aren't Planning Conversions Soon

MANSFIELD, Pa. A study of radio stations in Pennsylvania suggests HD Radio isn't going to be saturating smaller markets anytime soon.

Gary McIntyre, a broadcasting/mass communications instructor at Mansfield University of Pennsylvania in the north-central portion of the commonwealth, has been tracking conversions for three years.

He mailed 100 questionnaires to small-town stations in Pennsylvania, those in Arbitron markets No. 150 and below well as the non-rated markets. The survey consisted of 15 questions asked of station GMs, ops managers and CEOs.

McIntyre is a member of the Pennsylvania Association of Broadcasters, which provided him with contact information.

"This study examines the question of whether smaller-market radio operators will be part of what NAB President David Rehr calls 'the new radio revolution,'" McIntyre wrote.

He asked broadcasters last summer whether they intended to convert their facilities in the next 12 months; he also made queries about multicasting, HD-R receiver availability and station promotion of IBOC. He only recently released the report.

Of the 100, he received 50 surveys back.

Worth the Cost to Convert to HD-R?

Strongly agree	0%
Agree	6%
Neutral	36%
Disagree	22%
Strongly disagree	36%

Small-market station responses to survey in summer 2007

Of those, he said, only one station had converted to HD-R.

"Eighty-six percent of the remaining respondents indicated it would be highly unlikely or somewhat unlikely" they would convert their stations by this coming summer, according to his report. Six percent indicated it would be neither likely nor unlikely, and only 6 percent indicated it would be likely, he said in an interview.

McIntyre identifies several factors as so-called "gating" items for HD Radio's success in small markets.

Most respondents cited cost as the main factor prohibiting conversion; others felt the technology had been "overhyped" and that FM analog is good enough in listeners' minds, McIntyre said.

He also feels station managers in smaller markets do not feel compelled to convert

their stations because their neighbors have not, whereas in larger areas, he believes there is a more competitive mindset that compels competitors in a market to go digital once a neighbor has.

He noted that results could be different in states where small markets are more influenced by larger ones; he thinks an independent national survey of small markets should be planned to learn more, as should another survey in a state that has a lot of small markets, like Pennsylvania.

"There is a possibility of more small-market stations converting in those areas where retail stores offer more HD Radio product choices," he concluded. "The Pennsylvania small markets are often very isolated from more urban areas and may not be influenced from larger markets such as Pittsburgh, Philadelphia and Scranton/Wilkes-Barre."

While the instructor cautions that this is only one survey in one state, McIntyre believes Pennsylvania's large size and numerous smaller markets made for a good case study.

Some respondents predicted it would take several years before stations in smaller markets converted their facilities. Seventy-four percent of respondents also said they don't want the FCC to force stations to use HD Radio, as TV is mandated to go digital.

— Leslie Stimson

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What They Said:

Here's sample of responses from radio stations to McIntyre's Pennsylvania survey:

- "I can not think of even one area that needs two or three times the amount of radio stations than it has now. Most markets can't support all the AM and FM stations on the air now."
- "HD-R, while having many benefits, is being overhyped. We'll go HD-R in three to five years. But (it's) very expensive for smaller-market stations."
- "[The company is] on record as saying all 25 of our stations will convert to HD-R. Some already have. Our smaller-market stations which I oversee will probably be converted in the final phase. How soon, I can't say, but likely not in the next 12 months."
- "Our feeling is that HD-R's viability is many years down the road. Still too early."
- "What few stations have converted, we regret it already. Currently in radio, there is no revenue stream to justify [HD-R]."
- "AM IBOC is still a mess. I am aghast that HD-R is not an open standard. This is counterproductive."
- "It is nearly impossible to get bank financing for this new technology since it can not yet be heard in small rural markets because there are few, if any places these radios can be purchased."
- "If approximately 50 percent of receivers in our area become HD-R, we would expect to convert by that time."
- "Multicasting is the only benefit I see. HD-R is irrelevant by itself. 'Quality' of audio [is] not very important to rural listeners, but having additional channels to listen to is the real benefit."
- "We have done exploratory studies for HD-R and have plans to convert, but will not implement until HD receivers are easily available and implementation costs are under control."
- "Eventually, I think HD-R will ... have an impact. I don't see that happening in this market in the next five years, however."
- "Cost-to-benefit ratio too high. Licensing fees stopped project at this school. Station employs very good equipment. Air sound is already good."

Radio Where the Listeners Are

Radio needs not only better content, it needs better salespeople.

I mean not the gal or guy on the street, but national spokespeople for our industry.

Perhaps Jeff Haley will be that person. Haley is the president/CEO of the Radio Advertising Bureau, a job he took a little over a year ago.

Haley wants our industry to send "bold signals." Well, radio certainly needs those, because "bold" is not an adjective that describes most of what U.S. commercial radio has done for the past few decades.

I appreciate the tone he took at the recent RAB conference, his second as the organization's leader after replacing Gary Fries, an industry stalwart.

Multi-channel

Most dramatically, Haley called on our owners and sales executives to embrace new technology.

"Let's agree here and now that our goal will be to have radio on every mobile phone, PDA and MP3 player in the next five years. On-air; online; on-site; and on-demand — radio must be anywhere and everywhere there is a speaker or headphones."

Haley could have been writing the script for RW's next special supplement (look for it in a few weeks) when he reminded his radio sales flock that we no longer distribute our content via a single pathway.

"We've become multi-channel distributors. Radio provides easy and personal consumer interaction through numerous audience touch points and on a variety of platforms."

I'm all for that, although Haley didn't specify what strategies he or other industry leaders will follow to make that happen. But he did effectively demonstrate his point about a blossoming number of devices that allow consumers to access our content. All of these would be familiar to RW readers.

He showed off an IP radio from Asus that lets him listen to a local station and he cited statistics that 25 million Americans listen to radio via the Net, equivalent to an incremental increase to radio's national average quarter hour of 1 million people.

He brought along the gizmo that allows FM listening on iPods, "the most popular accessory that Apple sells." He also said almost half of Microsoft Zune owners listen to their built-in FM radio at least once a week.

Haley believes the success of the MP3 player format "requires that users continue to source and use new music. ... What would it mean for our business if all of those players featured access to radio content, and every MP3 owner listened to the radio feature for even a half an hour a week?"

Well worth thinking about.

Billions in potential

Revenue generation via new streams is key.

Haley said nearly 4,000 stations now have a streaming component — "that's one in every three radio stations in America reaching consumers on a platform that didn't even exist 10 years ago" — and he noted recent double-digit increases in radio's non-air revenue. He believes off-air revenue could approach \$2 billion by the end of next year.

He believes text messaging is coming on strong as an ad category, "quickly moving beyond artist and title information and ... poised to deliver advertiser content, including location-based messages and GPS services."

He showed off a Dual radio with MSN Direct HD that provides personalized, localized text content.

"Traffic information, typically broadcast at regular intervals over the radio station airwaves, is now delivered by the station to MSN and shows up on your dashboard screen as text. Local movie times, gas prices and nearby fast-food locations can also be transmitted to individuals in specific markets and at specific times."

He's encouraged by HD multicasting, the growing number of digital receivers and iTunes tagging. He mentioned conditional access, noting a planned radio by Dice Electronics.

"Here's an ESPN HD2 channel that anyone with an HD Radio can receive. But the HD3 channel is set up as an on-demand basis, available only to registered

users, allowing stations to capture valuable insights about their listeners and their clients' customers."

And, he said, cellular phones have opened the way to mobile marketing programs through two-way e-mail and text messaging communications. These include opt-in campaigns, text-to-win contests and tune-in alerts for special programming.

"It is a natural next step to deliver partnerships to advertisers that want more than just a gateway to the consumer and are seeking contextual engagement." He demonstrated a Nokia mobile phone that comes with a built-in FM receiver.

Haley said if half of all Americans take advantage of radio functionality on their mobile phones or MP3 players for a half hour a day, it would translate to 3.5 million incremental AQH, a 10 percent increase, and perhaps \$3 billion new revenue.

'Uniquely positioned'

He says radio is exploring how to position itself across these channels in ways that are attractive to advertisers.

No surprise there; but he also emphasized that it is "uniquely positioned to do this because it is the only medium that does not change its form from channel to channel. Print and video are different experiences when they move to digital; radio is not. The Rolling Stones sound like The Rolling Stones no matter the channel."

The RAB head also made reference, too briefly, to the negative vibes that surround radio, saying one goal of the new Radio 2020 campaign is to address perceived challenges head on. "We will directly respond to growing concerns about stale content and technology."

But Haley, a former senior VP of global marketing for Time Warner, thinks radio is often its own toughest critic.

"When I hear or read one broadcaster denigrating another, or witness a very public airing of our dirty laundry, I cringe at the damage we do to ourselves," he said.

"We are the number two most-consumed medium in America. We command an annual investment from advertisers of over \$20 billion, and that

From the Editor



Paul J. McLane

investment moves billions more in consumer purchases. The capital investment in radio by manufacturers, technology companies and the automotive industry has never been higher."

I've made similar points about keeping our strengths in view as well as our weaknesses; and I'm happy to hear this upbeat message coming from Haley. I don't buy into the many doomsday scenarios about radio. But I certainly do my share of worrying, and I feel we're hungry for more upbeat, assertive national voices to preach what's good about our medium. That's what an effective salesperson does.

However, I also hope Jeff Haley means what he says about addressing "perceived challenges" and that he realizes that some problems are not merely perceptual.

It's well and good to be out there in front, pitching what's best about radio and talking about new ways to disseminate what we already do.

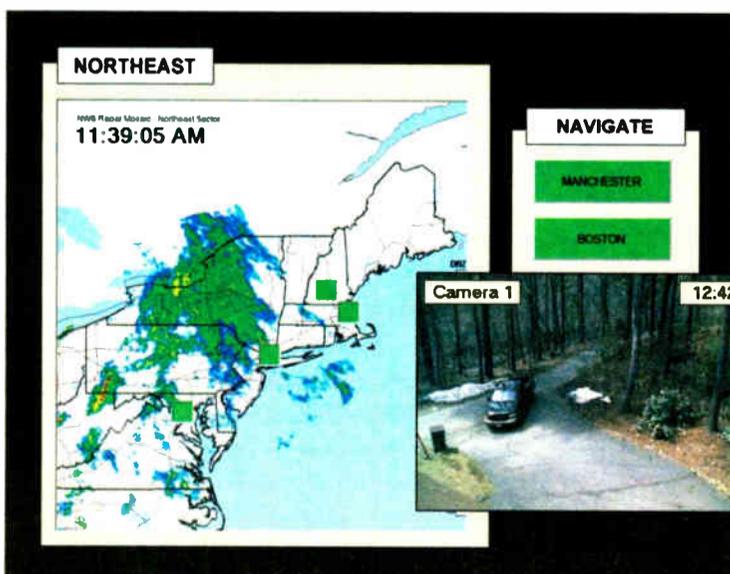
I hope he will be equally vocal about saying back to the industry, "We can also do a better job of creating content that consumers want to hear," and "If you want to profit by these tools, you need to invest in them. Explore them. Try them. Sell them."

Radio has often sat back and taken the "rote route," overly automated, bland and personality-less. You need look no further than most of the early HD2 channels for what I'm talking about.

These new tools give us a chance not just to reach more people, but to rethink what and how we do our job.

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NEWS WATCH

Emmis, CBS Radio Cut Jobs

Emmis and CBS Radio cut jobs in the first quarter to stem losses.

MediaWeek reported Emmis cut positions in New York, Los Angeles, St. Louis, Chicago and Austin, Texas. Other employees had their hours reduced.

In January, Emmis posted a loss in its third quarter as domestic revenue dropped due to continuing weakness in its New York and Los Angeles clusters, according to AP.

Meanwhile, while the number of total job cuts at CBS Radio was unclear, at least some engineers were affected.

Paul Sakrison, chief at KNX(AM) and KFWB(AM) in Los Angeles, is looking for work. Taking over that responsibility is Julian Vega, CE of KROQ(FM) and KCBS(FM) in Los Angeles.

Scott Mason, regional director of engineering for the West Coast, added Vega's old CE duties. Mason was KROQ chief in the 1980s and '90s.

CBS Radio senior vice president of Broadcast Engineering Glynn Walden adds chief engineer duties at KYW(AM), Philadelphia, with Wes Spencer taking over some of the DOE administrative duties with the regional engineers. That's a return to familiar turf for Walden, who was chief at KYW in the mid-'80s. He

moved his office to KYW in February.

CBS Radio spokeswoman Karen Mateo verified that staff cuts have been completed. In past months, the broadcaster has streamlined its corporate management staff, and installed market managers and directors of sales in all of its markets.

In a statement, CBS Radio said it continues to build on a strategy of deploying assets to best grow ratings and monetize the results. It said changes in operating structure have simplified the process of buying and selling ads, sped up the decision-making process and are "allowing us to more effectively monetize the aggregate number of listeners who hear us on the radio and the Internet."

CBS said it has also made programming improvements and strengthened its digital assets in order to distribute its content on various emerging platforms.

News Roundup

SPECTRUM: In recent meetings with staff for Commissioners Robert McDowell, Michael Copps and Jonathan Adelstein, a Media Access Project lobbyist said if approved, the satellite merger deal should be conditioned on the entity giving up 12.5 MHz of its S-band spectrum. According to an FCC filing, MAP says the FCC should create a set-aside for NCE programming, require the combined entity to lease capacity to unaffiliated

commercial programmers or require the excess capacity to be returned for auction. MAP also suggested the merged company adopt an "open device" principal.

RADIO'S POSSIBILITIES: RAB president/CEO Jeff Haley wants radio to be on every mobile phone, PDA and MP3 player in the next five years. At the RAB convention in Atlanta, Haley showed off devices to demonstrate how consumers can get radio content via non-broadcast channels, and said radio could possibly see \$3 billion in incremental revenue if a radio tuner were available on every device (see page 4). Haley also announced a marketing alliance with Katz and Interep to help give certain clients one point of contact for radio; and called on the industry to get together and "speak with one voice" on audience measurement.

HD2 SPOTS: Verizon Wireless will begin running the first ads on HD2 stations in New York, according to Crain's New York Business. Four 10-second spots will run hourly on the multicast feed of Clear Channel station WHTZ(FM).

CLEAR CHANNEL: After a slow Q4, Clear Channel's radio revenue ended flat for the previous year. Radio revenue was down 3 percent in the fourth quarter; for the year, Clear Channel Radio brought in \$3.4 billion. The parent company brought

in \$1.84 billion in the final quarter, up 4 percent over the same period a year earlier. Of 448 radio stations it set out to sell beginning in late 2006, it sold 160 with purchase agreements for another 73 as of the end of December 2007; of those 73, it has since completed the sale of 57.

AUDEMAT: Audemat-Aztec has changed its name to Audemat. The French company says it has grown rapidly, having recently acquired TV and FM transmitter manufacturer Eceso and Nortek, which makes TV monitoring, test and measurement equipment.

DOJ: The Department of Justice will require Clear Channel to divest six stations in four cities as a condition to approve the company's acquisition by a group of private equity investors led by Bain Capital and Thomas H. Lee Partners. The DOJ said the \$19.5 billion deal, as originally proposed, likely would have resulted in higher prices to purchasers of radio advertising in Cincinnati, Houston, Las Vegas and San Francisco because Bain and THL already have substantial ownership interests in two firms that compete with Clear Channel in those cities, Univision and Cumulus. Clear Channel believes the deal will close on or about March 15. The proposed settlement will be published in the Federal Register. Publication triggers a 60-day public comment period to the DOJ.

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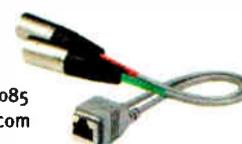


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Localism

► Continued from page 1

dios must be located in the designated community of license (see story, page 8).

Radio proponents say some small- and medium-market radio stations are unstaffed during overnight hours because of budget constraints; and in many instances main studios, in small and large markets, are located outside the city of license.

Survival

Broadcaster support for any part of the FCC's report is hard to find.

Some broadcasters feel the call for local advisory boards is a good idea; but others claim the FCC's wording is vague on what broadcasters will have to do with

board recommendations.

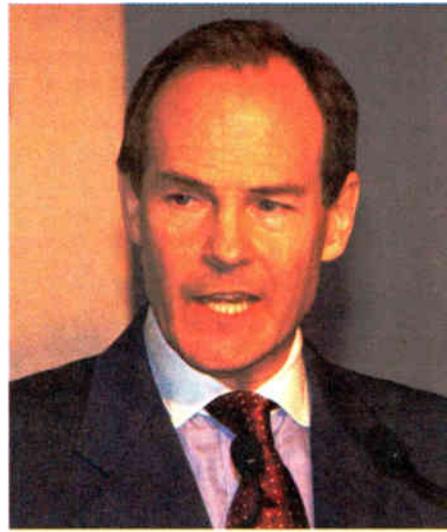
"Small-market broadcasters already reach out to the community," said Jon Yinger, owner of Broadcast Properties LLC, which owns nine radio stations.

"To survive in today's market you must localize your radio stations. My fear is that we will be required to follow the advisory board's recommendations."

Yinger's stations offer religious programming; he says advisory board recommendations could force him to offer programming that would be at odds with Christian faith.

The FCC specifically mentions "the development of balanced and community responsive programming that includes all significant groups with special interests and needs" in its report.

So opposed is Yinger to the FCC's localism reform that he, with help from law firm



Jay Mitchell speaks at an NAB Radio Show in 2004.

Fletcher, Heald & Hildreth, has launched Web sites www.helptheadnow.com and www.savechristianradio.com. The sites list reasons the FCC wants more regulation and how broadcasters can make reply comments on the Notice of Proposed Rule Making.

The NAB wrote a strongly worded response to the FCC's localism proposal when it was issued late last year. In it the broadcast trade association claimed the "proceeding carries grave First Amendment implications" and that in fact, "onerous regulations can have unintended consequence of reducing programming quality."

Dennis Wharton, NAB's executive vice president of communications, said, "There seems to be a disconnect between policymakers and how radio stations serve their communities. The one-size-fits-all regulation that sometimes comes from Washington doesn't always accomplish what they hope it will."

No more overnights?

The commission stated in its recommendations that many commenters, including some consumer groups, inferred it is increasingly difficult to get emergency information to the public late at night because many radio stations are unmanned and controlled from a remote location.

The FCC's proceedings reaffirmed the importance the public places on timely and accurate emergency information on broadcast stations.

However, several small-market broadcasters told Radio World the FCC's move to require radio stations be manned 24/7 ultimately could backfire on the commission by forcing some off the air overnight.

The FCC is considering options that would actually cut services in smaller markets.

— Jay Mitchell

"I think that is what will happen rather than broadcasters paying for someone to be in the studio around the clock," said Jay Mitchell, who until recently owned several small-market stations and is publisher of the Small-Market Radio Newsletter.

Many broadcasters have stringent emergency protocols and the technology to allow emergency alert messages to be broadcast instantaneously during off-hours, Mitchell said.

"You really don't need someone in the studio 24/7. I'm afraid many small broadcasters would simply cut broadcast hours and be unable to afford to keep their stations on the air overnight if forced to hire additional manpower. Therefore, the FCC is considering options that would actually cut services in smaller markets," Mitchell said.

Some wonder if the localism proposals are something of a trial balloon by the commission, intended to be a demonstration of what the commission could do if broadcasters don't improve, said Womble Carlyle Sandridge & Rice communications attorney Peter Gutmann.

"Is this just a function of the bully
See LOCALISM, page 8 ►

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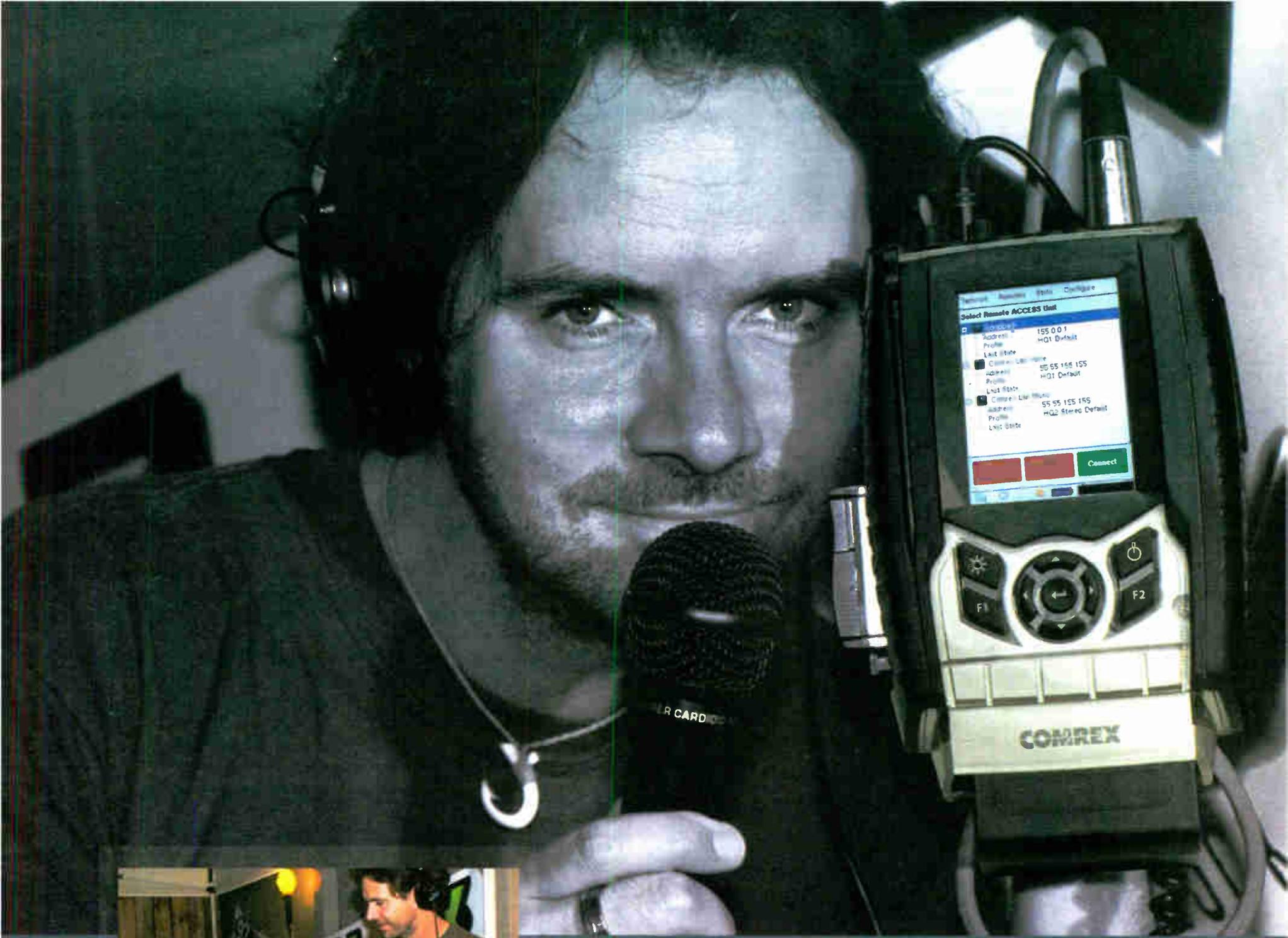
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Localism

► Continued from page 6

pulpit, or are they serious about regulating some of these areas, and is there serious congressional pressure to get it done?" he asked.

Gutmann believes there is an appreciation among FCC commissioners for what radio broadcasters do day-to-day. But he senses the agency's frustration with some broadcasters who do little local news and public affairs programming.

The FCC also has tentatively concluded it should introduce broadcast license renewal programming guidelines; broadcasters would be obligated to carry a certain number of hours of local public affairs programming to meet renewal criteria. Stations *not* meeting the requirements would then have their license renewals reviewed by the full commission, Gutmann said.

"That's scary for broadcasters and certainly a big move toward re-regulation. The possibility of subjectiveness in the process is threatening to broadcasters," Gutmann added.

What's next?

Will the localism proposals be enacted?

Gutmann expects some or all of the proposals to be diluted before the FCC's final rulemaking is issued.

Ownership diversity could also suffer from the added expense of additional regu-



lation, Yinger of Broadcast Properties said.

"This would hurt women and minorities who want to enter broadcasting. It increases the cost of entry by increasing the cost of operating a radio station."

Proponents of the FCC's localism initiative contend the commission is right in taking broadcasters to task for their lack of local commitment.

"Commercial radio has largely ceded

news and public affairs to non-commercial radio," wrote Media Access Project President/CEO Andy Schwartzman in comments filed to the FCC. Media Access Project is a non-profit, public interest law firm based in Washington.

Free Press, which describes itself as a

Washington-based nonpartisan organization working to reform media, supports the FCC's localism mission, though the group thinks the recommendations should have gone farther.

"We think the FCC downplayed testimony from the public hearings regarding localism, which showed a major wave of consumer discontentment of media," said Research Director Derek Turner.

"There needs to be major reform to ensure broadcasters take seriously their promise to reflect the views and address the concerns of their local communities in return for being granted a license to use the public airwaves."

Turner said Free Press is pleased with the FCC's recommendation to require radio stations post the majority of their public files on their Web sites, much the same as TV stations are now required to do.

"However, the license renewal process right now is broken. It will remain so until there is meaningful punishment for those stations that fail to meet localism obligations."

Other consumer groups, like the Consumer Federation of America and Consumers Union, have filed hundreds of comments, mostly supporting the FCC's actions on localism.

Broadcasters and interested parties can file comments regarding the FCC's Notice of Proposed Rulemaking (MB Docket 04-233). Comments are due March 14.

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Main Studio, 24/7 Staffing Raise Concerns

Radio engineering executives say they would be left scrambling if the FCC were to again require broadcasters to locate main studios in their community of license.

As part of the FCC's Report on Broadcast Localism and subsequent Notice of Proposed Rule Making, the commission is revisiting its 1987 decree that allowed a station to locate its main studio anywhere within the station's principal community contour.

The FCC's tentative conclusion could be devastating to radio broadcasters who have spent millions of dollars building new facilities to house clusters of radio stations, which are often licensed to surrounding communities, engineers tell RW.

"Fewer than a half of our properties actually have main studios physically located in the designated community of license," said Milford Smith, vice president of radio engineering for Greater Media. "Many of these facilities contain multiple radio stations and offices licensed to multiple communities and cost millions of dollars to construct."

However, Smith finds it unlikely broadcasters would move entire studio operations if or when the FCC issues final rules requiring it.

"I suspect that we and many others in similar circumstances would establish a minimal 'official' studio where it physically needed to be to fulfill the requirements," Smith said.

Sheridan Broadcasting Director of Engineering Bob Sharkey said, "This is not on our radar just yet, but if it does happen we would have to conform, which would amount to considerable expense."

Sheridan Broadcasting owns six radio stations, none of which are housed in their city of license, Sharkey said.

Steve Davis, senior vice president, engineering and capital management for Clear Channel Radio, said the current rule regarding main studios has it right, calling the new proceedings "anti-localism."

"It recognizes that the area a station serves is defined by that station's city-grade signal contour. The rule allows for stations to locate studios in population centers," Davis said.

In addition to costing broadcasters millions of dollars to relocate studio facilities, the FCC's recommendations would also be a hardship for the majority of most stations' listeners, Davis added.

"Locating in the population center makes it easier for listeners to interact with radio stations. Locating stations in sometimes remote, far-flung communities will reduce the contact most listeners have with a particular radio station," Davis said.

As for 24/7 staffing, he feels the change would affect smaller broadcasters much more than a large radio group like Clear Channel.

"In most cases with multi-station clusters, there is at least one person on duty within our facilities at all times. But smaller broadcasters would certainly be faced with additional costs to have someone baby sit the radio station at all times."

Greater Media's Smith added, "I have a hard time understanding how employing a minimum wage person merely to establish a presence would contribute anything whatsoever over and above a proper functioning EAS system in an emergency situation."

— Randy J. Stine

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Screen play • Use any display screen you choose, to suit your space and décor. Get a space-saving 12" LCD, or go for a big 21" monster. (This is Dave Ramsey's favorite Element feature, by the way. Anyone want to bet he bought his monitors on sale?)

Lovely Rita • LED program meters? How 1990's. SVGA display has lots of room for timers, meters, annunciators and more — enough to show meters for all four main buses at once. Reboot to 5.1 surround mode and the light show is even cooler, with surround audio and associated stereo mixes all going at once.

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Missing features • Did we forget something? Program these **custom button panels** with any macro you want, from recorder start/stop to one-touch activation of complex routing and scene changes using PathfinderPC™ software. You could probably even program one to start the coffee machine (black, no sugar, thanks).

Mix-plus • If constructing a complicated mix-minus on-the-fly brings a big grin to your face, you're excused. But if you're like us, you'll love the fact that Element does mix-minus **automagically**. Forget using all your buses for a four-person call-in, or scrambling to set up last-minute interviews. When you put remote codecs or phone calls on-air, Element figures out who should hear what and gives it to 'em — as many custom mix-minuses as you have faders.

Great Phones • With Element, jocks never have to take their eyes or hands off the board to use the phones. Element works with any phone system, but really clicks with the Telos Series 2101, TWOx12, and new NX-12 that connects four hybrids plus control with a **single Ethernet cable**. StatusSymbols™ (cool little information icons) tell talent at a glance whether a line is in use, busy, pre-screened, locked on-air, etc. Even dial out with the built-in keypad.



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Receiver

► Continued from page 1

electronics in the Cincinnati area. What I found was some improvement; but a lot is yet needed.

First stop: a store of the regional H.H. Gregg chain. I was met practically at the door by "Dan," who asked how he might direct me. I told him I had heard about this HD Radio and was interested in auditioning one.

He knew a bit about the technology — and mentioned that "you hear about it on the radio all the time." He turned me over to one of Gregg's "specialists" (their term) who bluntly stated, "We don't carry them" and suggested I try RadioShack or Best Buy.

At a Best Buy store just across the way, I made my way to the car stereo department in a back corner of the showroom and sure enough, there were two on display: the house-brand Insignia NS-C5112 and the JVC KD-HDR1.

The lone salesperson was tied up with a couple intent on deafening themselves, so I walked over and found the micro sound systems mixed in with clock radios and boomboxes neatly hidden in the middle of the store.

External antenna

On display, next to one another, were the Sony XDR-53HD table unit and another house-brand Insignia product, their NS-HD2114 HD radio/DVD player with matching speakers. Even though both were connected to an external antenna, neither unit received enough RF input to lock onto the HD-R stream.

Another problem was, I never did figure out how to tune the Insignia unit, and a Best Buy employee who wandered by and offered to help was just as puzzled as I. Another disappointment was the Insignia was tuned to 107.1, home of Class B1 WKFS(FM).

That should have been fine, as the station's antenna is less than 10 miles from the store. But the radio wasn't receiving any signal at all. That's not a strong recommendation of the unit.

When I returned to the car stereo display area, the salesperson was alone so I asked him about which units had HD Radio. At first he had a puzzled look on his face, but he quickly recovered and said, "Oh, yes — HD Radio," and pointed to the JVC KD-HDR1, which was surrounded by a sign that said, "Hear the difference of HD Radio!"

He also located without too much trouble the Insignia unit, which he attempted to demonstrate. He said, "That's HD Radio," even though the radio obviously couldn't link to the HD signal; the "HD" symbol on the radio's readout just blinked.

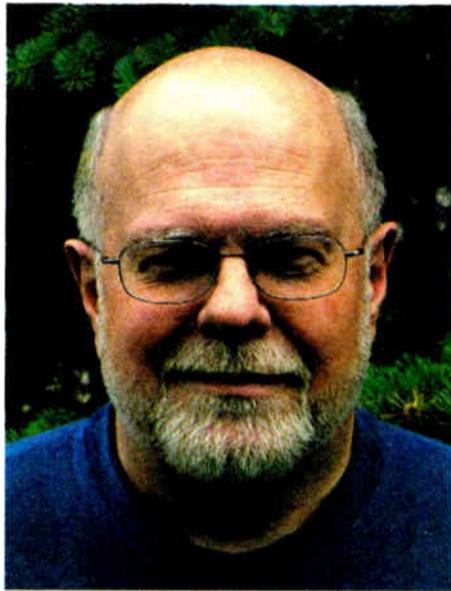
When I mentioned that to him, he sounded surprised and suggested we try the JVC. Finally, there was a radio in the store that could link to the digital stream and I could hear the difference — not well (brother, are Best Buy stores noisy!) but well enough.

I walked away a bit disappointed that the person in an HD Radio Alliance-featured retailer knew less about HD-R than I do.

I decided to take a break in the chain action to visit a local audio/video store, Alamo Electronics. They specialize in flat-screen TV but have enough interest in audio to carry some very fine lines.

I was pleased to find located centrally in the modestly sized store a display of high-end home radios: a complete selection of the Kloss radios from Tivoli and three HD-R units: the Sony I first encountered at Best Buy, the recently discontinued Boston Acoustics Receptor HD and the relatively new Denon S-52 networked unit.

The sales associate was moderately knowledgeable about the process. He



Thom Moon

knew that HD-R was digital but he didn't know how the digital stream was inserted into the signal.

At a store such as Alamo, I expect their people to know more than the folks at Best Buy. He did, and the store gets a gold star because I could actually audition an HD Radio without several other audio sources blasting at me.

Next stop: Circuit City.

It's a good thing they have a suspended sign that says "Home Audio" over the section because otherwise I don't think I would have found it, hidden in a far back corner behind a barricade of portable audio gimcracks. As I expected, their selection of home HD Radios was underwhelming: just the Sony XDR-53HD.

Of course, it wasn't connected to an antenna, so it wouldn't link with HD-R, even though I was only about six miles from the WKRC(TV) tower, home to all of Clear Channel's local FM's and Entercom's WKRQ(FM).

Over in the Car Electronics department in the opposite back corner, the selection was equally slim — just the JVC KD-HDR1.

Gold star

The kid keeping an eye on the section knew all about XM and Sirius but next to nothing about HD-R. He demonstrated the JVC unit and it was receiving enough signal for it to link, but one couldn't tell much about the sound because it was being played so loudly to compete with the boom-bam-bang of big-screen TVs.

A Target is just across the street, so I sauntered over and looked around their home electronics section, located about as far as possible from the front door and against an outside wall. HD Radio? Nada. Zero. Zip.

Talked to the gentleman who appeared to be in charge and he said, "Nope, we don't sell those." When I said I had found Target mentioned on the HD Radio Web site, he just said, "Oh — it must be Internet only." And, indeed, the Target Web site lists three HD units: the Sony, the Sangean HDT-1 tuner and Sangean's HDR-1 radio. All are available now.



One retailer said 'We don't carry them' and suggested I try RadioShack or Best Buy.

Then it was onto Wal-Mart. I checked the home electronics department from top to bottom and nothing. No one was around except in the photo department next door, but the guys there knew nothing about HD Radio.

I asked if HD Radios might just be Web site items and they both said that could be. On the Wal-Mart Web site, after looking at clock radios, mini-systems and receivers, I gave up and searched on "HD Radio."

No tag

There I realized I hadn't checked the auto accessories section of the store, because all three HD units that appeared are car units: the JVC KD-HDW10 (which looks like a re-labeled version of the KD-HDR1) and the Visteon HDZ300 in-car and Visteon "Jump" portable tuners.

It's bad when you're trying to sell an expensive unit and the prospect can't hear the main selling points of the technology: better sound and the "stations between the stations."

As it looks to me, broadcasters have been insistent in trying to create demand for HD Radio, and despite the naysayers, I know people who are intrigued enough at least to ask me about it. But brick-and-mortar retailers make it difficult (if not impossible) for consumers to make an informed decision. Right now, the consumer's smart move is to troll the Internet.

It occurs to me that the radio industry's best bet is to encourage local audio retailers to play up HD Radio — and to help them make sure the radios they have on display can lock onto the HD signals.

Stations might even tag HD Radio

He said 'That's HD Radio' even though the radio obviously couldn't link to the HD signal: the 'HD' symbol on the radio's readout just blinked.

My final stops were at the local mall. I went because that's where my local RadioShack is located — on the lower level, below ground.

When I got there, all that was displayed was a lonely-looking Boston Acoustics Receptor HD. It wasn't plugged in and had no price tag.

I asked the attendant if they had any others. He looked at me with his mouth half-opened and said he didn't even know they had that one. Recognizing I would get no farther there, I backtracked to a discovery I had made entering the mall: a Sony Style store.

The gentleman there was fairly knowledgeable but when I tried the XDR-53HD, it wouldn't even show a blinking HD-R symbol. I asked if they could put an antenna on it. He said it had one attached but they couldn't even pick up HD-R with it.

He then mentioned they had a 30-day money-back return policy so if I wanted to take one home and try it, I could. He was the best person I'd encountered in all of my search. But even he couldn't demonstrate the radio to me.

The problem with getting HD Radios into the hands of consumers strikes me as not that retail people know nothing about HD Radio; it's that the few HD Radios displayed aren't able to receive an HD signal.

spots with "Hear HD Radio now at (local retailer's name and address)." Do it as a trade of sorts; the store gets the plug if you know its HD Radios work properly.

My .02

We're in a critical period. For too long, there were stations transmitting an IBOC signal alongside their analog but no HD Radios. Now the radios are in the marketplace, but they require a bit of extra effort — effort a big-box store probably can't give them.

Retailers want to move merchandise and won't stock it if it doesn't move, but with HD Radio, they may need some help. Goodness knows, radio can move merchandise.

The industry already has made huge investments in capital equipment, programming and promotion. But people won't buy it if they can't hear the differences. Let's go that extra step and make certain they know where they can hear HD Radio.

Radio World welcomes other points of view.

Moon has spent more than 30 years in radio, mostly developing and analyzing audience research; he describes himself as an even longer-term, all-around radio geek. Reach him at tsmoon@zoomtown.com.

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World Radio History



Radio World, March 12, 2008

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Greenies Stick, and Greenlee's Fish Stix

by John Bisset

John Corbin used to be in the "biz" in Fort Wayne, Ind. He read with interest the tales of Paul Sagi and pulling wire down walls filled with insulation.

He worked in both television and radio and is also a former home theater man, so he knows wires, walls and insulation.

John's recommendation? If you have a lot of wire to pull, or do it frequently, you should look into Greenlee's Fish Stix. The set consists of either three fiberglass rods, 3 feet long, that thread together, or three rods that are 4 feet long and glow in the dark.

The rods flex nicely, and the set comes with a tip for tying on a pull string or a hook for blind fishing down walls. John has used them frequently in insulated walls; with a little twisting and persuasion, they'll match any insulated wall.

You can get Fish Stix at Home Depot. The 12-foot set is around \$35, the 15-foot set is \$45. They'll probably pay for themselves in labor savings the first time you use them.

If your budget won't permit a Fish Stix investment, another way to get wires up and down a wall — if there's nothing in the wall to get in the way — is ball chain.

This is like the chain you find on a pen at the bank or post office. Combine the ball chain with a retracting pick-up magnet and you're in business.

Most Ace Hardware stores carry ball chain in several diameters, but John says the medium sizes work best. This procedure also works best where you need to put a wire through a small hole, say behind baseboards or behind a speaker. You use the ball chain down the wall and sweep the magnet through the hole to grab the chain.

MCM Electronics (www.mcmelectronics.com) sells a lot of parts for this purpose under the Labor Saving Devices brand. Enter "Labor Saving Devices" in their search window and have fun with the solutions displayed. You'll find a flex magnet that John says is excellent (if you don't flex the magnet off the end!). By the way, MCM also has single six-foot green and luminous push/pull rods for under \$30.

Using these techniques saves the GM from hollering about "all the darn holes in the wall" if you have to run wires in public areas around the station. So, not only are these techniques more efficient for you, but there's an esthetic improvement, too.

John Corbin can be reached at jwcorbin@juno.com.

★ ★ ★

Broadcast engineer Joe Stack is between contracts; while he's looking for his next assignment (contact him at williamjstack@comcast.net), he took a moment to drop off a couple of great tips for *Workbench* readers.

The first uses a small adhesive-backed mini wire clip that will attach to the side of a rack or directly onto the front of a rack panel to hold a tweaker, also known as a greenie. I've known engineers who buy these by the handful, because they always disappear. These are a "must have" both in the studio and at the transmitter site. See Fig. 1.

Having the tweaker nearby makes for quick adjustments — and if they have a resting place, they won't get lost. This also means you don't have to worry about having one on your person at each site you service.

These mini-clips are available at



Fig. 1: A clip used to secure wires keeps a 'greenie' handy



Fig. 2: This wire nut on the end of a broken antenna prevents the end from collapsing.

electronic parts stores like RadioShack. Some clips are large enough to hold both a standard greenie and an insulated tool.

Now, here's a solution to a common problem. Have you ever lost or broken off the screw-on tip from a telescoping radio antenna? The sharp barb that's left is not only dangerous, but if the end gets pushed down into the next antenna section, it's almost impossible to get it out.

Enter the wire nut cap. As seen in Fig. 2, this nut cap

See CAP, page 14 ▶



Fig. 3: Springtime in New England? With an outhouse by the tower?

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Avoiding the Audio LCD, Part 2

Radio Is Becoming the Lowest Common Denominator for Audio Service — Generally Not an Envidable Position

Last time we discussed how radio is assuming the “fast food” position among competitive services, and how that might hurt its status in the future. This time we’ll consider some other ways to keep this problem at bay.

The focus in the March 1 column was on music formats, and how difficult it is for local radio to compete with “new media services” (i.e., satellite radio and Internet-only radio streams), which are produced on a national level and often with more narrowly defined, highly targeted formats.

These formats are clearly the most vulnerable local radio services in this respect, and we looked at some ways for music stations to avoid falling to the bottom of the food chain. Consider also, however, that other formats are less susceptible to becoming bottom feeders, because they can rise above their new competition — if there even is any.

News, sports, talk — particularly of a localized variety — along with weather and traffic information (which are inherently localized), are all content types that are generally not duplicated by new media, since the latter typically are national in scope, or perhaps even purposefully “de-localized,” such that they appear to be coming from nowhere in particular.

Those spoken-word formats are therefore helpful to local radio in competing with new entrants, even if they are not featured as a station’s full-time format but just occasionally intertwined into the rotation of a format that is otherwise duplicated by new media services.

One analysis of this approach is that new media are doing to FM what FM did to AM, and perhaps that is just the way of the world for media maturation. Another way to look at this is that the

FCC’s approval of satellite radio was in part a tacit method of encouraging terrestrial radio stations to restore their localism (which had been notoriously on the wane since the commission’s earlier approval of the ownership deregulation that enabled large-scale national consolidation of station groups).

The onslaught of new competitive services is unlikely to be a temporary phenomenon. Radio was into social networking before social networking was cool.

However you look at it, a movement away from entertainment (at least of a musical form) and toward information services (including recreational content such as sports) is one solid way for local radio to stay out of the cellar in terms of perceived content value.

Know your adversary (and your ally)

Another weapon in the fight against LCD-ness for local radio — including music formats — is a continuous attempt to stay intensely locally responsive.

Here stations can fight fire with fire by using various new technologies like the Web (including wireless access), e-mail, IM and SMS to do this.

Numerous ideas have been put into practice here, many of which are newfangled updates of the old request line — such as listener voting for the next song, listeners submitting short playlists as

suggestions for sets, SMS voting yea or nay for a new release, and so on.

Other elements may leverage different interactive concepts, but in all cases they are focused on input from the local audience, and responsiveness of the station’s output to it. Of course, there’s also the ongoing need to assess emerging service platforms as possible additional delivery mechanisms for a station’s content. (RW will present a special supplement focusing on that subject shortly.)

New methods of applying these basic

concepts seem to arise almost every day, so it’s critical for stations to pay attention to what colleagues throughout the industry are doing, and determine if any of this creativity can be applied in the local shop. Signing up for industry listservs that consider these topics is a good way to probe these issues and learn even more about them.

Stations should also develop a process in which they can test these new “interactive” services on a small scale first, using just station staff as test listeners, or a small group of identified listeners from whom honest feedback can be solicited. (This is equivalent to “beta-testing” in the software environment.)

Once a new service seems viable, it can be scaled up and offered to the audience at large. This so-called “incubation” process for new services should become part of the standard fabric of daily life at the station going forward. The onslaught of new competitive services is

The Big Picture



by Skip Pizzi

unlikely to be a temporary phenomenon. Better get used to it.

Meanwhile it’s just as important to know what the new media are doing, too, and in a timely fashion. For this reason it’s a good idea for someone at each station to be a user (even a subscriber, if necessary) to each remotely competitive service that can be identified.

As good as Radio World and other publications may be at covering these issues, there’s no substitute for the experience that putting yourself in the consumer’s seat provides. Armed with this knowledge makes you far better equipped to fight in the new media trenches.

Staying relevant

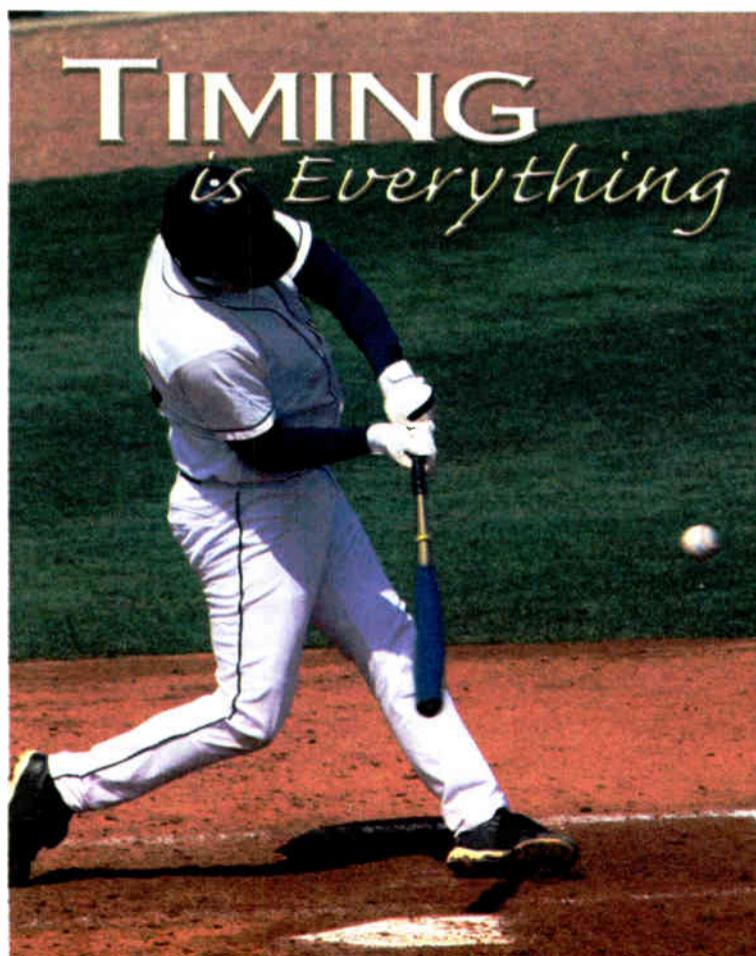
All of this is becoming part of the landscape that radio now lives within.

This should not be so intimidating, because — if I may borrow a well-overused phrase — radio was into social networking before social networking was cool.

The local audience, particularly one that shares the interest in a particular audio content type, is a classic case of social networking. It aligns two axes of interest — one geographic, and one stylistic — to create a perfect interest group that can be uniquely served by local radio.

All that’s required is the additional of an interactive path for the listeners to talk back to the station and to one other, something that’s easily and relatively inexpensively done today.

See LCD, page 18 ►



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Cap

► Continued from page 12
screwed onto the end of the telescoping antenna will not only protect you from the sharp edge but also keep the antenna from collapsing down into the next barrel.

★ ★ ★

Spring is right around the corner. As you study Fig. 3, could that be an AM tower amidst the flora? Perhaps the bigger question is who would build an out-house next to the tower?

Maybe it has something to do with improved ground conductivity.

Thanks to our anonymous roving contract engineer for sharing a site where his work is cut out for him.

John Bisset has worked as a chief engineer and contract engineer for 39 years. He is the northeast regional sales manager for Broadcast Electronics and in 2007 received the SBE’s Educator of the Year Award. Reach him at (571) 217-9386 or jbisset@bdcast.com. Faxed submissions can be sent to (603) 472-4944.

Submissions for this column are encouraged and qualify for SBE recertification credit. 🌐

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Okay, back to work now. (Consoles don't build themselves, you know.)



www.AxiaAudio.com

RadioTime: An EPG/PVR for Web Radio

by James Careless

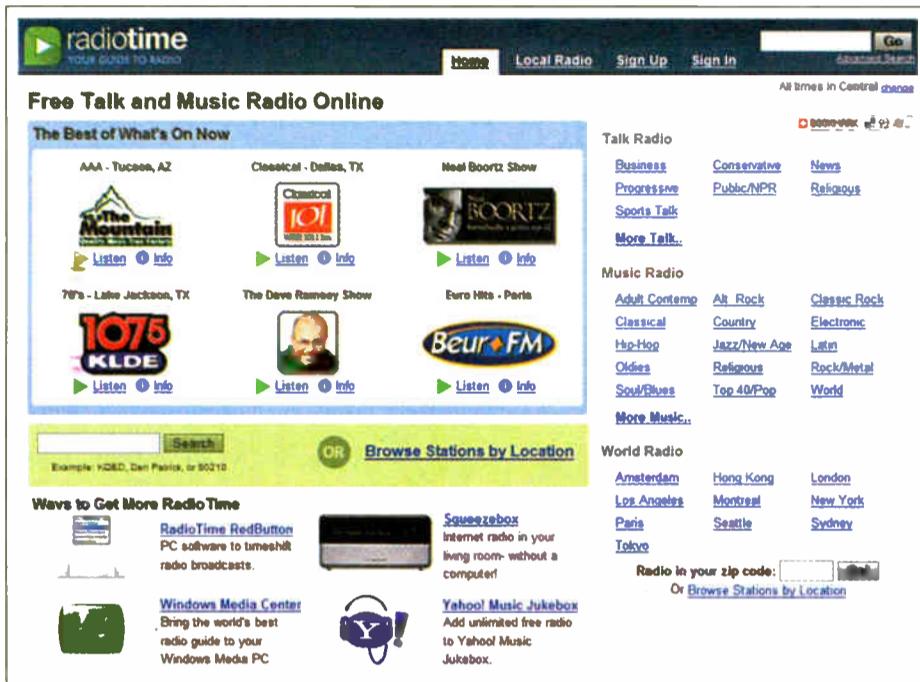
Long ago, before television roamed the earth, local newspapers printed the program schedules of radio stations. You could check the paper to see what was on which network and when, just as you do today for TV.

Most such listings perished once television grabbed hold of the American public's imaginations. But the idea still has merit, especially on the Web where conventional broadcasters find themselves up against thousands of Internet-only stations.

Then imagine if such program listings could be used to help you schedule and record your favorite shows, for later listening on your desktop PC, home entertainment system, or iPod.

This capability exists at www.RadioTime.com. Its RadioGuide is a searchable directory that lets you find programming by genre, station, network or location, drawn from 36,000 sources worldwide.

For instance, say you wanted to hear the return of Don Imus to the airwaves and didn't live close to one of his syndicated stations. Just put his name into the



RadioGuide search engine, and it will not only direct you to a radio station that streams his show, but you'll be told when it's due to come on next.

Similarly, you can select a city and instantly be presented with a list of its

radio stations and links to their audio streams. Just click on a stream, and the station comes direct to your desktop.

As for recording, RadioGuide can be used to record audio from the Web, using a downloadable feature call RedButton. That feature is free for 14 days, then you have to pay \$29 to keep it activated.

RedButton allows you to set your computer to pick up the desired stream when it occurs, and record it as MP3 files. Later on, you can play those files back on your PC, port them to your home entertainment system via WiFi or take them with you on an iPod or other MP3 player.

Early adopter

As with many products, RadioTime was inspired by someone's dissatisfaction with the way things are.

In this case, RadioTime CEO and inventor Bill Moore was tired of not being able to hear the shows he liked when he wanted to hear them, and was envious of the capability TV viewers have to find and record their favorite programs.

"I wanted to have a TiVo that would record audio from radio, like a PVR does video," says Moore.

"I also was one of those early adopters who bought a device to listen to Internet radio through my home entertainment system, and realized that the station information was scattered all over the place. So it made sense to create something that

allowed people to timeshift/record their favorite radio programs, and to be able to search easily for these shows using an electronic programming guide."

It was this yearning that motivated Moore to create RadioTime. Developing the RadioGuide was only part of the process; he also had to track down and log the thousands of streaming audio sites on the Web, a process that never ends due to the ever-changing state of the Internet.

"We monitor more than 50,000 programs, 100 networks and 800 sports teams," says Moore. "It's a big job."

Response

Will people use a "TV Guide for Web radio"?

"We're getting about 55,000 visitors a day, and over 1 million unique visitors a month," Moore said.

"Our usage mirrors the general population's radio references. There's more interest in spoken word than music. There are also some niches that are more popular through our site than on-air, such as ethnic broadcasters such as Tamil radio."

RadioTime's RadioGuide is free to all who visit the site, so how does Moore make money from radio program listings? One way is by selling the RedButton recording software. Another is by selling front-page space to radio organizations; you might see ads for The End 107.7 FM Seattle or the Nebraska Public Radio Network.

People who come to RadioTime are looking for audio content, so why not ensure that your station catches their eyes first?

RadioTime also works deals with companies that buy online ad space, and licenses its radio programming data to third parties "just like Gemstar licenses its TV Guide information," says Moore.

The service is useful for AM/FM broadcasters, he feels. "RadioTime helps make broadcast radio more competitive with other forms of media on the Web, by putting radio front and center for surfers wanting audio. As well, our RadioGuide allows stations to promote their popular shows to a global audience; again boosting potential listenership."

Over 95 percent of adults listen to radio, on average 20 hours a week, Moore said. "RadioTime helps them find what they want to listen to, and for broadcasters who use us to grab their attention, helps us to direct them to on-air broadcaster Web sites."

James Careless wrote about Radioshift software in the Feb. 13 issue.

Engineers Working Together

When WINS(AM) needed a Broadway vantage point for its coverage of a parade honoring the Giants football team after the Super Bowl, WOR(AM) helped out. "We were going live from the street in front of the building. We lent them a window, patched them



through our Axia system and everyone was happy," said Tom Ray, shown at right with WINS Chief Engineer Chris Tobin. At the front of the parade float, as seen from the Broadway perch: Michael Strahan, Tom Coughlin with the Vince Lombardi trophy and Eli Manning.

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World Radio History

FACILITY PROFILE

CC Asheville Builds Beyond the Familiar

Tucked Into the Mountains, Cluster Employs IP Audio and Other Innovative Studio Solutions

by Chris Korb

Clear Channel Asheville, N.C., operates six radio stations in the market area. Our studios and business offices were spread between two locations about two miles apart, just enough to make managing a chore for sales, programming and engineering.

GM Ken Salyer had been working to get the staff all in one place for years.

A new building finally was approved in the spring of 2005. We would build on the 61 acre grounds of our legacy AM, WWNC, adjacent to the original transmitter, studio and office building. It was to house the studios, programming and engineering offices and include the main reception area.

Of course, the most favorable location for the building was about 300 feet from the high-power ND tower, carrying 5 kW of 570 KHz.

IP Audio system

Hidden in the North Carolina mountains and mostly off the corporate radar, we could deploy engineering technology and utilize systems and software which were beyond what was generally available at the time. We would be the development mule, as it were, with our staff

willing to invest the time and effort to develop those systems fully.

As it turned out, the project was an exciting one and marvelously successful.

A broken leg (don't ask) in the summer of 2005 provided several weeks to research available digital studio systems. The Axia IP Audio system emerged as the winner. Its ability to route 32,000+ channels in a Cisco 3950, coupled with redundant hot-standby router controllers, seemed to be the direction in which the world would eventually move, and presented a good opportunity for us to get in front of the parade.

Lockett and Farley of Louisville, Ky., were chosen as the architects. Veterans of many CC projects, they provided a basic initial layout, which we refined into 8,000 square feet including 10 studios and a news production area, rack room and shop, multimedia conference room and kitchen, programming and engineering offices.

McCarroll Construction of Fletcher, N.C., was chosen as the general contractor and ground was broken on Jan 7, 2006.

RF control

To control some of the AM RF, 4-inch copper strap was brazed with bronze rod to the steel roof-support columns, then sil-

ver-soldered to strap circling the building and connected to the tower ground radials.

A strap was brought from each studio junction box to the perimeter strap, and insulated from corrosion by the concrete slab with roofing felt. The tower ground

used with each automation server and digital recorders.

Software Authority's Dan Bays, developer of the Pathfinder software router for Axia, created a software bridge from the Prophet Systems (now RCS) NexGen automation audio servers to the router. The bridge emulates the hardware audio source switch to the server through its standard control port using the server's



Operator's position in WKSF's studio.

radials, all electrical service entrance devices and the metal stud track in the outside wall were grounded every 15 feet with 4-inch strap connected to the perimeter strap.

The RF field of 20 volts per meter is reduced to about 1 volt per meter inside the building. No screening or other RF suppression methods were needed.

The technical center contains 12 racks, two of which are accessible from the hallway for access to EAS encoders, ISDN codecs and the like. A distributed UPS system is used, with 2 KW Liebert unit in each rack and individually sized units for each studio and office. AC entry is at the top of the racks, eliminating the usual dusty clutter of AC cables at the bottom.

Fifty satellite channels are used in creating the programming for our two newstalkers, WWNC (conservative) and WPEK (progressive). A few are used by the music FMs, WKSF, WQNS and WQNO. Audio from the satellite channels or other rack-room equipment is wired directly to analog or digital nodes in the rack room. Corresponding GPIO nodes accept contact closures to start breaks or play liners of IDs.

One of our bleeding-edge desires was to eliminate the hardware source switch

own comport. The routine then communicates over IP from a second NIC card to the router.

This allows NexGen to switch sources through the router rather than the usual hardware switch. This is an elegant solution, saving \$10,000 or more in equipment and cabling costs. The switching now takes place in virtual mix busses in each studio's respective mix engine.

Soundcards are eliminated with Axia's IP Audio driver software. A second NIC card in each PC or server is used to create the IP stream and to separate the Axia network completely from the automation and business LANs.

PCs running Adobe Audition are used for editing phone calls and production work in all studios. Those PCs also run a Pathfinder application which uses software buttons for emergency control room switching, emergency air chain routing, editing source switching and so forth. Gone are the hard-wired pushbuttons carved into the consoles.

Stacked events

Our treatment of the EAS system is worth mentioning.

Alerts activate an air-chain route
See ASHEVILLE, page 20 ▶

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LCD

▶ Continued from page 14

Yes, some metrics may change in the process, such as reduced TSL, but come can remain high (and even grow) if these techniques are implemented properly. (The introduction of the PPM will likely cause far more massive shifts in the enumeration and interpretation of audience ratings soon, anyway.)

This is becoming a broad industry mandate, as well, as both NAB and RAB mobilize for radio's inclusion on a variety of new platforms, particularly handheld form factors. Interestingly, this includes

both digital and analog forms of radio receivers, but with emphasis on metadata in either case.

That initiative makes good sense, as consumers move a growing number of functions from fixed devices to portable ones. Radio service already is available in the "unplugged" environment, so why not include the ability to receive it on all these new and increasingly capable devices?

Radio is a medium that has weathered many changes, but perhaps none so daunting as those it faces today. Keeping radio service both available and of high value to audiences young and old is a sound formula for continued future success.

Skip Pizzi is contributing editor of Radio World. ●

SUPPLY SIDE

BSW Enhances Offerings With Wheatstone Consoles

BSW is now a full-line Wheatstone console dealer. The company called it a "strategic alliance" and says it has begun by offering the new Evolution Series Digital Consoles. BSW also carries the Audioarts and Vorsis lines, owned by Wheatstone.

The manufacturer called BSW "the first-ever authorized distributor of our digital audio control surfaces and digital networks." RW asked BSW's Steve Kawasaki about the announcement.

RW: What was your previous relationship with Wheatstone, and what changes now?

Kawasaki: BSW has been dealers for Wheatstone's Audioarts line since ... well ... it's been so long that no one here can recall exactly what year we started. We've always had great relationship with Wheatstone, and this means we'll be working even more closely, especially on larger projects.

RW: Why is this notable for BSW?

Kawasaki: With the addition of the Wheatstone line, BSW now offers complete studio solutions for stations of all sizes. This greatly increases the scope of business BSW does with mid- and large-market stations.

RW: How did the decision come about, who made the decision to add/expand the line?

Kawasaki: This came about almost by happenstance. Apparently, our two companies had been having similar thoughts — but completely independently — for some time. BSW has been keenly interested in acquiring a digital, networkable console line for awhile now.

Unbeknownst to us, Wheatstone had been working on the new Evolution series during this same period. It offers a breakthrough combination of very sophisticated feature set, robust network technology, and competitive price — and it is astonishingly easy to install.

It seemed to dawn on us all simultaneously that joining forces would be great for both companies.

RW: What line(s) does this replace?

Kawasaki: We've represented networkable console lines in the past, but none recently. This is new growth for us.

RW: Any special training involved for your people?

Kawasaki: Every one of our sales, marketing and technical staff was required to complete the Wheatstone Evolution Series Training and is now certified by Wheatstone.

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MARKET PLACE

Dialight Has 48 V Version of LED Flashing Red Beacon

Dialight Corp. offers a 48 VDC version of the D264 series of medium-intensity LED red beacons.

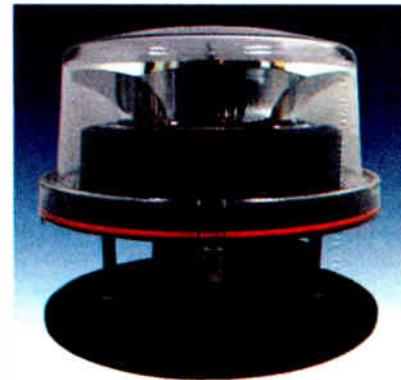
The beacons are intended for marking broadcast towers and other obstacles that could pose hazards to aircraft navigation. The beacons had been available only in 120/240 VAC fixtures.

They are designed to replace 300 mm incandescent obstruction lighting fixtures. The beacon mounts onto standard bolt patterns. The company says it requires no additional wiring, controllers or monitors and allows simple replacement of the light engine.

Dialight says the high-flux LEDs last longer than incandescent lights, extending replacement intervals and reducing maintenance costs; and use 90 percent less energy than incandescent lights, so the beacon can be operated in flashing or steady-burning mode.

Highlights include a cast aluminum base, stainless steel hardware and UV-resistant acrylic dome.

For more information, call the company in New Jersey at (732) 991-2837 or visit www.dialight.com.



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Asheville

► Continued from page 18

change in the router for each station rather than physically switching the audio in a relay box. The changes are configured as stacking events in the Pathfinder router and are triggered whenever the Sage receives an alert.

Audio from the Sage boxes goes directly to air for the duration of the alert. Three separate Sage boxes are used to compliment the counties covered by each of the five stations.

Configurable system logs in the Pathfinder Router allow us to track audio route changes and contact closure activations through the entire plant, which is a tremendous troubleshooting aid. Every router channel has silence and clipping threshold detection. Key channels are



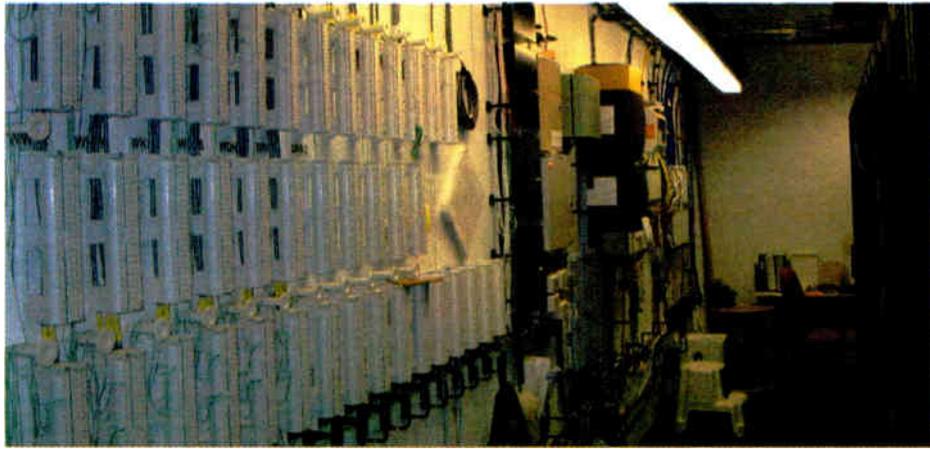
'All the wiring for 11 studios,' Karb said. 'Not much with an Axia system.'

spaces for ease of troubleshooting, cabling and staying cool. Wires and cables are held to the undersurface of the countertops with strips of Velcro, forming a backbone which holds the wires tightly to the bottom surface. It's a snap to add or replace cables and wires.

Much of the old studio equipment was reused to lessen costs, such as the Telos 1X6 studio phone systems, monitor speakers, amplifiers, microphones and so forth. Old program DAs were reworked for use as headphone amps, and computer speaker sets became cue amps.

A local Asheville provider, ISS Technologies, outfitted us with an NEC Elite IPK system that includes VoIP to allow for expansion into that realm as it is needed. Completely configurable via a Web interface, it's easy to make routine changes like moving salespeople's desks.

Surprisingly, the system cost many thousands of dollars less than the major



Tech Center Backboard. GPIO cross-connects for satellite receivers are in foreground.

configured to export a closure through a GPIO interface to a Viking K-2000 DVA security dialer. This dials the PDs or engineers and plays a specific message for each alarm.

Another desire was to eliminate the usual KVM switches and cabling.

With 43 servers and PCs in the rack room alone, cabling would just be a mess. We found a software KVM, Kavoom, which allows remote access from any PC through the network with a low-overhead application. Another

\$10,000 saved. And the engineering department can access any server or PC through the CC VPN from anywhere there is an Internet connection. Power and network connections are all that hook to each PC or server, making for an extremely un-cluttered view.

In the studios, Mager Kizziah of Mager Systems in Phoenix, Ariz., helped us design a clean and open layout for the studio furniture, with no above-counter rack turrets and only two under-counter cabinets per studio. Since the studios are



An open furniture design allows easy PC access and adds spaciousness.

on the small side, the floating countertops create the illusion of a much larger space.

The cost saving allowed us to use solid-surface counters and still remain within the budget. The open design permitted the usual PCs to be out of heat-confining

corporate phone entities. And the local ISS team is knowledgeable and happy to answer the phone.

Card access, intrusion alarm and video surveillance systems were part of the initial buildout. We added wireless infrared security cameras at each of the four tower houses after a round or two with the local vandals. All of these are accessible remotely on the business LAN.

Key to the success of our project were the excellent cooperation and support from Axia Audio, RCS/NexGen and Software Authority. All went well beyond the norm to assist us in developing our system.

Clear Channel's Regional VPE, Ben Brinitzer, allowed us the freedom to design and develop the systems we needed to implement the project, which was done within budget. Jim Hibbard and local engineers Mike Dwinell and Bill Boyd helped complete the wiring and configuration. Mitch Ensley, Ken Ray and Jason Reed of our engineering and IT staff put in long hours to complete the project.

When we began, we hoped to provide CC Asheville with a versatile and reliable studio system, maybe a bit more. It turned out that we achieved much more than that, and moved CC Asheville to the head of the line in innovative studio system design.

Chris Karb is the Electron Shepherd for Clear Channel Radio's Asheville, N.C. cluster. Also sometime Keeper of the Ones and Zeroes, he can be reached at (828) 257-2700.

PEOPLE NEWS

ABC Radio Networks promoted industry veterans **Christine Ianuzzi** to senior vice president, broadcasting technology, engineering and operations; **Ken Mayer** to senior vice president, finance and strategic development; and **Omar Thompson** to senior vice president, marketing and communications.



Christine Ianuzzi

Ianuzzi joined ABC Radio Networks in 2000 as vice president, broadcasting technology, engineering and operations after coming from ABC Television, where she began her career in 1987. She leads the engineering and operating areas in New York, Dallas, Chicago and Los Angeles. Ianuzzi sets the technical standards and strategies for ABC Radio Networks and initiates planning for technical systems and infrastructure. She also is accountable for radio content distribution to 4,400 affiliates.

Mayer has been with ABC Radio Networks since 1997 when he joined as director of finance. Thompson joined ABC Radio Networks in 2005 as VP, marketing and communications.

Chapter 28 of the SBE awarded its Wulliman Award to **Chris Tarr**, director of engineering for Entercom radio stations in Milwaukee and Madison. The Wulliman Award is presented to a member of the Milwaukee chapter who has contributed exceptional service to the chapter and the broadcasting community of southeastern Wisconsin.



Chris Tarr

SBE officials said he earned it by becoming a primary host for chapter meetings, making chapter technical presentations and creating and helping to run a Web site that helps engineers exchange ideas. Tarr also is now on the SBE national board. The award is named for retired engineer James Wulliman.

Longtime ABC News Radio Editor **John "Woody" Witmer** passed away at the age of 74. He had been with ABC News for nearly five decades.

Jones Radio Networks promoted **Eric Wiler** to vice president of technology. Wiler, in his second stint with JRN, came to the company in the early 1990s as a part-time engineer, eventually working his way to director of engineering. He left in 1998 to work for Clear Channel's Premiere Radio Networks, but returned in 2001 to supervise the launch of JRN's Starguide platform and manage projects including the conversion of the JDAS receiver platform. Wiler directs the efforts of technical departments within JRN, including Broadcast Engineering, Distribution Services and Information Technology.

Glenn W. Ferguson, who served as the third president of the merged RFE/RL Inc. from 1978 to 1982, passed away on Dec. 20. A former ambassador to Kenya who also had served as the first director of Volunteers in Service to America (VISTA), Ferguson headed three universities before succeeding Sig Mickelson as head of RFE/RL Inc. After leaving the "Radios," he served as president of the Lincoln Center for the Performing Arts in New York, and as president of the American University of Paris.



John "Woody" Witmer

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Making Sense of Metadata

Managers Must Find Ways to Deliver High-Quality PAD While Limiting Cost

by Daniel Mansergh

One of the most compelling features of digital radio systems is the ability to complement audio programming with real-time delivery of text and other information on a receiver display.

This programmatic metadata, generally known as Program Associated Data, can range from basic song title and artist information to news headlines, detailed background information and even album art or other images, if the receiver display supports it.

That's the promise. Realizing the full potential of this capability, however, will require a rethinking of broadcasters' role as information providers.

Not just audio

Until now, radio has essentially been an audio-only medium. Aside from some limited experimentation with RBDS and Internet streaming, most radio broadcasters in the United States haven't had much experience in managing data for end-user distribution.

With the advent of satellite radio, iTunes and other digital audio services, however, users have come to expect metadata as an integral part of the listening experience. Receiver manufacturers have responded by incorporating enhanced data display capabilities into many of their home and automotive products.

As this trend continues, radio broadcasts that lack data services will be perceived less favorably by users choosing between audio programming on display-centric devices.

The challenge for radio in this competitive environment is to find ways to deliv-

er high-quality PAD alongside one or more audio channels, while keeping costs low by integrating data management tasks within existing production and distribution workflows.



Refine your source data to resolve or alleviate problems caused by the constraints of receiver displays. 'Symphony in Bb' may need to be changed to 'Symphony in B-flat' to ensure that listeners do not see 'SYMPHONY IN BB.'

For the chief engineer or operations manager charged with implementing his or her station's PAD strategy, the simple goal of getting text onto a display can seem both simple and complex at the same time. A few fundamental principles will help to guide this process.

1. Do the Best With What You Have

Pick the low-hanging fruit first. Most music stations on the air with HD Radio PAD have figured out quick and inexpensive ways to tap into their automation

systems to forward current song title and artist information.

They accomplish this either through RDS/RBDS features included in the systems, add-on data management packages, custom data utilities, or by piggybacking onto data services designed to forward information to their station Web site.

News and talk stations have used the

It's wise to review your data source for any obvious misspellings, errors or missing fields in the metadata before you begin to broadcast PAD.

2. Focus on the User Experience

Once you have a basic data service running, assemble a sampling of several common HD and RBDS-capable receivers from different manufacturers to monitor the results from a listener's point of view.

Over the course of a few days, you should be able to identify patterns of any discrepancies or unexpected display behavior across the various models.

At this point, you'll have to refine your source data to resolve or alleviate any problems caused by the constraints of current receiver displays. For example, "Symphony in Bb" may need to be changed to "Symphony in B-flat" to ensure that listeners do not see "SYMPHONY IN BB" on receivers that can only display uppercase letters.

Balancing the requirements of PAD display with the needs of system users in the station can be tricky, however. Artist or song title fields may have been formatted to speed searches for specific cuts in alphabetical lists, so you may not be able to change "Beatles, The" even though it's not ideal on a receiver display.

If your system allows you the flexibility, you could resolve this conflict by adding or repurposing additional data fields for each title to use for display-only artist or title information and export those fields for PAD use, leaving your primary fields unchanged for station users.

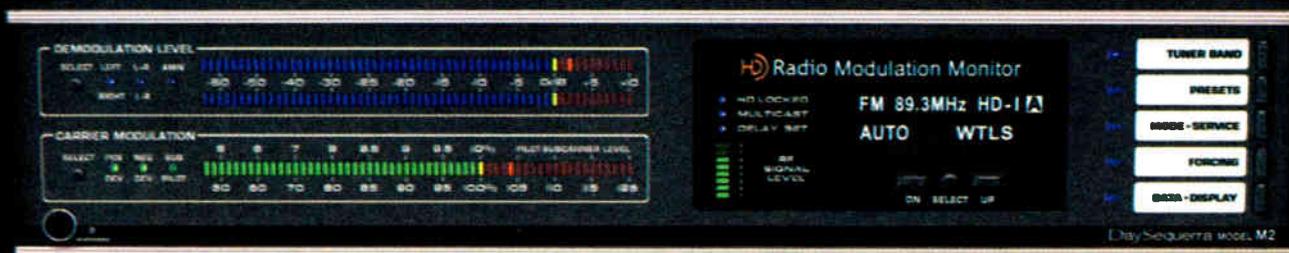
3. Build From the Basics

Once you've successfully launched a working data service, it's time to review your data requirements and begin to build out the capabilities to deliver consistent PAD across your program schedule and to support the metadata requirements of other forms of digital media.

As you determine what data you'd like to display during morning shows, talk

See METADATA, page 25 ▶

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Radio World's HD Radio™ Scoreboard

The HD Radio Scoreboard is compiled by Radio World using information supplied by iBiquity Digital Corp., the HD Digital Radio Alliance, BIA Financial Network and other sources. Data reflect best information as of mid-February. This page is sponsored by Broadcast Electronics. HD Radio is a trademark of iBiquity Digital Corp.

HD Radio in Indianapolis

Station	Frequency	Class	Format	Licensee	HD Radio	Multicasting
WSYW	810	D	Spanish AC	Continental Bcst Grp		
WXLW	950	D	Sports	Raven Bcstg Inc		
WFNI	1070	B	Sports	Emmis Communications	Yes	
WNDE	1260	B	Sports	Clear Channel	Yes	
WTLC	1310	B	Black Gospl	Radio One Inc	Yes	
WXNT	1430	B	News/Talk	Entercom		
WBRI	1500	D	Chrst/Talk	Wilkins Comm Network		
WSVX	1520	B	AC	3 Towers Bcstg Co		
WMYJ	1540	D	Gospel	Mid-Amer Radio Grp		
WNTR	1590	B	Mexican	Davidson Media Group		
WJCF	88.1	A	ChrsContemp	IN Community Radio		
WICR	88.7	B	Clsc/Jazz	U of Indianapolis	Yes	Yes
WJEL	89.3	A	Variety	Met Sch Dist, Wash		
WFCI	89.5	A	Alternative	Franklin College		
WRGF	89.7	A	New Rock	Greenfield Cent Sch		
WFYI	90.1	B	Nws/Tlk/Clc	Metro IN Public Bctg	Yes	Yes
WBDG	90.9	A	Variety	Met Sch Dist, Wayne		
WCJL	90.9	B1	Religion	CSN International		
WIRE	91.1	A	AC	Hoosier Bcstg Corp		
WEDM	91.1	A	Variety	Met Sch Dist, Warren		
WHJE	91.3	A	Alternative	Carmel/Clay School		
WJCY	91.5	A	Religion	CSN International		
WRFT	91.5	A	Variety	Franklin Twsp Sch		
WTTS	92.3	B	Varty/Rock	Sarkes Tarzian Inc		
WIBC	93.1	B	News/Talk	Emmis Communications	Yes	
WWFT	93.9	A	Soft AC	Cumulus Media Prtnrs	Yes	Yes
WFBQ	94.7	B	AOR	Clear Channel	Yes	Yes
WFMS	95.5	B	Country	Cumulus Media Prtnrs	Yes	Yes
WFDM	95.9	A	Talk	Pilgrim Comm LLC		
WHHH	96.3	A	Urban/HpHop	Radio One Inc	Yes	
WLHK	97.1	B	Country	Emmis Communications	Yes	Yes
WRDZ	98.3	A	Top 40	ABC/Disney	Yes	
WZPL	99.5	B	CHR	Entercom	Yes	Yes
WYGB	100.3	A	Country	Reising Radio Ptrs		
WNOU	100.9	A	CHR	Radio One Inc	Yes	Yes
WKLK	101.9	A	Clsc Hits	Oasis, Russell	Yes	Yes
WCBK	102.3	A	Country	Mid-Amer Radio Grp		
WRZX	103.3	B	Alternative	Clear Channel	Yes	Yes
WJJK	104.5	B	Clsc Hits	Cumulus Media Prtnrs	Yes	
WYXB	105.7	B	Soft AC	Emmis Communications		
WTLC	106.7	A	Urban/AC	Radio One Inc	Yes	Yes
WEDJ	107.1	A	Spn/Nws/Mex	Continental Bcst Grp		
WNTR	107.9	B	Adult Hits	Entercom	Yes	Yes

Source: Data above is from BIA Financial Network's data service MEDIA Access Pro™ and also includes iBiquity information. Visit www.bia.com

HD Radio at Emmis

Total stations: 23



Legend:
■ Licensed by iBiquity and on the air
■ Licensed by iBiquity and not on the air

The HD Radio Bottom Line

Total Licensed

On the Air

FMs Multicasting

2,090

1,615

827

Last Month: 2,074

1,584

809

Last Year: 1,685

1,183

519

PRODUCT REVIEW

Dual's HD-R Tuner Packs a Punch

HD-R Functionality Integrated Into CD Head Units

by Amanda Alexander

For the past couple of years, I have had a Kenwood KDC-MP428 with KTC-HR100MC HD Radio tuner, which pulls in the multicast signals in my 2006 Ford Escape. That radio served its purpose, allowing me to listen to our Denver market HD Radio stations.

When I read online that Dual Electronics was coming out with an aftermarket automobile radio with integral HD Radio tuner for just \$129, I jumped at the

chance and bought one. (In the first quarter of 2008, Crutchfield Electronics lists that unit at just under \$100 after a \$30 price break.)

I received my Dual XHD6420 within a week of ordering it from Crutchfield. The vehicle-specific wiring harness and instructions provided by Crutchfield made the installation easy. I put together



the harness as the instructions indicated, pulled out the Kenwood and plugged in the Dual radio. It was a piece of cake.

This radio features a removable faceplate, a CD/WMA/MP3 player as well as an auxiliary input on the front panel for personal MP3 players, etc. There are 18

Product Capsule:

Dual XHD6420
HD Radio tuner

Thumbs Up

- ✓ Easy display menu access
- ✓ Easy install
- ✓ Easy switching access between displays/modes/bands/presets

Thumbs Down

- ✓ One item is shown when displaying title/artist/album

PRICE: \$129;
reviewer's model was \$99 after
\$30 price break from Crutchfield.

CONTACT: Available at national chain retailers and certain independent specialists. See www.dualav.com.

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Satellite Automation

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\$100/month

Xtreme-Bridge... handle up to 16 source channels with Bridge hardware

Complete System

ready to go out of the box and on the air



\$5,000

Xtreme-Complete... Dell PC, software, and Bridge switcher for a complete system

PC enabled Console

includes PC software for Live On Air



\$1,999

ARC-IDUP the console has a built in sound card with logic & a USB connection to the PC

Automation for the ARC-10

combine the ARC-10 & PC for automation



\$75/mnth

XTREME-ARC automation software for use with the ARC-console

Music Libraries

buy an Xtreme system with music ready to go



\$500 per library

Highest quality MP2 song libraries... Pop, Rock, Country, Xmas...

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Xtreme-Jingles... 300 file jingle box plays up to 3 carts at a time...

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Radio Production

a powerful free production tool for Radio



FREE !!!

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www.arrakis-systems.com/zrwx-1.html

970-461-0730

FM and 12 AM presets. I am happy with the number of presets on this particular radio, although on the FM side I have a problem filling all the presets; on AM, I can finally add all of my favorite AM stations that I previously did not have room for in the Kenwood, purchased in 2005.

Switching between preset banks is simple. Just a touch of a button will take you to FM1, FM2, FM3, AM1 and AM2.

The display on the radio is easy to read, no matter the light conditions. The PAD display will only show one thing at a time, but a single front-panel button rotates the display between time, frequency, title, album, artist etc.

Control differences

One of the biggest differences I noticed is that the controls are not as sensitive as on the Kenwood. I can switch to the different displays without any problems. If I hit a bump while trying to change the display, it doesn't go somewhere I don't want to as the Kenwood did. It will allow me to find the display I want.

I have enjoyed this radio so far. The sound quality is great (50 watts peak/channel). The radio does not require turning the volume up to 20 to get good sound. A volume level of 5 or 6 is more than sufficient.

The HD reception is great. I don't have to worry about the warmth from the engine or outside air causing the unit to overheat and make it lose its HD-R connection, as the KTC HR-100 occasionally did. Everything is easy to use. I don't have to worry about looking at the radio while I'm driving because everything is just a button away, not several menus deep.

I'm also happy with the removable faceplate; I am able to take it off when I leave my car and know that the radio will not work without it. The auxiliary input has become a very much used part of the radio because I can plug in my MP3 player and have 500 songs at my fingertips instead of having to search through my stack of CDs.

The only thing I don't like about the Dual XHD6420 is that the display only shows one thing at a time. This is some-

Radio World's HD Radio Scoreboard is published in alternating issues. Selected data is from BIA's MEDIA Access Pro™; the scoreboard also uses information supplied by sources including iBiquity Digital Corp., the HD Digital Radio Alliance and RW's own research.

BIA Financial network

MEDIA ACCESS PRO

www.bia.com

thing the Kenwood does that the Dual does not: If you select to display the title, it will scroll the title, then the artist. I like having both on the same screen instead of having to flip to the artist then back to the title to find out what I'm listening to.

I bought the radio from Crutchfield. This was a good experience because of the customer service. Every person that I spoke to from Crutchfield was helpful. They did everything in a timely manner. I never had to wait more than a minute on hold and the people were friendly.

Swapped out

I had to return the first unit because of a defective CD mechanism. I called Crutchfield and the man I spoke to was apologetic and quickly sent me another unit. I received the second unit within a week of this and it seemed to work fine.

After a while, I noticed the auxiliary input was not working properly; it would only work on the right channel. I tested my MP3 player in a different car with the same radio and it worked perfectly. I called Crutchfield again and the man was helpful as before. He sent me another radio.

Despite my few problems with the radio, I do recommend it. I know of one other person with the same unit and he has had no problems. If you want a good aftermarket radio with a built in HD Radio tuner, I suggest the Dual XHD6420 or the XHD6425 listed at just under \$150 from Crutchfield. The main difference between the two units is the XHD6425 includes a USB port as well as Bluetooth capability.

The author is an engineer for Crawford Broadcasting in Denver.

Metadata

Continued from page 22

shows, newscasts, network programs and during commercial breaks, the complexity of ingesting, managing and distributing all of the information required may seem a bit daunting.

The good news is that the raw material for a rich data service already exists. Show prep material, production notes, scripts, guest bios, promo copy and detailed broadcast schedule information from traffic or automation systems are valuable and easily accessible sources of metadata. The problem is that it's most likely spread throughout the facility, in many different formats, and with huge variation in quality.

Ideally, the tools to manage these disparate sources of information would be built into our production, scheduling and automation software, but since this hasn't been a high priority for most U.S. broadcasters, manufacturers haven't included such features into their products.

This means that to implement your requirements, you may need to link several systems together or even do some custom development in-house.

Information architecture and management are not traditionally core areas of experience for broadcast engineers, so you may want to partner with your in-house or contracted Web developers, since they are particularly skilled in deploying flexible, high-availability data management systems.

4. Become a Workflow Guru

The technical challenges of building a robust and scalable metadata system are fairly straightforward; it's the organizational and workflow changes that are required to make such systems work well that are far more difficult.

Since programmatic metadata essentially is a "new" service for broadcasters, we simply haven't built into our internal information processes the editorial, quality control and management structures that are required to ensure a consistently high-quality data service for end users.

There's no easy answer for this; changing the inertia of long-established processes takes a lot of energy, and it's most difficult when the reason for the change is perceived as a new external requirement.

As you start to dig into your station's existing information management workflows to determine how to best capture and distribute metadata, look for ways to partner with internal users to make their jobs easier as you introduce changes.

Conclusion

For example, installing a new newsroom management system with enhanced data management capabilities as well as more powerful assignment and scheduling tools will allow editors and reporters to see tangible improvements in their day-to-day work, reducing resistance to changes in established procedures.

The process of workflow improvement is by its nature iterative. A constant loop of tests, review and refinement is required to develop systems that match

Best Practices For Data System Design

- Measure progress through frequent monitoring of data services on multiple devices
- Agree on house standards for content, style, and presentation
- Build quality control into the workflow; not just at the end
- Keep it simple for users
- Assume nothing is given; ask "Why?"
- Build in "value adds" that reward users for adopting change
- Make it scalable
- Test, retest and refine

the service requirements, resources and capabilities of your station.

Although developing and implementing a comprehensive metadata management system to support digital broadcasting and other metadata-rich distribution technologies do require a significant investment in time and commitment to change, broadcasting organizations who make the effort will be best positioned to leverage the value of their creative assets in the competitive digital media future.

Mansergh, a frequent RW contributor, is DOE of KQED Public Radio in San Francisco and a self-described "Metadata Geek." This article is based on his experience of working with metadata and solutions he's developed for KQED.



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PRODUCT EVALUATION

RemoteMix 4 Thrives in Field

A Flexible Tool, This Portable Audio Remote Mixer 'Connects All the Dots'

by Frank Beacham

After 15 years, Joe Klinger has connected all the dots with the new RemoteMix 4.

He has built a super portable audio remote mixer that combines most of his other telephone-centric devices into a powerful single unit.

First, it's a four-channel field audio mixer combined with a four-channel headphone amplifier. Then he added a phone line hybrid and keypad, a universal PBX handset interface, a wired hookup to a cell phone, and — just in case you need it — a Bluetooth cellphone adapter.

It all comes together in a single, battery-operated 3.8 pound unit a bit smaller than a lunch box (9.5 inches x 8 inches x 3 inches).

Now, I must admit it took a bit of time to wrap my brain around this remarkable device, as each product I have used individually. But the idea of wrapping them all together in a single box is a bit overwhelming.

Just as the well-written literature says, this is more than just a field audio mixer. Rather, it is a "communications interface." The parts were designed to work together and save setup time in the field.

Once you get the hang of it and understand the many ways to use the RemoteMix 4, it becomes a remarkably flexible tool.

Before we go any further, you need to understand that Joe Klinger is an important name in radio broadcasting. As the man behind JK Audio, Klinger is among the most significant figures in getting audio into and out of your telephone. Forget RadioShack and the other makers of all those cheap telephone interfaces.

When JK Audio started 15 years ago, it made a few inexpensive — yet bullet-proof — phone interfaces. Now the company, based in Sandwich, Ill., has dramatically expanded into a full-service business with a range of mixers, bridges, hybrids, interfaces, taps and amplifiers.

It is a wonderful American success story

with the RemoteMix 4 as its top product.

For radio stations, the RemoteMix 4 is ideal as the front end for live remotes. Use it as a phone line hybrid, calling into your studio talk show hybrid. Or use it as a front-end mixer for your POTS, ISDN or IP codec. Or use it with your laptop codec. It does it all.

The mixer will first attempt to connect in "hands-free" mode to a cell phone. If

before sending the signal down the line.

For television applications, the unit does IFB; but we are focused on radio here, so let's target a sports remote. It's as simple as connecting the RemoteMix 4 to a single phone line, dialing up the station on the keypad and checking the connection with the telephone headset. If everything works, you're on the air.

If there is no analog phone line, use a cell phone — either through the headphone jack or with a wireless Bluetooth connection.

The mixer also can be used with wire-



this type of connection is not available, it will connect to any other product, such as a notebook or portable that allows a Bluetooth wireless connection. This wireless headphone mode offers a full audio bandwidth stereo connection.

Mic inputs 1 and 2 come only with 48 volt phantom power switches. Inputs 3 and 4 add a 40 dB pad for a line-level balanced input. A stereo 3.5 mm line-level input is available for stereo recorders. A master output contains the sum of all four XLRs and the 3.5 mm input. Audio is at full 20 Hz to 20 kHz bandwidth.

Each of the four mono headphone jacks can be set to hear either a mix of local microphone and line inputs, or the return from the phone line, which will include a lesser amount of your local mix.

An RJ-11 phone line jack connects to a single analog line. Another jack connects to the handset jack on a PBX television. An ABC switch adjusts it for electret-, dynamic- or carbon-type element in the handset.

A soft limiter prevents overdriving the phone line interfaces, while the mixer XLR output offers full-range sound. Bass boost adds some low end to the feed

less analog (bag) telephones in conjunction with their proprietary fax/modem adapters. In this case, the fax/modem adapter should be connected to the RJ-11 phone line jack.

The mixer runs on a pair of 9 volt batteries or through a 100–240 volt desktop-style power supply (supplied). Phantom power can use a lot of electricity, so it only runs if any of the rear-panel 48 volt switches are set to "on" position. Low-noise, low-power ICs are used throughout to preserve battery life. Use one battery or two. Separate compartments are for hot-swapping batteries.

Battery life is hard to gauge, but Klinger estimates seven hours through a cellphone using Bluetooth wireless technology at a distance of one meter; nine

Product Capsule:

**JK Audio RemoteMix 4
Portable Audio Remote Mixer**

Thumbs Up



- ✓ Combines telephone-centric devices into one unit
- ✓ Bluetooth cellphone adapter
- ✓ 'Astounding' flexibility
- ✓ Smaller than a lunch box

Thumbs Down



- ✓ Some wireless phones generate excessive RF noise, resulting in 'chattering' or 'motor boat' sound

PRICE: \$1,395

CONTACT: JK Audio at (815) 786-2929 or visit www.jkaudio.com.

hours through the phone line hybrid, using a phantom-powered microphone; or 10 hours through the phone line hybrid using dynamic microphones.

Also, the wireless interface on the RemoteMix 4 works well with most cellular telephones. However, some wireless telephones generate excessive RF noise which can be heard as a "chattering" or "motor boat" sound. The noise from these particular telephones will be unacceptable for most broadcast applications.

Priced at \$1,395, the RemoteMix 4 is the ideal combination of components and functionality for an American remote radio broadcast. Its flexibility is astounding and it is ready for any situation you hand it.

At first its full complement of features may throw you, but everything is there for a reason. Once you get the full picture of its features, there's no turning back.

Frank Beacham also writes for RW's sister publication TV Technology.

PRODUCT GUIDE

Audio-Technica Debuts AT2020 USB



Audio-Technica introduced the AT2020 USB cardioid condenser microphone, based on its AT2020 and featuring a low-mass diaphragm.

The AT2020 USB has a USB digital output and is suitable for digitally capturing music or acoustic audio sources using recording software.

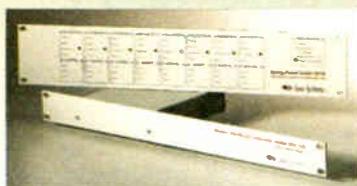
The company says the Mac- and Windows-compatible AT2020 USB offers articulation and intelligibility for field recording, podcasting and voiceover use. Low self-noise and extended frequency response make the AT2020 USB a suitable device for various digital recording setups. It has a fixed cardioid polar pattern to allow isolation of the desired sound source.

The AT2020 USB is powered from a USB bus and includes a tripod desk stand, stand mount, USB cable and soft protective carrying pouch.

The AT2020 USB retails for \$249.

For more information, visit contact Audio-Technica at (330) 686-2600 or visit www.audio-technica.com.

Product Showcase



Model RFC-1/B Remote Facilities Controller

- control transmitter from any telephone
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World Radio History

PRODUCT EVALUATION

iKey Plus Useful, Though Not Ideal

Handheld Recorder Uses USB Drives, Records WAV, MP3, Though 'Arm' Time Is a Limitation

by Paul Kaminski

If you travel with an iPod and you make recordings in the field, GCI Technologies has developed a tool that will help you put that iPod to work: the iKey Plus audio recorder.

It records to a USB flash drive as its native format; that means you do not need any card readers to start processing audio. The iKey Plus, if you haven't guessed, also will record to either a Windows-driven or Apple iPod for even more storage. It is a record-only unit.

The iKey Plus records in stereo, which means for deadline news work you'll either convert the track to mono, or split the track and use one channel when you open the file in your audio editing program. Of course, if you are making a stereo recording, skip this step. Select a recording format between WAV (16 bit, 44.1 kHz sampling rate) and MP3 files at sample rates from 128 to 320 kbps. If you use Windows, the size of the WAV file your computer can process is limited to 2 GB. A WAV file takes up to 10 MB per minute in stereo.

The device needs four alkaline batteries; it will recharge NiMH batteries when you power the unit with the supplied AC-DC power transformer. Access the battery compartment by undoing four thumbscrews.

Published specifications indicate approximately a four-hour battery life with alkaline batteries. The device ships with black, red and silver metal plates;

we opted to use the silver-colored plate.

Arming the recorder takes some getting used to. You have to press the record button, wait for the LEDs to flash and then the recorder will roll, and record onto a USB jump drive. A set of LEDs will indicate recording level. They are a little hard to see in the sunlight.

When you are finished recording, you hit the record button again, wait for a series of LED flashes and then you can remove the USB jump drive and insert it in your USB-equipped computer.



The operator's manual is exactly correct about what happens when you don't follow the ejection procedure for a USB drive — nothing shows up on the USB drive when you plug it in to your computer.

It's essentially plug-and-play for a Windows-driven iPod; you'll take some extra steps with an Apple-driven iPod. Set or adjust levels while recording, and use a set of headphones/ear buds to monitor the sound. The LEDs also indicate when the USB drive is full and when the batteries are getting low. Quality time with the manual will explain all combinations.

On- and off-track

We used the iKey Plus to record voice tracks when covering the NASCAR Championship Weekend in Homestead, Fla.

The little windscreens on the supplied plug-in mic were lost early in the game.

Product Capsule:

iKey Plus Location Audio Recorder

Thumbs Up

- ✓ Palm-sized
- ✓ Uses USB; no adapters/card readers needed
- ✓ Records WAV and MP3; MP3 sample rates from 128-320 kbps
- ✓ AC adapter charges AA batteries
- ✓ Operator can monitor, adjust record signal while recording
- ✓ RCA line inputs for phono and line level (-10) recording

Thumbs Down

- ✓ Microphone level too low when using outboard mics
- ✓ Supplied mic works okay, but windscreens are easy to lose
- ✓ Arming sequence slow, not intuitive; may miss audio unless pre-rolling
- ✓ File-saving sequence slow

PRICE: \$239

CONTACT: GCI Technologies Corp. at (732) 738-9003 or visit ikey-audio.com.

of a mixer, the iKey makes an effective backup recording of a line-level signal.

For instance, if the main outputs of a recording mixer are going to a laptop or other recording device, the RCA tape outs could be connected to the iKey. So if the main recording device goes down, or crashes in the middle of a live performance, the iKey can record everything that runs through the RCA outs of the mixer in stereo onto the USB stick or iPod.

It also can be connected to a turntable so analog phonograph recordings from an LP, for instance, can be digitally recorded. In the real world, those RCA "tape

The iKey Plus is palm-sized so you can hold it close to the newsmaker to record sound.

The mic is sensitive enough to discern the presence of plosives if the mic were held too close to the mouth. Any lavaliere-sized windscreen would fit the plug-in mic.

With a shotgun (Audio-Technica AT897) and an omni-directional hand mic (Shure SM63) plugged into an XLR female to 1/8th inch TRS male cord, the iKey Plus could only record at -20 level even with all the gain turned up. With the supplied stereo plug-in condenser mic, normal mic levels could be set. We tried this with two different units, and observed the same result with outboard mics.

That said, if connected with a 2 GB USB drive, and to an RCA line level output on RCA-style phono plugs, a reporter can leave the iKey connected to a line-level output from a mult box (a news conference, for example) and record that audio, while chasing a newsmaker in another location. If your machines must perform more than one task, that may limit your flexibility.

If a reporter or operation needs record and playback function in all of its field audio recorders, then the iKey will fill the record half of that requirement in real time. The playback is delayed by the time necessary to take the USB drive from the iKey and mount it to a computer.

Plugged into the RCA tape out jacks

out" or similar outputs are usually available if you check with the sound technician before the event.

The iKey Plus is palm-sized so you can use it in an impromptu media availability, holding it close to the newsmaker to record sound. If you do use it that way, you might want to invest in another supplied condenser mic for the iKey Plus as a backup, in case the original gets lost.

The iKey Plus would not be my primary radio ENG recorder because of the inability to use standard professional XLR connected mics and record at nominal mic level, and the time necessary to arm the recorder. In a breaking situation, you need to be able to start to record immediately.

But the iKey will perform well as a backup recorder, with the proper RCA adapter cords to record a line-level output from either a mult box or RCA tape out jacks from a mixer. The supplied stereo electret condenser microphone is useful for voice tracks and impromptu audio if you can remember to start the recorder before you elbow your way into a gaggle of reporters crowded around a newsmaker.

Paul Kaminski, RW's "Radio Road Warrior," is news director for the Motor Sports Radio Network; he also reports for CBS News Radio. Contact him at motorsportsradio@msrpk.com.

PRODUCT GUIDE

Air 1 Suitable for On-Air, Remotes, Podcasting

Wheatstone says the compact Audioarts Air 1 radio console retains the features and interconnect system of much larger consoles, and is suitable for on-air, production, news applications, remotes and podcasting.

The Air 1's low-profile frame is 2-1/2 inches high and comes with tabletop mount with direct access TRS rear connectors.

Features include bottom-mounted programmable DIP switches, professional and consumer input gains, universal power supply, six stereo lines, two stereo program bus outputs, split cue for headphone and monitor, VU meters and two mic channels.

The Air 1 is now shipping.

For more information, visit contact Wheatstone at (252) 638-7000 or visit www.audioartsengineering.com.



PRODUCT GUIDE

TASCAM DR-1 Includes Mics, 1 GB SD Card

TASCAM debuted the DR-1 portable digital recorder, which it says captures hours of music using built-in mics to its 1 GB SD card.

A pair of microphones is mounted on a variable angle mechanism, which allows the recorder to record from



“almost anywhere,” according to TASCAM. The unit includes a 1 GB SD card for recording at MP3 or WAV file formats.

The DR-1 also includes auto gain control and analog limiting to ease setup, and a low-frequency cutoff to eliminate handling or wind noise.

Additional features include a stereo condenser microphone, 48 or 44.1 kHz/24 bit recording resolution; switchable low cut filter; rechargeable Lithium-Ion battery, USB 2.0 connection to computer; tuner and vocal cancel features; and an overdub function to record narration, singing or instruments over an existing record

The DR-1 retails for \$299.

For more information, contact TASCAM at (323) 726-0303 or visit www.tascam.com.

Timer Panel Lets Board Ops Access Timekeeping Suite

Axia Audio will soon release an addition to its line of studio accessories for the Element broadcast console: the Element Touchscreen Timer Panel.

Board operators and hosts using Element consoles have access to a timekeeping suite using console-mounted controls. The Element Touchscreen Timer Panel gives studio guests, producers and show hosts access to these functions as well via touch-sensitive interface.

Features include digital and analog time-of-day clocks, configurable for 12- or 24-hour display; an elapsed-time counter with freeze and pause functions; an adjustable event countdown timer; the ability to be slaved to the console timer, act as timer master or operate independently; expansion ports that host up to five more Element studio accessories; a Web server for easy configuration; the option to be desk- or turret-mounted (using an accessory mounting frame).

Other studio accessories for the Element include a range of programmable SmartSwitch Studio Accessory Panels with backlit LCD displays; and various headphone selector and mic control panels for talent and producers.

For more information, contact Axia Audio at (216) 241-7225 or visit www.axiaaudio.com.

Omnia One FM, 8X Now Shipping

Omnia Audio is shipping two processors for multicast broadcasting: Omnia One FM and Omnia.8X.

The company says the Omnia One FM enables stations in any size market to attain “major-market sound.”

Omnia One FM features the same processing topology from the original Omnia FM, and includes a wideband AGC/leveler, four-band AGC and a separate four-band limiter section with precision crossover.

The unit also includes Omnia’s pre-emphasized final limiter/clipper.

The wideband AGC enables smooth, “hand on the pot” gain riding; the four-band AGC adds consistency and builds density before the limiter stages; and the four-band peak limiter uses feedback limiters for the lower two bands (optimized for bass punch and lower midrange warmth) and feed-forward limiters for the upper two bands (optimized for sparkling upper mids and highs).



Omnia.8X

Additional highlights include a selectable phase rotator; and integrated digital stereo generator with advanced peak control, two composite MPX outputs, SCA input and 19 kHz output.

The Omnia One FM retails for \$2,995.

The company also is shipping the Omnia.8X, which simultaneously processes eight stereo audio channels. Audio I/O enters and exits on a Livewire Ethernet port, ready to connect to an Axia IP-Audio network. Users without an Axia network can pair Omnia.8X with an Axia Audio Node for standalone I/O on traditional XLRs.

Features include eight stereo processors in one 2 RU chassis, each with three bands of AGC.

Omnia.8X retails for \$4,995.

For more information, contact Omnia Audio at (216) 241-7225 or visit www.omniaaudio.com.

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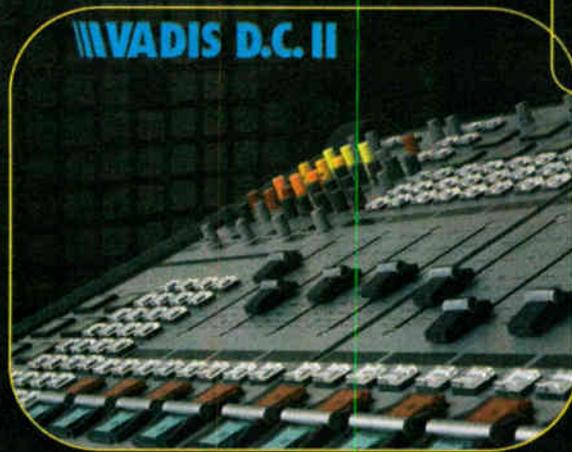
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PRODUCT GUIDE

Klotz Upgrades Aeon Digital Mixing Console

Klotz Digital added two upgrades to its digital on-air mixing console, Aeon. For integration into the studio environment and interfacing with third-party equipment, the company now offers MADI interface cards for the Aeon. The MADI cards can be configured to 56- or 64-channel mode.

The second added feature is the audio networking of Aeon via Octo-Bus. This feature provides the opportunity to link several Aeon consoles or connect the console to the Main Control Room (MCR) via Cat-5 cabling providing eight bi-directional channels per bus. Each Octo-Bus card features four bus lines; free busses can be used for Octo-Bus break-in and break-out boxes tying microphones or headphones for monitoring purposes into the system, for example.

For more information, contact Klotz Digital at (678) 966-9900 or visit www.klotzdigital.com.



SPC2000 Suitable For Call Screening, Tx Remote Interface

RAM says its Model SPC2000 computer is an ultra-quiet design suitable for numerous broadcast uses.

It features a mini 1U rack-mountable chassis; front-panel CD/DVD drive; and front-panel flash drive. There also are two USB ports on the front and rear panels.

Additionally, the front has LEDs for power, hard drive activity, network activity and system overheat.

The SPC2000 also features ACPI/APM power management; power-on mode con-



trol for AC power loss recovery; external modem remote ring-on; CPU/chassis temperature monitoring; and DMI support.

Broadcast applications include on-air call screener PC; Internet streaming encoder; transmitter remote control interface; studio Internet access; network server interface; automation system interface; and production software administrator.

Additional highlights include 1 GB RAM, Intel Core 2 Duo 1.8 GHz processor; Seagate 80 GB 7200 rpm hard drive; Intel Gigabit Ethernet; and a three-year system warranty.

For more information, contact RAM Broadcast Systems at (800) 779-7575 or visit www.ramsyscom.com.

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Auralex Among VocalBooth.com Upgrades

VocalBooth.com says it has added upgrade options to its line of custom booths.

They include Auralex acoustic foam



available in 10 colors, hardwood floors with sound dampening sub-floors, fabric-wrapped acoustic foam wall sound absorbers and quiet ventilation systems. Other customizations include interior and exterior colors, foams, fabrics, windows, floors and industrial casters.

The company also is offering products like amplifier enclosures in four sizes, and turnkey packages that include recording interfaces, microphones, monitors, ceiling mount booms, headphones and cabling.

VocalBooth.com rooms are enclosed systems with active ventilation, lighting, cable passage and optional windows. Standard sizes range from 4 feet by 4 feet, up to 16 feet by 16 feet.

For more information, visit www.vocalbooth.com.



Inside

Buyer's Guide

Radio World

Audio Production & Creation

March 12, 2008

USER REPORT

M-Audio Helps Podcast 'Clean Up'

by Ronald Nutter
Help Desk Editor
Network World

KANSAS CITY, Mo. Having had a background in broadcasting for several years, I realized interviewing people for my Network World podcast, "Ron Nutter's Help Desk Tool Chest," would present new challenges I hadn't yet encountered. I am located in the Midwest, and those being interviewed may be elsewhere in the country or the world, so I invested in a phone line interface to connect between my studio mixer and the outside world.

The results I got were less than what I had expected. I was limited to talking to a single individual unless I paid even more for using conference bridge service or had everyone at one location on a potentially noisy speakerphone.

I was introduced to the **M-Audio Fast Track Pro USB Audio/MIDI interface box** while looking for better ways to get quality audio for the studio interviews. Using this device in conjunction with Skype, I now had a way to get close to studio audio quality without having to use an ISDN line or other advanced technology, or having the people being interviewed travel to my studio for the recording.

Skype's the limit

Using Skype for interviews has been easier and less costly than the teleconference solutions I have used in the past.

The Fast Track Pro interface couldn't be easier to use. I just connect it between a Mac Mini or Windows system, and my studio mixer. This allows me to introduce audio processing possibilities to clean up or enhance the audio before being handed off to the digital recorder without time-consuming post product editor/processing.

The operation of this product is as close as I have come to a plug-and-play device.

If for some reason the Skype client you use doesn't pick up on the Fast Track Pro



being connected to the computer, either restarting the Skype client or adjusting the audio properties to force the use of the M-Audio device will take care of the minimal setup that needs to be done.

An interesting side benefit is that the sounds involved in using the chat functions of the Skype client are kept out of the audio being sent to the mixer. This allows a chat window to be open between my co-host and me to handle questions during the show without having to stop the show or interrupt the guest.

Although you have the option of using an external power supply, I haven't found that I need to use one. The Mac Mini I use in studio as my digital audio workstation has been more than up to the task of serving as power supply to the Fast Track Pro and as the source of audio. This helps keep cable clutter to a minimum.

If you run into a situation where you aren't getting enough power from the USB port the Fast Track Pro connects to,

you have the option to use an external power supply for the Fast Track Pro.

Another benefit is that this box is compact and rugged, making it easy to move as needed or take with me. This allows me to get almost studio-quality audio, and have a co-host appear on the podcast with me in one part of the country and the guest being interviewed being in a different state or country.

What minimal cabling you need between the computer running the Skype client and the mixer is easy to recreate without having to create a detailed document that has to be followed precisely in order for things to work.

gear could not be easier. I run the USB cable from the M-Audio device to the Mac Mini that serves as my interface to Skype. I connect the Mic 1 connector on the front, to one of the Aux Send connectors on my mixer. I take TRS Output 1 to the one of the line in connections on the mixer. Both connections running from the M-Audio to my mixer are done using short balanced cables. Leave the gain turned up on the M-Audio all the way.

Phantom menace

If you are using a condenser mic that requires phantom power, make sure you have the phantom power turned off on the M-Audio. If you have it on, you will get voltage feedback between the M-Audio and your mixer that will sound like a motorboat engine running at slow idle. Remember to turn off the Aux Send feeds on the input channel to which you connect the M-Audio to prevent feedback. Once you have things set up, you can drive the audio levels and audio processing from your mixer.

When using an alternative audio

This box is compact and rugged, making it easy to move as needed or take with me.

One of the guests I interviewed for my podcast is using the Fast Track Pro and a Heil PR 40 studio mic for the podcast he does, and for doing guest segments on podcasts such as mine. You have the option of using a condenser mic, as the Pro can supply power to the microphone, or using a mic such as the Heil PR 40 or PR 20, which do not have that requirement.

Connecting the M-Audio to my studio

source such as Skype, you will run into various issues depending on the sound card present in the computer you are using. We know that not all sound cards are created equal. While you can try different audio cards, disabling the onboard sound card may be easier said than done; and do you really have the time to spend trying different cards, tweaking drivers

See FAST TRACK, page 33 ▶

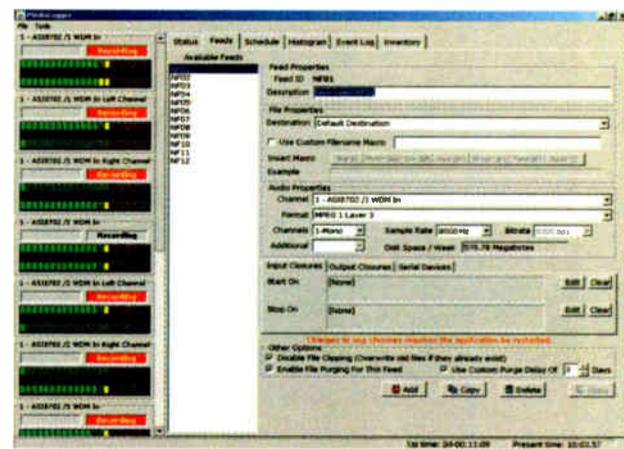


iMediaLogger

Radio's #1 Digital Logger is about to get even more versatile

iMediaLogger Version 3 is coming soon with more features and a companion Linux based archive publishing product called WebSecure +

Available in 1, 2, 4, 8 and 12 record channels, any channel is user defined capable of simultaneous logging, Best of Show recording, mic skimming and podcasting. Also versatile for archiving, competition monitoring, network show recording and Audio On Demand functions.



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TECH UPDATE

VoxPro 4.1 Adds Podcast Wizard

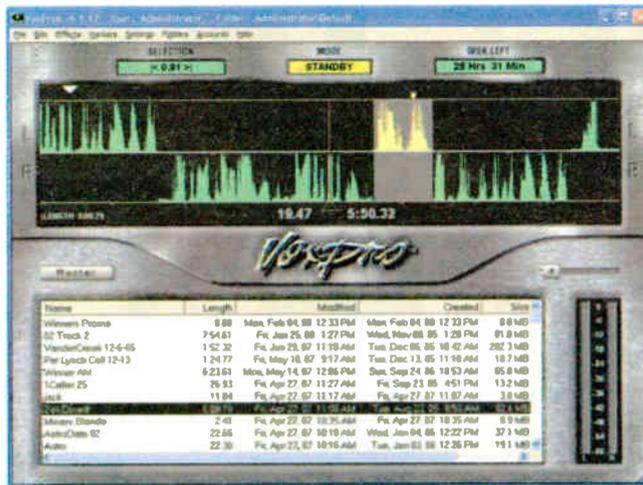
Audion Labs added a publication wizard to VoxPro 4.1 that allows users to podcast recordings.

The wizard can be used to generate RSS files, compress audio to MP3 format and upload files to a Web site.

Additionally, a new search function has been added (in the main File menu), allowing file names to be searched for particular combinations. A search run by a normal user searches through folders to which that user has access. A search run by the administrator searches through each folder in each account.

Users may now record two-channel input into a mono mix, producing a "two-track mono" file (a recording with identical data on both channels). This setting is available in the user's Settings menu. To guarantee no clipping, the volume of each channel is decreased by 6 dB before the two signals are mixed.

A headroom slider has been added above the VU meters. This slider functions as a "vertical zoom," allowing low-level signals to be seen and edited. Moving the slider changes the scale on the VU meters as well.



The top of the scale corresponds to the value on the slider knob itself (the amount of headroom), while the 0 dB point on the scale corresponds to the top of the range of the waveform window. It is possible to add ID3 tags to files that are being exported in MP3 format. A noise reduction effect has been added, which the company says is effective in removing hum and hiss from recordings.

The waveform display now displays peak values rather than average values. Because of this, the administrator's Headroom setting has been removed and the vertical scale of the display is now always full-scale; there is no extra room above the top border of the display for each channel.

Thus, the waveform display now matches the levels shown in the VU meter (actually a Peak Program Meter), is consistent with the display in Zoomed mode, and conforms with standard practice in other popular audio editing applications.

The interface to the Automatic Gain Control (AGC) has been revised, and the AGC algorithm itself has been significantly improved, says Audion Labs. A peak level setting has been added.

The Markers window no longer opens automatically whenever a file containing markers is opened. The Markers window opens when the user adds a marker, clicks on a marker in the timeline or explicitly opens it from the main Marker menu.

To conform with common Windows practice, users now have the option of overwriting duplicate files during import, export and copy operations.

The VU meters are now always live, and display signal input when in Standby mode.

For technical and legal reasons, the CD Ripping function has been removed from VoxPro.

VoxPro 4.1 retails for \$999.

For more information, including pricing, contact Audion Labs at (206) 842-5202 or visit www.audionlabs.com.

While he's anxious to learn more about HD, right now he's focused on radio's interactive possibilities. He has plenty of questions regarding streaming, staffing a Web department—and the impact on his bottom line.

At his station, it's all about the HD transition and the associated benefits, including sound quality, netcasting, tagging, scrolling text and no multi-path distortion. He's ready to put the pops, hisses and fades behind him.

On the hunt for creative content that will help elevate his station's revenue using on air, online and mobile strategies.

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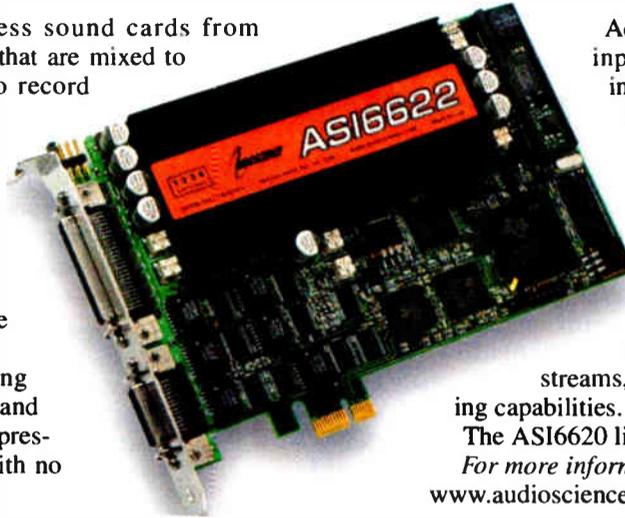
TECH UPDATE

ASI6622/20 Offer Multiple Play, Record Streams

The ASI6622 and ASI6620 multi-stream PCI-Express sound cards from AudioScience provide four or six mono/stereo play streams that are mixed to two balanced stereo outputs, and two or four mono/stereo record streams fed from two balanced stereo inputs, and feature the company's "anything to anywhere" mixing and routing.

The ASI6622 provides both balanced analog and AES/EBU inputs and outputs. The ASI6620 has analog I/O only. The maximum analog input and output level is +24 dBu. A choice of uncompressed PCM, MPEG Layer II and MP3 is available for both recording and playback. Compression is handled by a floating point DSP, allowing the host computer to focus on other tasks.

DSP-based functionality includes MRX multi-rate mixing technology, which allows streams of different sample rates and formats to be mixed digitally. TSX time scaling allows compression/expansion of any or all playback streams in real time with no change in pitch.



Additional highlights of the ASI6622 include AES/EBU inputs and outputs with sample rate converters on all inputs (only); dedicated AES/EBU and Word clock Sync input (ASI6622 only); SoundGuard transient voltage suppression on all I/O; short-length PCI card format; and up to four cards in one system. Windows 2000/XP/Server 2003 /Vista and Linux software drivers are available.

The ASI6622/20 supports two adapter modes. The 4-Play mode supports four play streams, two record streams and two out streams with full mixing capabilities. The 6-Play mode supports six play streams, four record streams and two out streams with full mixing capabilities.

ing capabilities.

The ASI6620 lists for \$995; the ASI6622 lists for \$2,495.

For more information, contact AudioScience at (302) 324-5333 or visit www.audioscience.com.

Fast Track

► Continued from page 31

and getting everything to work together? I sure don't, and that is where the M-Audio Fast Track has let me concentrate on recording the podcast instead of spending hours getting everything to work the way I need it to.

I have tried several microphones with this configuration. The first one I used was an Audio-Technica AT2020, which requires phantom power. As I upgraded the studio equipment, I moved to a Heil PR 40, which does not need phantom power. Both worked well.

Especially with condenser-type microphones, you will find that you need to leave the gain for the channel to which you are connecting the microphone turned up all the way (if you plug the microphone into the M-Audio instead of your mixer). For remote use of the M-Audio you will probably need to connect the microphone this way to avoid having to take the mixer along.

Whether using a Windows- or Mac-based machine as your Skype platform, the CD that comes with the M-Audio will get you up and running. After you get things going, I would suggest going to M-Audio's Web site to get the latest drivers for the platform you are using. Even if you don't have problems as you work with the M-Audio box, it is a good idea to check back periodically for updated drivers to help avoid problems and keep things running optimally.

I am in pre-production planning on a second podcast where use of the Fast Track Pro is being integrated into the studio setup I will need. You will be hard-pressed to find a more cost-effective or versatile device to use for live remote broadcasting.

The Fast Track Pro retails for \$249.95.

M-Audio also is shipping Fast Track Ultra, an 8x8 audio interface with MIDI that features high-speed USB 2.0 connectivity; MX Core DSP mixer; and four pre-amps with the company's Octane technology. It is suitable for mobile and desktop production. Features include six channels of analog inputs and outputs; two-channel digital S/PDIF I/O; and two dedicated inserts on the first two channels, facilitating the insertion of outboard processing before A/D conversion.

The Fast Track Ultra carries an MSRP of \$449.95.

For more information, contact M-Audio at (626) 633-9050 or visit www.m-audio.com.

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USER REPORT

KQED Upgrades Production With Dalet

Pubcaster Selects DaletPlus Radio Suite for Its 'Ubiquitous' Access to Editing and Production Tools

by Daniel Mansergh
Chief Engineer
KQED(FM) Public Radio

SAN FRANCISCO KQED(FM) Public Radio is a unique broadcasting organization, building a substantial and loyal audience of listener-supporters through a consistent focus on high-quality non-commercial local, national and international news and information programming.

The success of this strategy requires an equally unique combination of systems to support the requirements of our newsroom and editorial staff, production and recording units, multi-channel broadcast operations, remote bureaus and digital content distribution platforms.

Although a multi-year comprehensive redesign of KQED's San Francisco headquarters was just completed in 2006, the rate of technological change and a commitment to continuous improvement within the organization requires ongoing evaluation of our tools to ensure we can continue to deliver consistently high-quality programming as efficiently as possible.

As part of that effort, in early 2007 we began planning an upgrade to our core production, automation and newsroom systems to replace aging hardware, improve system redundancy and add new information management and workflow features.

Integration now

As we evaluated potential solutions,

one key requirement stood above all others: integration. In the news cycle, time to air is a critical factor and the advantages of having a single platform used by reporters, editors, production engineers, on-air announcers and news anchors are measured in seconds.

Ubiquitous access to editing tools, production resources and a searchable

air operation. Reporters record telephone interviews or pull files from flash recorders directly into the system at their desks, where they can be trimmed and made available for immediate playout in the next newscast.

Sixteen ActiveLog recorders operate behind the scenes, continuously recording program streams from the Public Radio Satellite System, ongoing productions in the control rooms and other audio sources as required to ensure that nothing is missed.



Engineer Danny Bringer cues host Dave Iverson to begin KQED's live call-in show, 'Forum,' as Dan Zoll looks on from the producer's desk.

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archive through a common application fosters collaboration, speed the editorial process and minimizes training requirements. To efficiently support digital distribution technologies that rely on rich metadata along with audio assets, side-by-side data management and audio production tools and improved workflow tracking are essential.

After looking at the available options, we decided to install Dalet's DaletPlus Radio Suite 1.4. We had made the same decision (for many of the same reasons)

InterWebPlus allows remote access to core assets in the database, and allows direct filing into the system from our bureaus throughout the state and reporters in the field. Robust workflow features tie it all together, allowing editors to track production status and make new assignments without leaving their desks.

Northern California Public Broadcasting Inc. (NCPB) (www.ncpb.com) is the most-watched public television, and most-listened-to public radio, broadcaster in the

Access to editing tools, production resources and a searchable archive through a common application speed the editorial process.

when we installed Dalet as our first automation, production and newsroom system in 2002.

The tight integration between the newsroom, production and on-air features in our existing system had served us well; and the enhanced metadata and asset management features, multi-format audio support and easily extensible database platform of the new system promise to aid our digital content strategies as we move to offer our productions to listeners worldwide through new programming distribution channels.

Seventy-five DaletPlus clients are deployed throughout the KQED Public Radio facility, allowing all staff members to use the system in their daily work, whether it is reporting, production or on-

country. NCPB owns and operates public television stations KQED 9, San Francisco; KTEH 54, San Jose; and KQET 25, Watsonville/Monterey; public radio stations KQED(FM), San Francisco and KQEI (FM), Sacramento; KQED's Education Network (EdNet); and the Interactive platforms KQED.org and KTEH.org.

Audiences and users also can access NCPB content through digital television channels KQED HD, KQED Encore, KQED World, KQED Life, KQED Kids and KQED PBS Kids Sprout; and stream or download available content on www.kqed.org.

For more information, including pricing, contact Dalet Digital Media in New York at (212) 269-6700 or visit www.dalet.com.

TECH UPDATES

Sony Acid Pro 6 Adds Record, MIDI Functions

Sony says it has updated its Acid Pro loop-based music creation and production software with several enhancements to the recording and MIDI capabilities of the program.

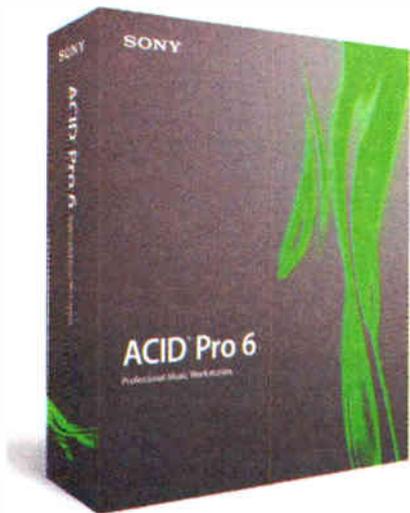
Added digital music workstation technologies include multi-track audio and MIDI recording; inline MIDI editing; MIDI filtering and processing; VSTi parameter automation; record input monitoring; and Drum Map editing.

Multi-track audio and MIDI recording let the user simultaneously record multiple tracks of audio and MIDI into the Acid timeline through various methods, including step recording, punch in/out and continuous looping.

Layout multiple media files per track, including one-shots, beat-mapped events, loops and disk-based files with added crossfade capabilities.

MIDI data can be manipulated on the Acid timeline, using either a piano roll or a drum grid interface. Edit note position, velocity, pitch bend and controller information using a visual approach in the main multi-track interface.

Acid Pro 6 provides processing of MIDI data directly on the timeline, including quantization, swing, editing of velocity values and event duration changes.



Using automation envelopes, Acid Pro 6 provides increased mixing flexibility for VST instrument parameters.

The Drum Map Editor creates custom Drum Map templates to ease working in the Drum Grid.

Acid Pro 6 also provides for the creation of project sections that let users more efficiently rearrange time-based segments of audio and MIDI events located across multiple tracks; and the multi-track workflow provides users with the ability to monitor audio signals with real-time track effect DSP during recording sessions.

Additional highlights include one-the-fly punch-in recording; enveloped automation recording; track record

meters; MIDI track envelopes for controllers; dual/multi-core processor support; MIDI file import and export; and MIDI Quantize and Velocity fillers.

"Starting with a new high-performance multi-threaded audio engine, we've reengineered Acid Pro 6 to perform faster and more efficiently, not only on dual-core and multiprocessor systems but also on single-CPU machines, providing more efficient track buffering for higher performance at lower latencies," said Sony Media Software Vice President of Marketing Dave Chaimson.

Acid Pro 6 carries an MSRP of \$399.

For more information, contact (800) 686-SONY (7669) or visit www.sony.com/mediasoftware.

Airshift Studio LT Thinks It's a Production Tool

Airshift Media says its Airshift Studio LT radio automation software doubles as a production system with many features, and provides the presenter with various tools to improve a show.

While helping the DJ in the studio by replacing the stack of CD and cart players with a single screen, Airshift Studio provides additional information about the music, allows staff to communicate through an instant messenger, receives and creates news using standard RSS format and publishes podcasts.

The company says the news browser "narrows the gap" between news production and live show; news stories also can be written while in the studio.

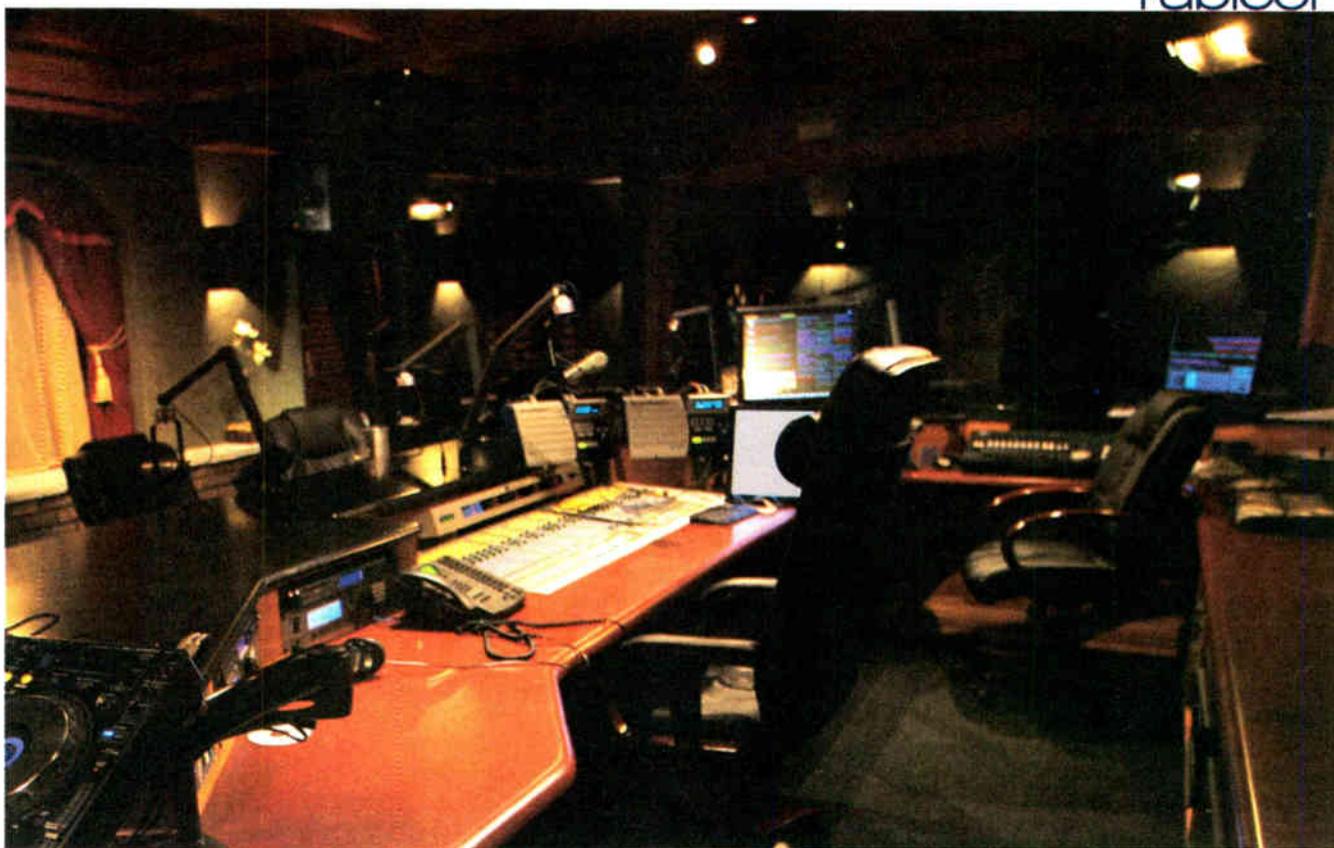
Airshift Studio can be integrated with third-party audio editors, and users can create podcasts and RSS feeds directly from the studio without additional modules. Airshift Media says its production tools make it suitable for community radio.

The software runs on Windows XP, Mac and Linux systems. The company says it is as easy to install as a CD player. Features include audio editing, text writing, a graphical voice-tracking tool, newswires and a text editor, in addition to music clock design, scheduling and copyright reporting.

The music library has support for metadata, including images for value-added services such as HD Radio. Airshift Studio also produces statistics and reporting, such as copyright reports, playlists, top 40 lists and music summaries.

Airshift Studio supports several audio formats including MP3 and linear, and supports Unicode characters. Other highlights include instant messaging, support for most audio editors, an event calendar and an SQL database.

For more information, visit www.airshift.tv.



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Pictured is our installation in the New York studios of Univision, integrated by CBC Broadcasting, Inc. Photos by George Snure, CBC.



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USER REPORT

WQXR Converts to Hard Disk With Netia

Station Stores 10,000+ CD Library, Streamlines Production Via Radio-Assist 7.5, Isilon IQ

by **Harold F. Chambers III**
Director of Operations
and Distribution
WQXR(FM)

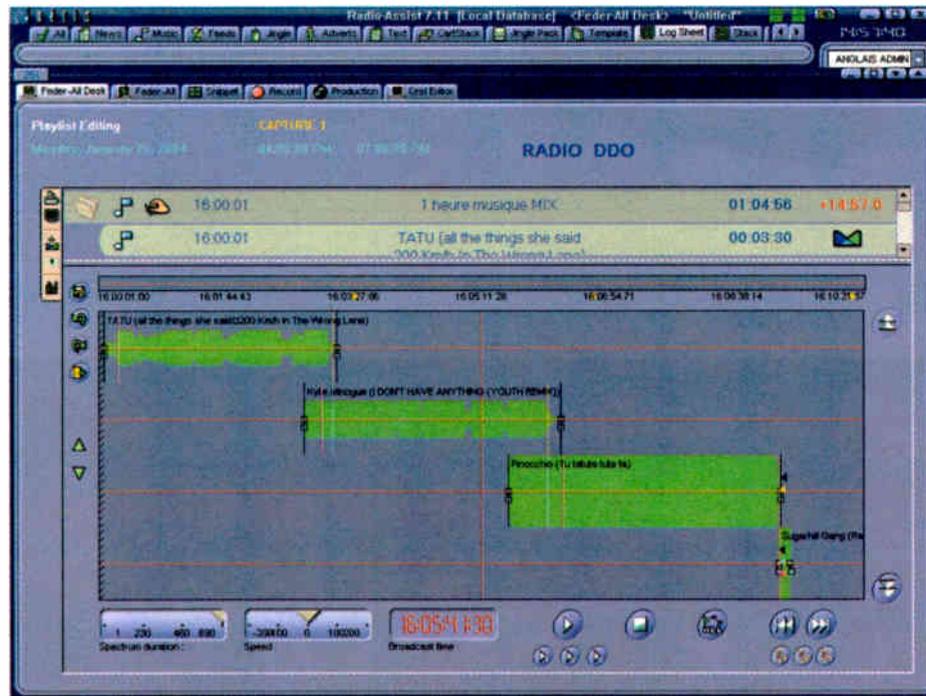
NEW YORK With nearly a million listeners tuning in each week, WQXR(FM) 96.3 has long been the most-listened-to classical station in the United States. Our station, founded in 1936, also was the country's first commercial classical music radio station; and it has been owned and operated by the New York Times Co. since 1944.

WQXR features not only classical music, but also regular news, analysis and commentary from correspondents of The New York Times. The signal, broadcast from atop the Empire State Building, reaches the five boroughs of New York City, Northern New Jersey, much of Long Island, Westchester, Rockland and Putnam Counties and Fairfield County, Conn.

In the fall of 2007, we undertook an upgrade of the WQXR facilities with the aim of enabling creation of more programming on additional outlets. We decided that the first step in performing a major studio overhaul would be the installation of a system that would allow us to convert our library of more than

10,000 CDs to a hard disk-based system. With the flexibility provided by this more efficient production environment, our staff would be better equipped to create new content for a variety of distribution platforms.

After evaluating different product options that address production and storage, we opted to implement an integrated solution comprising Netia's Radio-Assist 7.5 range of digital audio software programs and Isilon Systems' Isilon IQ clustered storage system. Together the two solutions enable secure, highly automated production and broadcast operations.



The Radio-Assist Multimix module lets users fine-tune the playlist.

ware, we use the DBShare database management module to ensure the consistency of media stored within the Isilon IQ clustered storage system.

DBShare performs systematic and synchronous redundancy checks of all the metadata produced by the system, thus safeguarding the stability of database contents. Because our databases are synchronized automatically, we enjoy transparent redundancy and the confidence that those databases will be restored automatically and reliably in the event of any incident.

The Isilon IQ storage system software further protects both file integrity and the accessibility of our media assets through a range of data security software. SnapshotIQ enables instant global snapshots of the server system, while SyncIQ supports for synchronization and replication processes. Isilon's SmartConnect Advanced software allows us to optimize the number of client connections based on Network File System (NFS) and Common Internet File System (CIFS) protocols.

Installed in conjunction with Radio-Assist, and the DBShare module in particular, Isilon IQ gives us the generous storage capacity we require, along with simple management tools and a high level of data security.

The complete transition of our production activities onto the Radio-Assist platform has significantly increased the efficiency of our operations, and it will soon allow us to provide our listeners with new services that complement our audio content.

Among the planned benefits of the integrated Netia/Isilon system will be our ability to make now-playing information available to online listeners in real time. This popular feature will link our radio offering to our Web presence and allows those who tune in at www.wqxr.com to identify classical pieces and recordings as they listen.

For more information, including pricing, contact Netia at (888) 207-2480 or visit www.netia.net.

Now installed within our Fifth Avenue facilities, Netia's Radio-Assist provides the comprehensive production environment and database management tools we require for streamlined production. Isilon's storage systems offer the density and reliability we need for storage of audio content from thousands of CDs.

Consistency is key

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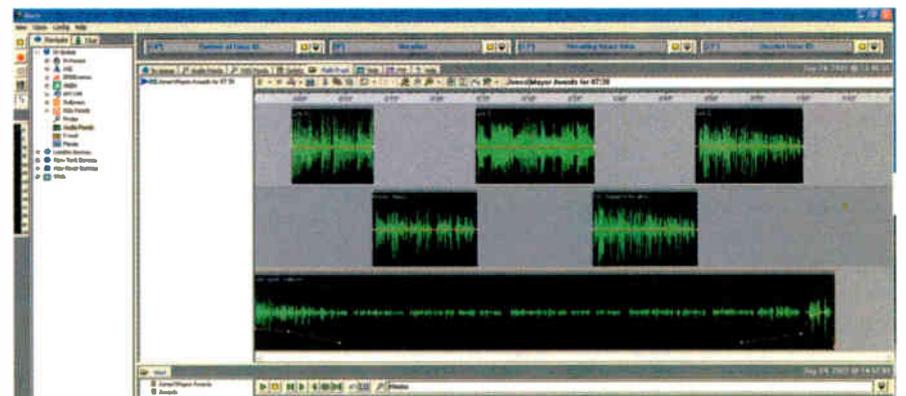
and fill out the form.*

* Signing up for the digital edition of Radio World in no way affects your subscription to the print edition.

TECH UPDATE

Burli Integrates Audio, Newsroom

Burli's newsroom production software includes a multi-track audio editor. Audio produced in the multi-track is integrated into the newsroom system. Users don't have to transfer or save their work across workstations or applications, and system administrators avoid issues related to linking other editors to the newsroom system, according to the company.



Producers can use Burli's editor to edit interviews or add intros and music when assembling current-affairs programs for broadcast. Editing tools for journalists include label clips, ad markers and fades.

Combined with Burli's Virtual Newsroom feature, laptop users can drag-and-drop clips from the newsroom, another correspondent or the station's archive, and then file the finished package into the newsroom via drag-and-drop.

For more information, contact Burli Software in British Columbia at (604) 684-3140 or visit www.burli.com.

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TECH UPDATES

TASCAM GigaStudio Offers 128 GB, Plug-In Hosting

TASCAM says its GigaStudio 4 sampling workstation supports 64 bit operating systems like XP64 and Windows Vista 64, allowing users to access up to 128 GB of RAM for loading sample libraries and compositional templates.

GigaStudio 4 also hosts VSTi and GVI virtual instruments, loading or stacking instruments alongside GigaStudio instrument libraries.

When hosted in GigaStudio 4, virtual instruments based on TASCAM's GVI gain the advantages of kernel-level processing, offering lower latency than other host applications, according to the company. Upgrades from GigaStudio 3 include an "all-new" QuickSound database tool, additions to the QuickEdit interface and user interface improvements.

Additional highlights include unlimited polyphony, 96 kHz/24 bit sample support, 128 MIDI channel playback and embedded GigaPulse convolution reverb. The iMIDI rule programming includes legato mode, round-robin, alternation, portamento and dynamic expression filters to add realism to sampled performances.



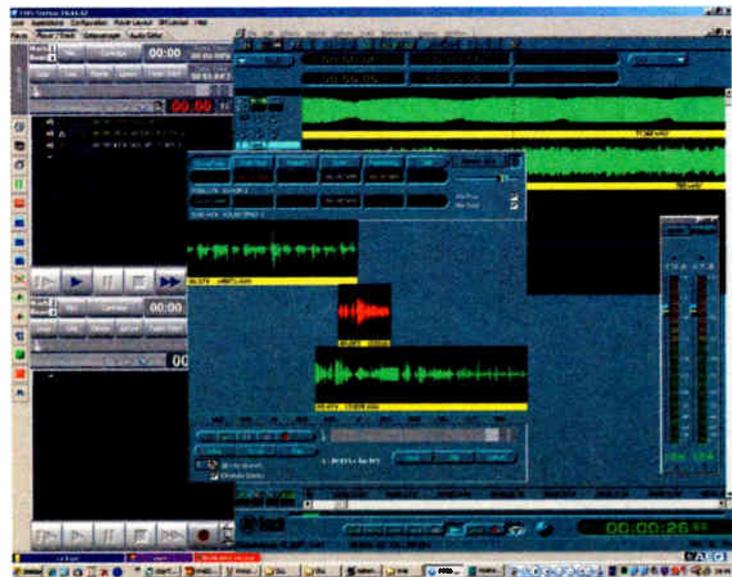
GigaStudio 4 supports Windows XP and Windows Vista (32 and 64 bit versions). TASCAM also offers GVI 4, a plug-in instrument powered by Giga technology offering both Mac and PC support.

GigaStudio 4 retails for \$599.

For more information, contact TASCAM at (323) 726-0303 or visit www.tascam.com.

AEQ Mar4Suite Adds Audio Mix Editor

The AEQ Mar4Suite Pro system offers audio production tools for broadcast, and allows integration of additional modules for added features. The company says it can accommodate more than 300 workstations in a single network.



Mar4Suite Pro Audio Mix Editor

The Mar4Suite Pro architecture was built around the Microsoft SQL Server database engine, and incorporates functions to maximize broadcast and data security, according to AEQ. Added features include an audio mix editor that lets users graphically mix sound on the playlist itself, and a multi-track editor.

Also information managers have been added to facilitate the tasks of information selection and organization, such as Remote, Favorites, References and On-the-Fly and Global searching.

The Mar4Suite Track audio mix editor also prepares introductions and, essentially, gets the program ready for live or recorded broadcast. It can manage up to 32 mono or stereo tracks of linear audio or MPEG, and also WAV format. Functions include merge, stretch, pitch shifting, reverse, noise gate, normalize and Direct-X.

Modules include Mar4S Data Manager, for the storing and organization of information within the Mar4Suite application; Mar4S Player, the software module integrated in Mar4Suite to manage playback; Mar4S Track; Mar4S News, which includes the reception and management of news from an external news agency receiver; and Mar4S Cont, the module for continuity applications.

The software runs on PCs with Microsoft operating systems and Digigram audio cards.

For more information, contact AEQ at (800) 728-0536 or visit www.aeqbroadcast.com.

Adobe Audition 3 Adds Tools to Ease Editing

Adobe Audition 3 audio production software helps stations create music and radio spots and restore imperfect recordings with editing tools. Added features include VSTi virtual instrument support with MIDI piano roll, improved spectral editing options, fast fade and crossfade controls and improved multi-core support.

The company says effects such as Analog Delay, Convolution Reverb and Tube-modeled Compressor provide new sonic options, while the Guitar Suite adds analog-modeled effects to dry guitar tracks. Radius time stretching from iZotope lets users change tempo and pitch independently.

Multi-core processor support and an optimized mixing engine are highlights. The company says Adobe Audition 3 helps users save time by allowing them to work with more tracks and effects on the same machine, according to Adobe. On-clip fade handles, a dedicated Top/Tail mode in Edit View, automatic cross fades and the ability to edit grouped clips together ease mixing and editing.

The addition of the Marquee tool to the Spectral Pan and Spectral Phase displays means users can visually isolate and edit any sound based on time, frequency or pan location.

Adobe Audition 3 retails for \$349.

For more information, contact Adobe Systems at (415) 532-0583 or visit www.adobe.com.



360 Systems' IR² Has Ethernet Networking

360 Systems says its Instant Replay² audio clip player added Ethernet networking that lets the user leverage Internet and e-mail technology for on-the-fly updates to stored sound clip libraries. IR² includes a 100 MB Ethernet port for transferring files to and from a PC.

Producers can record audio directly onto hard disk. Editing software enables head-and-tail trims, fade-ins and fade-outs

and gain changes. Fifty "hot keys" enable instant playback of sound effects from 10 banks of 50 clips; another 500 clips can be stored on the hard disk.

Users can build and store multiple playlists of audio clips in sequence, and store up to 24 hours of stereo digital audio on the internal hard drive. Audio clips can be transferred to and from a PC via point-and-click. Last-minute additions can be immediately retrieved over the Web and uploaded for live entertainment or production applications. One-touch back-ups also can be performed, providing an extra measure of protection for critical content.

Other IR² features include WAV file support; 16 and 24 bit recording formats; and balanced and unbalanced audio inputs and outputs. Production teams have more flexibility to load clips from a range of audio sources, including PC audio editing programs, CDs and digital music players, according to the company.

360 Systems also offers the Short/cut 2000 two-track editor, with editing features such as Cut, Copy, Insert, Erase, Fade in and out, Cross-fade, Level change, and several single-track operations.

For more information, including pricing, contact 360 Systems at (818) 991-0360 or visit www.360systems.com.



Digidesign Touts Pro Tools 7.4's Elastic Time Tool

Digidesign released version 7.4 of Pro Tools and Pro Tools HD software. It says the Elastic Time music composition and production tool tops the list of new features.

Elastic Time lets users change the tempo and timing of loops, music, dialog and other sound files in real time without cutting up audio tracks. Users can audition or import loops and audio files that sync with a session's tempo. Users also can use the Elastic Time feature to quantize audio to the session grid or extracted grooves, and fine-tune regions with control over each individual beat.

Pro Tools 7.4 also provides improved networking capability with Avid Utility ISIS shared storage systems. Avid Unity ISIS offers a scalable, shared storage option for large, integrated post environments. With Pro Tools HD 7.4 software on Windows XP systems, editors can record and play back audio (and video) directly from qualified Avid ISIS shared storage systems.

For more information, visit www.digidesign.com.

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TECH UPDATE

DAVID Systems Adds DigaToolbar to Audio Editors

DAVID Systems says it has developed several new applications to enhance the power of its audio editors to share content across the Internet, speed newsroom workflows and simplify access to media applications on workstations.

The DigaToolbar is a dashboard that centralizes communication and launches other applications. It can be used to set up and recall certain screen configurations, and keeps users aware of events such as story assignments, new and updated entries and reports from newswires.

DigaToolbar is a modular system with a plug-in structure that allows certain third-party systems to use the toolbar as a platform. It uses little screen space and its placement can be selected according to personal preference.

Wherever a user logs in, DigaToolbar loads individual settings from the DigaSystem registry. The DigaToolbar also has a function that displays a real-time clock on the screen as well as one that shows time in another zone.



A producer for German pubcaster Bavarian Broadcasting uses DAVID's DigaTool dashboard.

The Story Editor is a pre-production tool for combining text and audio in a single application. The company says the look and feel are similar to the Reporter Box, a component of DAVID Systems' audio editors. It consists of audio and text elements as well as commands. Features include spell and grammar check; a thesaurus; notes; clip lists; durations and other helpful features like drag-and-drop functionality between StoryEditor and news feed or DigaSystem editors.

For fast, secure transfer of media files via IP connections including firewall support and automatic resumption of aborted broadcasts, DAVID offers DigaTrans IP, which sends data as "named account" and converts files automatically if required. DigaTrans IP is being used to share content instantaneously among remote bureaus, market clusters and production houses.

For more information, including pricing, contact DAVID Systems at (888) 374-3040 or visit www.davidsystems.us.

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Rohn 18-inch faced used tower. 18 10-foot sections including one base section. \$2700 OBO Contact: Neil Lipetzky, Partner/Manager, KMOM-FM & KABD-FM, 426 N. Highway 281, #4, Aberdeen, SD 57401. PH 605/725-5551. neil@dakotabroadcasting.com

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GUEST COMMENTARY

AM Should Rely on Its True Strengths

Is IBOC an Attempt to Turn the Band Into Something It Can Never Be: A Digital Transmission Medium?

by Randall "Bear" Bradley

IBOC doesn't matter. It is no good, but it doesn't matter. It creates awful hash, but it doesn't matter.

Don't get me wrong. I love radio, I loved AM radio. I remember driving my 1961 Valiant station wagon with a Slant-6 engine on a summer trip out in the middle of the Utah desert at night on some endless two-lane road and finding nothing on the dial but WABC. I remember how the big NYC stations of the '60s, WABC, WOR and WCBS used to bomb in upstate, 125 miles north of NYC. No more; they're hard to hear today on their "new" transmitters, at their "new" transmitter sites.

Endangered species

Like it or not, radio is obsolete technology.

It is only 20 seconds into the future when Wi-Fi will be ubiquitous, everywhere that is important. When that happens, and it will happen, having 1,000 channels of mobile audio at your beck and call will be the norm.

Who will listen to or care about radio then? Why will anyone listen to or care about radio then? Ask yourselves this question now, and come up with a good answer quickly. This includes both AM and FM broadcasting.

No matter how you slice the pie, broadcast radio as it is will become a minority portion of a larger thing. The task before this industry is to at least keep AM radio from becoming extinct entirely.

IBOC is an attempt in vain to turn AM broadcast into something it is not, and can never become: a digital transmission medium. That makes it a mistake of colossal proportion.

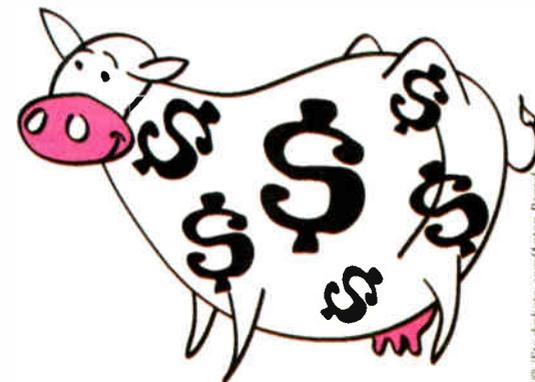
Let's be clear about this. Sure it could be switched to 100 percent IBOC transmission, right? But that is not going to eclipse or affect the oncoming of true digital programming using other technologies.

My position is that going to "digital" will in fact cause AM broadcast to become superfluous and, if nothing is to change the present path, die completely in not too long a period of time.

What is the alternative? The alternative is for the AM broadcasters who still have control over the medium to recognize that their "cash cow" is headed off a big cliff, and stop trying to ride the milking machine off the cliff with their golden calf.

AM broadcasters need to figure out exactly what makes listening to AM radio attractive to the public. In other words, re-learn the lessons of the greatest eras of AM broadcasting; find those that are unique to AM, classic, universal and that still work. Find the true strengths.

Then rebuild, develop, sell and use



The alternative to AM extinction? The author says AM broadcasters who still have control over the medium should recognize that their 'cash cow' is headed off a big cliff.

AM radio that way. That's clearly not what we have today; it's clearly not what IBOC advocates want or intend; and it is in my view an unenlightened process that will almost surely lead to the demise of AM broadcast radio in the not too distant future. It's pretty much a case of "re-arranging the deck chairs on the Titanic."

With the huge installed base of AM radios still around, there is yet a chance. A better idea is to see the future of AM broadcast as an opportunity for a renaissance of a unique artform and medium unavailable any other way.

Randall "Bear" Bradley, WB2GCR, is the founder of Bear Labs, a "micro-business that specializes in the design, building and sale of high-quality audio equipment." Visit www.bearlabs.com.

AMBER

► Continued from page 45

disappearance. Shortly after, a driver for a North Texas towing company heard the alert and recalled bringing in a car matching the alert description. Discovering the automobile in an impound lot, they found the five-month-old still asleep in the back seat.

Had the radio alert not been aired, it could have been days until law enforcement found the car. This alert prevented a tragedy as have other AMBER Alert programs nationwide, which have helped save the lives of 192 children.

The AMBER Alert program has

spread far beyond radio. Outdoor advertising, for instance, deploys digital billboards to post AMBER Alerts along highly-traveled routes across the country. Educational programs have been developed to teach law enforcement agencies and broadcasters how to create and implement programs in their community.

I have read where the Department of Justice estimates there are up to 4,600 stranger abductions per year, about 12 per day. It is clear that serving the public interest with the AMBER Alert is a good idea for radio. It is a program with national awareness but it is entirely dependent upon local implementation.

J.D. Freeman is president and market manager for Clear Channel Radio, Dallas-Fort Worth.



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GUEST COMMENTARY

AMBER Alerts Show Power of Local Radio

Their Service to the Public Is Good for Radio Too, But Success Depends Upon Local Implementation

by J.D. Freeman

Over the past 10 years, AMBER Alerts have become a highly recognized force in the recovery of missing children in America. Named after Amber Hagerman of Arlington, Texas, who was abducted and murdered in January, 1996, the alerts have now been implemented in more than 115 communities.

The program has created national awareness, but its success depends entirely upon local implementation.

To understand the effectiveness of AMBER Alerts, it is worthwhile to review some of its history. Nine-year old Amber was abducted from her suburban Arlington neighborhood while riding her bike. The kidnapping was witnessed by a man who saw Amber being yanked from her bike and thrown into the front seat of a truck.

The witness informed the police that the vehicle was a dark-colored, short-bed pickup truck. While not much of a description, if this information had been broadcast to the public it could have activated eyeballs on the road during the critical search period, perhaps leading to a happier outcome.

Statistics have shown that, when it comes to returning a child home safely, the first two hours following an abduction are the most integral. The longer it takes to recover a child, the more likely it is that the child will be harmed.

It is chilling to think in these terms, but necessary in order to protect our children.

Voice of the people

I moved to Dallas shortly after Amber Hagerman was murdered. It was apparent that the community of Arlington and the surrounding areas were experiencing a crisis within their community. The tragedy shook the emotions of everyone, and immediately following it, radio stations received phone calls and letters suggesting the broadcast community consider taking action to improve information sharing within the community in instances of abduction.

In April of 1996, a task force of members of the ARMS Radio Broadcast Association in Dallas began working on the alert program. This local radio association put aside competitive differences to address the needs of the community — a hallmark of radio broadcasters across the

country, whom I have seen assist in crises that are sometimes the result of natural disasters, sometimes man-made.

The radio task force began working with Dee Anderson from the Arlington Police Department to create a plan that would provide access to the local radio stations airwaves in the event of an abduction. Providing this access, though, initially raised some red flags on the part of broadcasters and both sides of local law enforcement.

Law enforcement needed to do its job without interference, and broadcasters wanted to do their job without compromising the alert system. Lengthy meetings were held to create the template for the plan through the balance of the year, and multiple tests were conducted by Dallas-Fort Worth broadcasters.

The primary EAS stations in the markets, WBAP and KRLD, agreed to air the messages immediately and communicate the announcement with all radio stations in the area. It was the responsibility of the other market stations to air the alerts as soon as possible.

The criteria and guidelines were developed between the police and broadcasters within the market. It was a long process but one that allowed law enforcement and broadcasters to air their con-

cerns and create a foundation that was easy to replicate.

Soon other markets became interested in creating their own system, and AMBER Alert systems became fully functional by June of 1997.

Radio works

The original guidelines listed below for activating an AMBER Alert in Dallas-Fort Worth are the foundation for the "guidance" currently in use by the U.S. Department of Justice.

1. Law enforcement must confirm that an abduction has taken place.
2. The child must be at risk of serious injury or death.
3. There must be sufficient descriptive information of the child, captor or captor's vehicle to issue an alert.
4. The child must be 17 years old or younger.

The effectiveness of radio with the alert program was demonstrated in Dallas on a cold night in the middle of winter when a woman parked her car in a no-parking fire lane and hurried into a laundromat, leaving her five-month old daughter in the back seat asleep. Returning, she found her car and baby were gone.

She called 911 and an Amber Alert was issued giving a detailed description of the vehicle, the child and the area of

See AMBER, previous page ▶

AMBER Plans
America's Missing:
Broadcast Emergency Response
 August 2007

STATE-WIDE PLANS

- AK "AMBER Plan Alert"
- AL "AMBER Plan"
- AR "Morgan Nick Alert"
- AZ "Arizona AMBER Alert"
- CA "California Child Safety AMBER Network"
- CO "AMBER Plan"
- CT "Connecticut AMBER Alert"
- DC "DC AMBER Plan"
- DE "AMBER Plan"
- FL "Florida AMBER Plan"
- Florida Emergency Missing Child Alert
- GA "Levi's CALL"
- HI "MAILE AMBER Alert"
- IA "AMBER Alert Plan"
- ID "AMBER Alert"
- IL "AMBER Alert Notification Plan"
- IN "AMBER Alert"
- KS "AMBER Plan"
- KY "Kentucky AMBER Alert System"
- LA "AMBER Plan"
- MA "AMBER Alert Plan"
- MD "AMBER Plan"
- ME "AMBER Alert Program"
- MI "AMBER Alert of Michigan"
- MN "AMBER Plan"
- MO "ALERT Missouri"
- MS "AMBER Alert"
- MT "Montana AMBER Alert"
- NC "North Carolina AMBER Alert System"
- ND "AMBER Alert Plan"
- NE "AMBER Plan"
- NH "Child Abduction Emergency Alert Plan"
- NJ "AMBER Plan"
- NM "New Mexico AMBER Alert"
- NV "Nevada AMBER Alert Child Abduction Plan"
- NY "AMBER Alert"
- OH "Ohio AMBER Plan"
- OK "Oklahoma AMBER Plan"
- OR "AMBER Plan"
- PA "Pennsylvania AMBER Plan"
- PR "Plan Alerta AMBER"
- RI "AMBER Alert"
- SC "AMBER Alert"
- SD "Child Abduction AMBER Alert"
- TN "Tennessee AMBER Alert Plan"
- TX "AMBER Alert Network"
- UT "AMBER Alert"
- VA "AMBER Alert System"
- VI "Virgin Islands' AMBER Alert Plan"
- VT "Vermont AMBER Child Abduction Alert"
- WA "Washington - AMBER Plan"
- WI "AMBER Alert"
- WV "West Virginia AMBER Alert System"
- WY "Wyoming AMBER Alert Plan"

REGIONAL PLANS

- CA Los Angeles County, CA - "California Child Safety AMBER Network"
- IL/MO Belleville; St. John, MO; St. Louis, MO - "St. Louis Area Regional A.M.B.E.R. Alert" (SARRA)
- MO Joplin - "Child Abduction Alert System (CASS)"
- MO Nodaway County plus five others - "Northwestern Missouri AMBER Plan"
- OH Crawford County plus six others - "North Central AMBER Alert Plan"
- OH Cuyahoga County plus eight others - "Northeast Ohio AMBER Alert Plan"
- OH Franklin County plus six others - "Mid-Ohio AMBER Alert Plan"
- OH/KY/IN Greater Cincinnati, Northern KY; Southeastern IN - "Cincinnati/N. Kentucky/SE Indiana Child Abduction Alert Plan (CAAP)"
- OH Montgomery County and others in Miami Valley - "Miami Valley AMBER Alert Plan"
- TN Knoxville - "East Tennessee AMBER Alert Plan"
- TX Abilene Region - "AMBER Alert Network"
- TX Amarillo Region - "AMBER Alert Plan"
- TX Austin Region - "Capital Area AMBER Plan"
- TX Brazos Valley Region - "AMBER Alert Plan"
- TX Cooke, Grayson and Fannin Counties - "Texoma Plan"
- TX Corpus Christi Region - "AMBER Alert Plan"
- TX Dallas/Fort Worth Region - "AMBER Plan"
- TX El Paso Region - "Maria Alert"
- TX Houston Region - "Houston Regional AMBER Plan"
- TX Jasper, Newton, Tyler, Orange, Jefferson and Hardin Counties - "South East Texas AMBER Alert Plan"
- TX Lubbock County - "Lubbock AMBER Alert Plan"
- TX Permian Basin Region - "AMBER Alert Plan"
- TX South Texas Region - "Houston Regional AMBER Plan"
- TX Waco Region - "AMBER Alert Plan"
- VA Accomac - "Eastern Shore Virginia AMBER Plan"
- VA Newport News - "Hampton Roads Regional AMBER Plan"
- VA Richmond - "Richmond Regional AMBER Alert Plan"
- WA King County - "AMBER Alert Plan"

LOCAL PLANS

- AL Dothan - "AMBER Alert Plan"
- AL Tuscaloosa County - "AMBER Plan"
- CA Orange County - "C.A.R.E. Alert" - Child Abduction Regional Emergency Alert
- CA San Diego - "San Diego AMBER Alert Plan"
- HI Hawaii County - "Hawaii County AMBER Alert"
- HI Honolulu - MAILE Alert - "Minor Abducted in Life-Threatening Emergency"
- HI Kauai County - "Kauai County AMBER Alert Plan"
- HI Maui County - "Maui County AMBER Alert Plan"
- IN Allen County, Fort Wayne and New Haven - "AMBER Plan"
- IN Portage - "Missing Child Alert Plan"
- KS Wichita - "AMBER Alert"
- MO Kansas City - "AMBER Alert"
- ND West Fargo - "AMBER Alert Plan"
- NM Albuquerque - "AMBER Alert"
- OH Allen County - "AMBER Alert Plan"
- OH Athens County - "AMBER Alert Plan"
- OH Auglaize County - "AMBER Alert Plan"
- OH Butler County - "AMBER Alert Plan"
- OH Carroll County - "AMBER Alert Plan"
- OH Clark County - "AMBER Alert Plan"
- OH Clermont County - "AMBER Alert Plan"
- OH Columbiana County - "AMBER Alert Plan"
- OH Coshocton County - "AMBER Alert Plan"
- OH Fulton County - "AMBER Alert Plan"
- OH Harrison County - "AMBER Alert Plan"
- OH Lucas County - "AMBER Alert Plan"
- OH Mahoning County - "AMBER Alert Plan"
- OH Mercer County - "AMBER Alert Plan"
- OH Pickaway County - "AMBER Alert Plan"
- OH Pike County - "AMBER Alert Plan"
- OH Ross County - "AMBER Alert Plan"
- OH Sandusky County - "AMBER Alert Plan"
- OH Stark County - "AMBER Alert Plan"
- OH Tuscarawas County - "AMBER Alert Plan"
- OH Warren County - "AMBER Alert Plan"
- SD Yankton - "AMBER Alert"
- TN Memphis - "AMBER Alert"
- VA Roanoke - "Roanoke Valley AMBER Alert"

Total AMBER Plans - 119

- Statewide AMBER Plans plus District of Columbia, Puerto Rico and Virgin Islands - 53
- Regional AMBER Plans - 28
- Local AMBER Plans - 38

Sources: National Center for Missing & Exploited Children, Alexandria, VA; Environmental Systems Research Institute, Redlands, CA (ESRI); Mapping software donated to NCMC by ESRI

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Lessons From the HD2 Highway

Consultant Fred Jacobs shared tips on his blog from HD2 pathfinder Mark Pennington of WRIF(FM) in Detroit recently. We liked them too and share them here.

Today's posting is a guest entry from RIFF2 Program Director Mark Pennington. It's a veritable "six-pack" (hey, we're in Detroit) of ideas about how radio can better approach the programming and strategic planning that ought to be a part of HD Radio.

We have been critical of the lack of content and imagination on the vast majority of HD stations in this blog. Our belief is that few HD Radios will be sold until great content drives interest which will, in turn, drive sales.

Clever ad campaigns, better store placement, deals with automakers and improved hardware are all well and good, but without great content, HD Radio won't work. To date, the results speak for themselves.

With that in mind, think about Mark's great advice about how to do HD2 right, from the HD2 station recently honored by the NAB.

1. Pick your format wisely. Make sure you have the right people to accomplish your objective. If you work for an oldies station, for example, you might not have the people or talent in the building to pull off an alternative station.

2. Experiment, experiment, experiment. It's a radio programmer's dream: a station without format restrictions, ratings or revenue to worry about. Take advantage while you can. Try something new; if it doesn't work, tweak it. For example, we originally included hip-hop in the RIFF2 mix. After listening and getting audience feedback, it didn't work, so we scaled it back.

3. Turn over some rocks when trying to find talent. Just because that intern in the hall doesn't have a deep broadcasting voice doesn't mean he can't be good on the air. People are becoming accustomed to hearing content created by non-broadcasters ... podcasts, video blogs etc. It's become more about the content than ever. On our staff, we have Justin and Jeremy, two guys from the promotion department who love

video games. So we created a two-hour video game around them, part of what makes RIFF2 special.

4. Tap into an internship program or local broadcasting school. Find people who are hungry and passionate. You will be pleasantly surprised if you take the time to work with them. HD Radio has a chance to become the new "farm system," which is vital for the overall health of our industry.

5. Listen to your people. Just because you have been doing this for a while doesn't mean you know everything. Many of our ideas have come from the staff. We get together and talk about promotional stuff, music, etc.

A prime example is the RIFF Music Awards campaign we are doing right now. The idea grew from a discussion about how corporate and un-cool the other music awards have become around town. Thousands of people have cast their votes for our awards on an HD2 station!

6. Have fun! You have to have the right attitude and passion to make this work. If you treat this like a burden or one more thing that you have to do without getting paid more, the results are predictable.

Have fun, be creative, enjoy the freedom, be a music fan again. In that spirit, I have done a holiday dinner with just the RIFF2 staff every year. We tend to forget how far a nice meal goes when you are a broke, starving broadcaster. I did the same thing when we won the NAB award. We made up plaques for everyone (costing us next to nothing), but you would think that we just gave them a Grammy Award.

Fred Jacobs added a postscript: "When you read over Mark's ideas for building a great HD2 station, perhaps you thought this was pretty good advice for creating a successful HD1 station. Indeed, it is."

Find Jacobs' blog at www.jacobsmedia.com. Send us your own ideas about managing for HD2 success to radioworld@nbmedia.com.

—RW

◆ READER'S FORUM ◆

Meet Dave Royer

Ty Ford ends his evaluation of a selected pressure gradient (ribbon) microphone and preamp combination, saying, "It's a quality piece, and getting good, quiet gain for ribbon mics in not easy. ("P-Solo Ribbon, Naked Eye: a Dynamic Duo," Jan. 16)."

He's right. It isn't easy, but he needn't have had to take the pains he described in order to achieve that goal.

For a number of years, Dave Royer has been offering his series of compact, rugged, wide-range ribbon mics with preamps that handily overcome the deficiencies Mr. Ford decries.

Royer Labs doesn't advertise in broadcaster publications because his line is primarily for high-end recording studio use. This might explain why Mr. Ford hasn't heard of them. Moreover, broadcasters don't have the EQ facilities he found necessary to bring in to line the microphone and preamp combination he was analyzing.

Wes Dooley's AEA offers a superb reproduction of the legendary RCA 44BX, yet boasting higher output and better frequency response; but I don't find Audio Engineering Associates listed in Radio World's Source Book. And mics like RCA's 44BX and 77DX are not only too pricey, but too cumbersome for today's kind of broadcaster.

By the way, I'll give Mr. Ford a "kilo-buck" for each of those "77s" he unearthed in 1977. As for his remark to the effect that FM broadcasting requires a mic with better high-frequency response than with the

famous old ribbons offered, I ask: For voice? *Oliver Berliner Bozman, Md.*

Follow the Money

After reading Paul McLane's article, "We Need to Mend Some Fences" (Jan. 16), I would like to respond.

Comparing the sales of Rush Limbaugh bootlegged programs to the free airing of commercially-released music makes no sense to me.

In one case, you have a talk show host who does not record and sell his past programs. He is paid on the spot for each program, as it airs.

In the other case, you have a musician (or a record company) who makes money by the sale of CDs after (and because) they are played on the radio. No airplay, no sales, no money.

Remember payola? Record companies used to pay big bucks under the table to get DJs to play the music they were promoting. Many records were hits (so I hear) only because of payola. So what has changed to make it a bad thing rather than a good thing for radio stations to play music without payment changing hands?

Record companies still spend a ton of money advertising their new releases in the trades. Isn't that because they want airplay?

What would happen to CD sales if all music stations suddenly dropped music and became talk-only? Do you think the record companies would be happy?

You talked about the big bucks that radio stations make from the free use of music. I am under the impression that many stations are struggling to stay afloat, what with the Internet and iPods. Charging stations to air music will, I believe, will be the straw that puts them out of business. Now how will that help the music business?

*Dan Hughes
Champaign, Ill.*

History has shown that copyright and regulatory fees start off low but continue to rise. Like many broadcasters, I invest in my community by supporting local causes and financing fundraisers. Should this fee pass, I would be forced to cut back on these funds.

I fear that with FEMA refusing to help our state on a recent ice storm, it is a sign that the communities are going to have to help each other, as the government is unable to do so. Then what about the writers? It only stands to reason that it would have an adverse effect on their fees.

I agree an artist should have a say in how their work is used, but I know of no artist who would turn down airplay. If more money is needed than they should look to the labels, as that is their job.

I hope your statement that radio will lose this fight won't come to pass, as it will hurt the communities that local radio serves the most.

*Linda Jones
President
One Ten Broadcast Group
Seminole, Okla.*

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