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BEVANNTOJ **********AUTO**3-DIGIT 604
80007189 48 RDWA E0804
THOMAS BRAXTON 136
SENIOR ENGINEER
SHURE INCORPORATED
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BOLINGBROOK IL 60490 1520

AM Option

Ray Benedict hopes to correct 'misinformation and unnecessary worry' about computer modeling.

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Multicast Map

Mark Lapidus thinks the 'brand extension' strategy is dead, or should be.

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iStockphoto/Palto

Radio World

$2.50 The Newspaper for Radio Managers and Engineers February 1, 2009

INSIDE

ENGINEERING

▼ How this $30 gizmo can help you minimize satellite downtown.

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▼ IBS sees fruits of its partnership with Backbone Networks.

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▼ Sony ACID Pro 7 is a useful audio editing/creation tool.

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▼ Internews taps the Sudanese wind. Shown: Musa 'Mosquito' Atebera of Voice of Community.

Melita Dennett & Matt Buck/Internews

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▼ The concept of 'top-down' broadcasting from a radio tower to passive listeners in real time is no longer relevant.

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Groundhog by iStockphoto/Tracey Cullen

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Feds Seek Faster Hurricane Alerts

Summit Examines Hurricane Data To Glean Lessons for 2009 Season

by Randy J. Stine

WASHINGTON The Federal Communications Commission and public warning advocates are looking for ways to alert hurricane-prone coastal regions about threats more quickly.

The FCC and the Federal Emergency Management Agency plan to make more use of a system that measures broadcast transmissions before and after a hurricane.

See HURRICANE, page 8 ▶

Field agents Paul Coburn, left, and Loyd Perry use a spectrum analyzer in Louisiana as part of the FCC's Project Roll Call system, which measures broadcast activity within a 30-mile radius before and after a hurricane.

NEWS MAKER

Rehr Likes Radio's Vibe At CES Show

Also Claims Progress In Changing the Tone Of Media Coverage

LAS VEGAS NAB President/CEO David Rehr says, "There's never been more innovation in radio than there is today."

As evidence, he noted that some 100 companies featured new radio devices at the Consumer Electronics Show, in a range that encompasses HD Radio to MP3 players. Eight of the top 20 free apps for the iPhone are radio applications, according to the National Association of Broadcasters and Radio Advertising Bureau, whose chief executives attended the convention and talked up radio.

Rehr believes "radio is now becoming a more important component to consumer electronics." He talked with Radio World News Editor/Washington Bureau Chief Leslie Stimson about the consumer market, radio's economic challenges and how those forces may play out in Washington

See REHR, page 5 ▶

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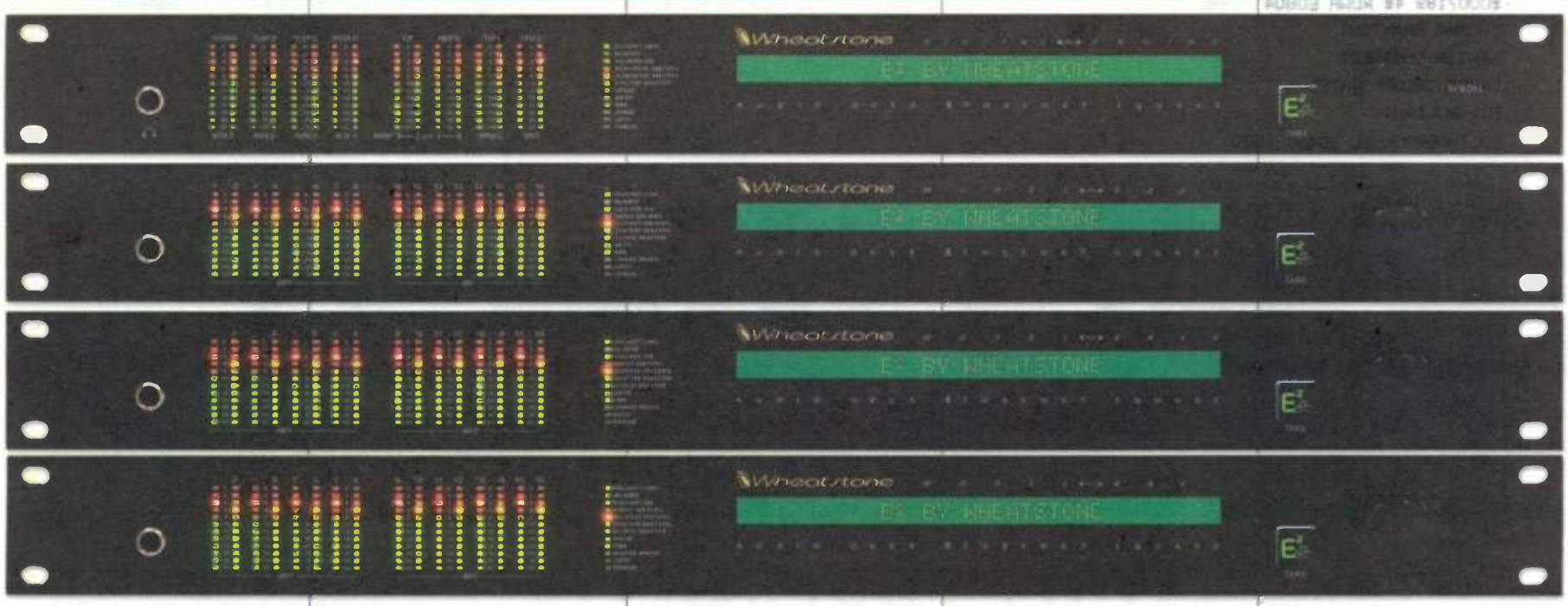
World Radio History

THE POWER OF THE SQUARE

AUDIO-OVER-IP ROUTING. SOME TECHNICAL STUFF.



WHEATSTONE and E²...

Wheatstone is world-famous for consoles and networked audio routing – tried-and-true technology that has become broadcast's de facto standard. With the emergence of Audio-over-IP as a viable transmission medium, and knowing that existing solutions are cumbersome at best, Wheatstone has turned its attention and resources to developing a superior set of tools that are as efficient as they are effective.

GIGABIT ETHERNET

Wheatstone chose Gigabit Ethernet (1000BASE-T) because quite frankly, 100BASE-T just can't simultaneously handle the large number of audio channels prevalent today in large broadcast plants without the very real risk of audio not being available when you need it.

E² SQUARES

Three SQUAREs are access points in and out of the network, the fourth is a digital mix engine.

EASE OF SETUP

E-SQUARE setup is easy, intuitive, and takes only a few minutes until you're on the air. The front panel setup wizard in each SQUARE gets you up and running in moments. Extensive front panel metering and status indicators provide quick confirmation that all is well. E-SQUARE's web interface and E² Navigator GUI let you further customize your system, locally or remotely, with input and output names, logic associations, routing and much more.

88e E² MIX ENGINE SQUARE

Every nerve center needs a brain. The 88e is it, handling all of the mixes from Wheatstone Evolution Series Console Control Surfaces and the Wheatstone Glass-E Virtual Console Control Surface, a PC-based GUI. The 88e SQUARE houses all DSP power for an individual control surface and distributes the four stereo PGM, four stereo AUX SEND, per-channel MIX-MINUS, monitor outputs and other bus signals to the network. Once on the network, they are available as sources and outputs anywhere. This creates an extremely flexible system, where program outputs from one surface can be a source on any other surface; for example a news mixer's program bus as a source on the air studio surface. While the MIX ENGINE SQUARE doesn't house audio I/O, it does include 12 universal logic ports.

HIGHLIGHTS

- SQUAREs are linkable units that communicate via a single CAT5E/6 over Gigabit/1000BASE-T protocol — Gigabit protocol means all audio everywhere with extremely low latency
- SQUAREs interface seamlessly with Wheatstone's Evolution Series Console Control Surfaces, the Glass-E Virtual Console Control Surface, most of the popular automation systems, and streaming audio
- Install the WHEAT-IP driver on automation system computers to eliminate the expensive sound card and replace tons of audio and control wiring with a single CAT5E/6 cable
- Each SQUARE includes two 8x2 virtual utility mixers that can be used for a wide range of applications
- Front panel headphone jack with source select and level control to monitor any system source
- Silent — no fans — can safely be located in a studio with live mics
- Flexible GPI logic — 12 universal logic ports, programmable as inputs or outputs
- SNMP messaging for alerts
- Silence detection on each output that can trigger alarms or make a routing change

Introducing E-SQUARE Audio-over-IP routing and mixing. Wheatstone's goal was to design a system that is extraordinarily easy to implement without the need for super-complicated network engineering, and where the user doesn't need to be concerned about setting network parameters and priorities to assure that those signals that are most critical are available.

Here we give a brief overview of E-SQUARE, and a few considerations that went into Wheatstone's design of a second-generation AoIP system for broadcasters.

Each of the I/O SQUAREs handles 16 audio channels in and out, plus logic (GPIO). One model is all analog, one all digital, and one is half of each. The relatively small channel count of each I/O SQUARE allows you to conveniently locate them close to your equipment: in your TOC racks and in the control room or studio furniture.

Each of the SQUAREs and each Wheatstone console control surface connects to the network with a single CAT5E/6 cable.

There's also WHEAT-IP, a software "SQUARE" that you install on a Windows® machine — automation computer, news workstation, or a PD/GM's desk computer — to control, play and record audio on and off the network without a sound card, also with just one CAT5E/6 cable.

RELIABILITY

Keeping you on the air is foremost in the design of E-SQUARE. It's completely self-contained — no PC is required to perform any of the system functions, including routing, mixing, salvos, and logic control. The PC is needed only for configuration changes.

Each SQUARE carries a complete map of the entire connected network in its onboard CPU flash RAM — this allows SQUAREs to be quickly and easily replaced in a network. Assign an ID # to a SQUARE and connect it to the network — it will query the other connected SQUAREs and import all the necessary configuration settings.

E² I/O SQUARES

Each 88 I/O SQUARE provides connectivity for 16 input channels, 16 output channels (switchable 8 stereo, 16 mono, or any combination), and 12 universal logic (GPIO) ports programmable as inputs or outputs, routable throughout the system.

88a ANALOG I/O SQUARE
16 analog in/out

88d AES DIGITAL I/O SQUARE
8 AES in/out

88ad ANALOG & DIGITAL I/O SQUARE
8 analog in/out, 4 AES in/out

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World Radio History

◆ NEWSWATCH ◆

NEURAL SOLD: DTS Inc. has acquired Neural Audio Corp. and plans to expand its offerings in the broadcast, satellite radio, automotive and gaming markets. DTS makes decoders for surround sound processors. The California-based DTS paid $7.5 million and may pay up to $7.5 million more over five years if conditions are met. Neural, in Washington state, develops surround technology for various markets. Among those moving to DTS are Geir Skaaden, chief executive officer; Mark Seigle, president and chief operating officer; Jeff Thompson, director of engineering, and James "JJ" Johnston, chief scientist.

DTV TRANSITION: President-elect Barack Obama urged Congress to postpone the Feb. 17 switch from analog to digital television broadcasting, fearing that too many citizens won't be ready. The incoming administration is pushing for a delay in part because the Commerce Department ran out of money for the coupons that subsidize digital TV converter boxes for consumers. Opponents of a delay said it would increase consumer confusion; supporters say the administration needs time to bring order to the process.

PPM LAWSUITS SETTLED: The lawsuits regarding the Portable People Meter between Arbitron and the state attorneys general in New York and New Jersey have been settled. In New York, Arbitron has agreed to pay the state $200,000 to settle the claims and $60,000 for costs. Arbitron will pay an additional $100,000 to the National Association of Black Owned Broadcasters for a joint radio project between NABOB and the Spanish Radio Association to support minority radio. In New Jersey, Arbitron agreed to pay $130,000 for investigative costs and expenses. Arbitron denies liability or wrongdoing.

EPG RESEARCH FUNDED: Funding is in place for the next phase of a project to demonstrate the viability of an HD Radio Electronic Program Guide. The consortium working includes BIA Advisory Services and Broadcast Signal Lab, working with Unique Interactive and funded by the NAB FASTROAD technology advocacy program. The project will conclude with on-air field trials in the Boston and Providence, R.I. markets, which the researchers chose because of the number of HD Radio stations on-air, including coverage areas that overlap into the adjacent market. This is an extra challenge for an EPG on mobile receivers.

FAIRNESS DOCTRINE: Efforts are being renewed in Congress to ban any attempt by the Federal Communications Commission to reinstate the Fairness Doctrine. Republican Sens. Jim DeMint of South Carolina and South Dakota's John Thune introduced the Senate version (S. 34) of the bill. They say Democrats plan to revive the policy and suppress free speech by requiring the government to monitor political views and decide what constitutes fair political discourse. Prior attempts to get the bill passed have failed. Republican Reps. Mike Pence of Indiana and Greg Walden of Oregon earlier introduced H.R. 226 in the House.

BROADBAND: The pace of broadband signup will slow this year, according to research company Pike & Fischer, which said approximately 5.7 million U.S. households will become new high-speed Internet customers, a 12 percent decline in subscriber growth from 2008. Still, the total number of broadband-connected homes will reach about 74.5 million by the end of the year, or 63 percent of U.S. households. Pike & Fischer thinks the economic crisis means consumers will spend less on communications services as job security becomes more tenuous and discretionary income drops. "However, broadband customer growth could exceed forecasts if the incoming Obama administration succeeds in its plan to expand broadband availability as part of a major economic stimulus package."

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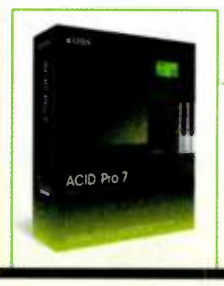

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World Radio History

For Mike, the Messages Are Mixed

From the Editor

Paul J. McLane

A thoughtful broadcaster told me recently he's feeling a little "whipsawed" regarding the health of the U.S. commercial radio industry.

I can't use his full name but wanted to share his perspectives as we head into another NAB Show season. Issues he cites are likely to be dominant during that convention and beyond. Just call him Mike.

In short, Mike feels that free local radio is getting very mixed messages.

Radio stocks are down hugely, of course, and although other media stocks are off as well, radio's performance is one of the worst. Its share of the ad revenue pie has shrunk from 8 percent to 6.8 percent, according to some sources; share peaked in 2003 and has been steadily declining since then, despite talk at that time of *increasing* it (see related chart, page 32). We also hear that radio is losing ground and over-leveraged, and that if revenues decline just a few percentage points, radio might have to start increasing leverage just to stay afloat. We also have been told that if radio EBITDA (earnings before interest, taxes, depreciation and amortization) were to decline much further, a lot of companies could face bankruptcy.

Have we thought this through?

In recent months radio industry leaders have talked about how the industry is dealing with these challenges. Lew Dickey of Cumulus Media has argued that radio needs to resist commoditization of its product, the urge to lower spot rates too far in efforts to outbid other stations for ad dollars.

"The problem with Lew Dickey's vision is, it's illegal," Mike writes. "The government takes a very dim view of price fixing and other anti-competitive behavior. I'm sure he knows this, for he's a smart guy and he never talks enough specifics to get to the point of actually attempting to fix prices. And I suppose we have to forgive him, since our business is so intertwined with the music industry and its ridiculous and sometimes illegal business practices. But price fixing is not a realistic plan for radio's future."

Meanwhile Dan Mason of CBS Radio has lamented the fact that the FCC did not mandate HD Radio capability in Sirius XM receivers as part of its approval of the merger. That causes alarm for Mike: "The ability of CE companies to differentiate their products from one another is important, and government mandates make differentiation more difficult. And as a consumer, I hate it when I have to buy things that I don't want in order to get things that I do want."

> 'If a single operator controlled the entire band in a community, that operator would be able to re-farm the spectrum in that community, using it much more efficiently and creating many new services.'

Researchers have also told radio managers that, among younger listeners, satellite radio hasn't really been a big hit. Maybe this is what broadcaster Russ Withers was thinking when he told FCC Chairman Kevin Martin at the fall NAB Radio Show that he would gladly accept a requirement that Sirius XM tuners be included in HD Radio receivers in exchange for a requirement that Sirius XM receivers include an HD Radio tuner.

"Russ, have you really thought this through?" Mike wonders. "Mel Karmazin already expressed interest in sending free programming to inactive satellite radios. Are you sure it's in your best interest to force receiver manufacturers to put satellite tuners in your listeners' radios?"

Mike was pleased though to hear Mason say that it's important to get CBS stations available on iPhones. David Goodman, president of digital media and integrated marketing for CBS Radio, has made a strong case for CBS' expansion on the Internet through its work with AOL Radio and streaming of CBS stations.

"CBS' commitment to unilaterally turning iPhones and other portable devices into free local radio receivers by making compatible streams available on the Web is awesome," Mike said. He likes a suggestion that Dave Wilson of the Consumer Electronics Association made in RW last year that the radio industry could band together on one Web site, effectively turning portable devices like the iPhone into radio tuners with thousands of free local channels.

"Wilson said the National Association of Realtors runs a site that lets you 'tune' to any real estate listing throughout the country, so why can't the National Association of Broadcasters do the same thing for radio?"

'This is terrific!'

Then there's the Radio Heard Here campaign. Our faithful observer says, "My initial reaction was, 'What are they thinking?' There are many types of radio out there today: satellite radio, Internet radio, cable radio, and of course free local radio. How does promoting 'radio' help the latter compete with the others? It was as if the city of Austin wanted to increase tourism and developed a campaign to achieve this goal called 'Visit Texas.' Also, the graphic images I've seen associated with the campaign seem to focus almost entirely on non-Internet and non-handheld receivers, which to me seemed to reinforce the perception that free local radio is old technology."

But two things have warmed him up: the discovery that RadioHeardHere.com serves as a portal to local stations' Internet streams — "This is terrific!" — and the decision to have individual stations customize the logo for their brands with "WXYZ Heard Here," "Z104 Heard Here," etc., using the same logo design.

"Now I see how this brand can be used to distinguish free local radio from other forms of radio. I think NAB, RAB and the HD Radio Alliance are doing some good work, for an omnipresent logo customized with different brand names seems likely to drive home the message that free local radio is an omnipresent service with many different offerings." He said they still need to work on presenting radio as modern and relevant and on promoting the portal so that listeners see it as thousands of stations in one place.

"The key is to make the free local radio portal the *only* place to go for AM/FM stations online, so that listeners are drawn there and not to other portals that also offer non-AM/FM streams, which can entice listeners away from free local radio."

But his "whipsaw" feeling continues when Mike hears David Rehr of NAB talk about how radio has never been stronger and that it continues to grow its listener base, even as others insist AM/FM radio's market share inevitably will shrink as Internet radio, satellite and other competing media grow. "Which is it? Is radio growing or shrinking?"

Eliminate caps

Mike does like what Mark Mays at Clear Channel has said, arguing for elimination of the caps on station ownership,

See WHIPSAW, page 6 ▶

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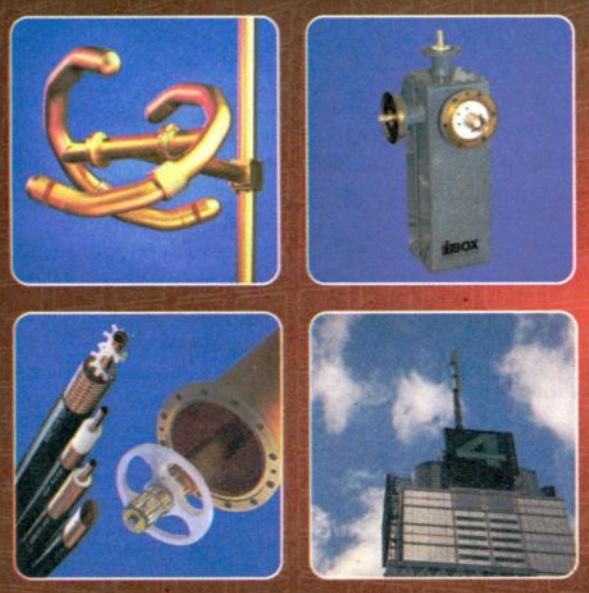

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World Radio History

Rehr

▶ Continued from page 1

given the change in administrations.

***RW:** What are you talking about here?*
Rehr: I did a panel … on what's going to happen in Washington. One of the things I talked about was our efforts to get cellular handset companies to either activate or put FM chips into handsets so more people have the opportunity to listen to radio. Two hundred fifty-three million people have mobile cell phones. I received an e-mail [here] that said T-Mobile was announcing a new phone that had an FM receiver in it. It's now permeating the cellular phone community — the benefits of having FM radio as another advantage.

I think it makes us more relevant as we go to multiplatform opportunities for people to receive radio.

***RW:** If the DTV transition is delayed, how could that affect radio? A digital power increase is on the table at the FCC; and with a new administration coming in, people are telling me it might take until summer for [new commissioners] to get up to speed.*
Rehr: My feeling is we've made a good empirical case for boosting the power on HD Radio. I think it's just going to be the mundane practicalities of Washington. It will move slower than everyone would like because of how Washington works generally, *and*, when you superimpose over that [a] new FCC, new commissioners, new chairman — people are just going to want to be sure that they're doing the right thing and that they're fully engaged and understand everything.

***RW:** But if there's a delay in the DTV transition and we know the FCC is really focused on DTV, does that have the potential to also delay the focus on radio?*
Rehr: I've always thought that the staff in the Audio Division led by Peter Doyle, they're top-flight professionals. They want to keep things moving forward. There may be a lack of a lot of public attention [on radio], but I still think they're working every day. So I'm not too concerned about that.

I'm more concerned about, we don't know who the commissioners are going to be, who the chairman's going to be… Everybody wants to, rightfully so, give the new administration the benefit of the doubt of getting their people in, and then wanting to move stuff. It's going to take everybody a while to go through the piles of paper.

But I think we've made a good case for the power increase among large-to-small, urban-to-rural companies.

***RW:** I've been talking to people here about what kind of higher digital power testing they're planning such as asymmetrical sidebands, where you raise the digital power on one sideband only, away from the neighbor station. There are some other tests being discussed, too. My sense is that iBiquity, the commercial broadcasters and the non-commercial broadcasters are all talking.*
Rehr: Yes, that's true. Which is a good thing.

***RW:** Is NAB a part of those talks?*
Rehr: Yes.

***RW:** Because you want to speak with one voice to the commission …*
Rehr: That's exactly right. So that's moving forward.

Also, we continue to see strong radio listenership numbers. We're at 235 million. We grew 3 million over the last year. Our Radio Heard Here campaign is really taking off. Which is good for business, we'd rather have more business opportunities in the category but I think the last volume of aggregate number of spots, number 10 was "Radio Heard Here." Everywhere I go, I hear it. …

It's helpful among consumers but it's also, quite frankly, great for our own people. Because we're in kind of a rough patch right now. That's when you need to have activities like Radio Heard Here, which is principally aimed at consumers and the advertisers, reminding them of the relevance and importance of radio; but for your own people, it fires them up. We have to have people who, every day when they go to work, at the end of that day go, "I should come back tomorrow because my future's bright."

***RW:** As opposed to, "I should come back tomorrow because they've laid all the other day parts off and I'm the only live jock."*
Rehr: Yeah, or "There are no other jobs." Well, a lot of these smart, intelligent radio people could go other places but they love radio so we need to ensure they are enthusiastic proponents of the medium.

***RW:** Let's talk about the economy. Radio's in a tough place. People are preparing for horrific numbers in '09. What does that do to the effort to monetize multicast channels? I see an uneven effort in programming those channels.*
Rehr: And with 16,000 radio stations in America, all of whom are entrepreneurial, you're going to see a wide variety of business results, challenges, opportunities, innovation. I think that's probably good.

I wish everybody was doing well and we had year-over-year double-digit increases in revenue. It would make everyone's life easier and it would make us economically stronger. …

Part of the challenge we've always had in radio is everyone has two opinions about everything. In prosperous times, that's not a problem, but when you have … adversity, people have to say, "What's really the core? What are we really about? How can we build the brands?" I think people are a lot more inclined to lock arms and stand together as an industry or a business.

The economic outcome really is dependent on companies. I don't want to be too pollyanish about it, but we do have a lot of small companies, small-market radio that's been able to withstand some of the downturns because, in part, they never really got the upturn. So they didn't really benefit, but now, when things change, they don't really see the dramatic declines that other people are seeing. …

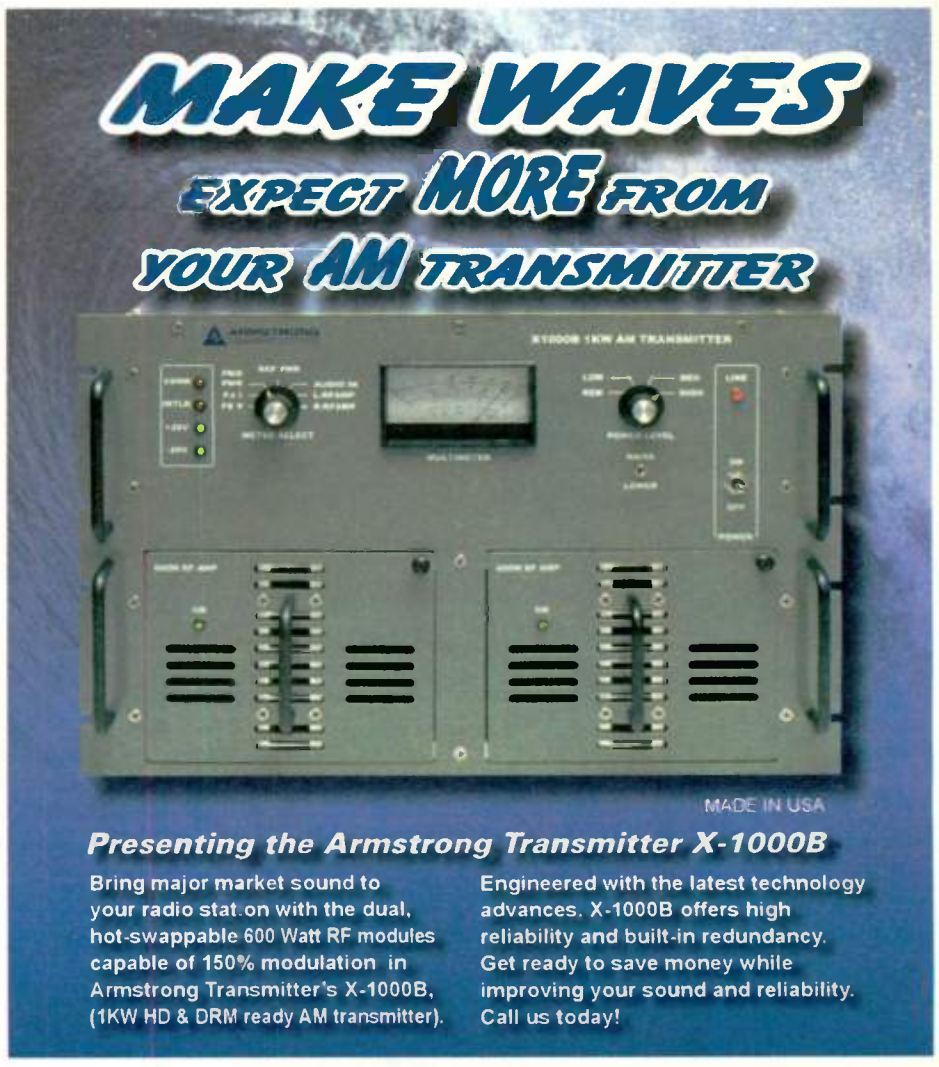
One [NAB member] just sent me an e-mail that said last year was their best year ever. Now, that's not true of all 16,000

See REHR, page 6 ▶

Photo by Leslie Stimson

IBiquity's Bob Struble shows NAB's David Rehr the KRI armband portable HD Radio receiver at the CES show. The device features MP3 playback capability and is the smallest device yet using an HD Radio chip.

'A year ago we had all these bloggers saying radio is old, it's dead, it's not the future. … The amount of positiveness about radio over the last year has dramatically changed.'



World Radio History

Rehr

▶ Continued from page 5

licensees, but it's good to have that glimmer, where it's not all doom and gloom.

I gave this in my speech in Austin, which I firmly believe in: We have to be really careful, kind of, controlling the amount of negativity that pervades our business. ...

I don't want to pretend it's great, because it's not great. But when people look at you, whether it's other people in the radio business or your advertisers or your listeners, or people you deal with in your communities, if you have a sad face, they're even going to be less likely to want to be with you. There are some days when things are tough. I get up in the morning, I look in the mirror, and I say, "You know, things are tough today, but part of my job as president of the NAB, is to put a smile on my face and say, "There's a bright future." I believe that in my soul.

But if I walked around Washington, kind of like, "Wow, things are bad, things are bad for radio, people are going to be less likely to want to invest and to help radio and advance radio," I think it's better to say "Yeah, we have challenges. It's not as good as it could be. But you know what? In the future, if we execute our 'Radio Heard Here' plan, we get on cell phones, we're smart, entrepreneurial businesspeople, we utilize our spectrum, we stay close to our customers, we define localism, we're going to come out of this and we're going to be better." ...

RW: I know you can't speak for RAB, but is NAB trying to help stations do that?
Rehr: We haven't really said, "Hey, here's how you monetize your multicast channel."

RW: Well, why not?
Rehr: Because, in part, we have some 46 different issues affecting radio in Washington ... from the performance tax, to streaming ... all things which [will] make multicast decisions even worse if our adversaries are successful. Some days, I'm just holding the people at the door, and wanting to be sure that we don't erode the bottom line of companies.

Our job is to ensure that the wolves at the door don't get in the building. So that's part of it. Another part of it is ... to kind of run out of the building — I mean this metaphorically — run out of the building and look for ways that we can make the building bigger, that we can make our people stronger ... and it just consumes 25 hours of the day.

RW: If we could just settle the Internet licensing issue ...
Rehr: We're trying to negotiate with SoundExchange on that. I view the world as, sure there are a lot of challenges, but great entrepreneurs who make up the radio business also see great opportunity.

Sometimes people say, "David sees the cup as too full, and he should think about it more being empty." Believe me, I know it's plenty empty. I just think in the world of marketing and branding and business you have to be realistic.

But you also have to be sure that you're ready to put your best foot forward. Because this is still a great business. The margins are still a whole lot better than they are in retail and in automotive and in a lot of the companies whose spots and advertising we carry. ...

RW: ... and it looks like people are still willing to invest in radio. If they're willing to put FM chips in cell phones for example, they see radio as a delivery mechanism.
Rehr: Yes, and it's a benefit to the public.

RW: The public service aspect.
Rehr: The thing I pull my hair out is when we've done all these studies about radio, the radio industry is the most negative about radio. I remember we did some focus groups awhile ago ... and they were saying "We love radio!"... This is why I'm on such a big kick about how we stay positive, and making sure negativity doesn't infect us. ...

We get little snippets from this first series of ads we've been running, where people, literally, send e-mails to the station or go on our Radio Heard Here Web site, wanting copies of the spots because they're so moved by them. I think that's a great thing.

There's not a silver bullet in this. We are not going to go from year-over-year double-digit increases in revenue with a silver bullet. So we have to do a lot of things, and we have to do some entrepreneurial things, and we're going to have to take some risks. Some of the things we're going to do are going to work and maybe other things we're going to do aren't going to work. ...

RW: Do you think big companies that have gone public and are thinking quarter-to-quarter are going to be willing to take chances?
Rehr: Yes, because they'll have to. Some of our strongest supporters with our Radio 2020 initiative or Radio Heard Here program are the largest radio companies — I think, in part, because their CEOs really understand the need to reposition, better position, align the value of radio with the expectations of the advertising agencies. We know that there's an issue there that their people remain enthusiastic and fired up. They've been very supportive. And you add that with the small-market stations, who I love to say to people, "They believe."

RW: They didn't really benefit from the expansion after the Telecom Act. They kind of chugged along they way they were.
Rehr: Right, but they believe. They get up every morning and they run spots or they talk about something in their community. And they walk down Main Street and somebody says to them, "Hey Bob, that's great that you ran that." And they know instantly the reaction and the power of radio. The combination of the large, publicly-held companies and our small-market radio all working together really, in a coordinated effort, the first in a long time. I think it's very positive.

RW: CES attendance is much lower than in the past. Are you worried about attendance in trade shows in general and what that means for the NAB Show in April?
Rehr: Yes, we're looking at ways to add additional value in programming to the show. We're going to be doing some additional high-powered speakers. Our radio and television conference programs, we're re-aligning to help people to drive revenue ... I mean real things that our people need at this moment in time that will make them more successful. Not that we've not done that before, but we're putting more emphasis on that. I'm hoping that we'll be able to hold the number. We had 104,000 people last year. We'll probably see a rise of international (attendance).

I love CES and Gary Shapiro, the CEO of the Consumer Electronics Association. He does a wonderful job. I generally say to people, "You come to look at the CES. You buy at the NAB." We're going to have a lot of cool things, particularly with radio this year. We will make it worth the investment to come. I like to think of NAB and myself and our board as big ROI people.

The flip side of having a more difficult period is the price of hotels in Vegas are down, flights are going to be cheaper, so there's going to be some benefit for the radio operator in coming that they've not seen in years past, even if it may be more of a strain for them to find those resources to come to NAB.

RW: You're planning things to help people, even more so, make money?
Rehr: Our bottom line is we need to encourage radio to continue to be everywhere, online, in cell phones, in traditional ways people have heard radio, innovation through HD, through iPhone innovation.

We're the innovators and we just need to make sure people are aware of that and that the advertising agencies know that as well.

[For example,] one of the most requested attachments for iPods are FM radio.

Every day our Radio Heard Here Web site (*radioheardhere.com*) has new innovation in radio posted every day. A year ago we had all these bloggers saying radio is old, it's dead, it's not the future. ...The amount of positiveness about radio over the last year has dramatically changed.

RW: Positiveness among the public? Or...
Rehr: Among the bloggers, among Internet sites, articles generated about radio. ... In this idea of re-positioning radio we've worked very hard, and this has been because of the involvement of radio broadcasters, that the messages now being articulated to people like yourself who write about us. [Given] the volume of PR efforts by satellite radio, to make us look old and outdated and past — in part, because of their less-than-stellar economic performance, and in part, more importantly because of the pro-active campaign we've engaged in, a lot of that has disappeared, and positive stuff about radio is dominating the media. ...

RW: Still, I worry about this DTV transition dragging out and taking attention away from radio.
Rehr: I think it's important. Once we get the dates ... our television broadcasters have executed a phenomenal effort. We're up to a $1.2 billion marketing campaign. And radio guys have been running the public service announcements on the DTV transition. ...

At the end of the day, will the date be moved? Won't the date be moved? We'll see what Congress and the government tells us. We need to stay focused on radio and the commission needs to stay focused on radio because radio is important to 235 million plus people in this country.

'Sometimes people say, "David sees the cup as too full, and he should think about it more being empty." Believe me, I know it's plenty empty. I just think in the world of marketing and branding and business you have to be realistic.'

Whipsaw

▶ Continued from page 4

saying that a single company should be allowed to own all of the stations in a community and compete with the local cable system operator, the satellite radio operator, the local newspaper and other forms of media as "the local radio operator" in the community.

"Not only do I agree with his view, but I believe such a change in government policy would ultimately lead to tremendous growth for the industry and terrific new services for consumers. I strongly believe this because, if a single operator controlled the entire band in a community, that operator would be able to re-farm the spectrum in that community, using it much more efficiently and creating many new services."

He wonders if radio broadcasters who think like Mays are doing themselves a disservice by not putting a campaign to change radio ownership rules before their campaign to turn every cell phone into a radio receiver. "Given the government's rationale for approving the Sirius/XM merger, might not free local radio have a stronger case for relaxed ownership rules if cell phones were considered competitors, instead of providers of free local radio service?"

And Mike concludes by noting he has heard little talk about the efforts to make digital TV signals available on portable and handheld devices, as well as in vehicles.

"NAB is hoping this technology will be in the marketplace about a year from now. TV broadcasters have more spectrum than satellite radio and free local radio combined. And they compete for local advertising dollars. But, so far at least, no one in the radio industry seems to be paying much attention. I guess live TV programming in the car is only a threat to radio when it comes from Sirius Backseat TV."

I don't agree with everything Mike concludes but he does a good job of synthesizing the big issues in front of commercial radio today. You see why I wanted to share his thoughts. Let me know yours at *pmclane@nbmedia.com*.

World Radio History

The Metropolitan Opera sets the standard for great sound.

And it's chosen ACCESS to let the world listen in.

Photo: Jonathan Tichler/Metropolitan Opera

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World Radio History

Hurricane

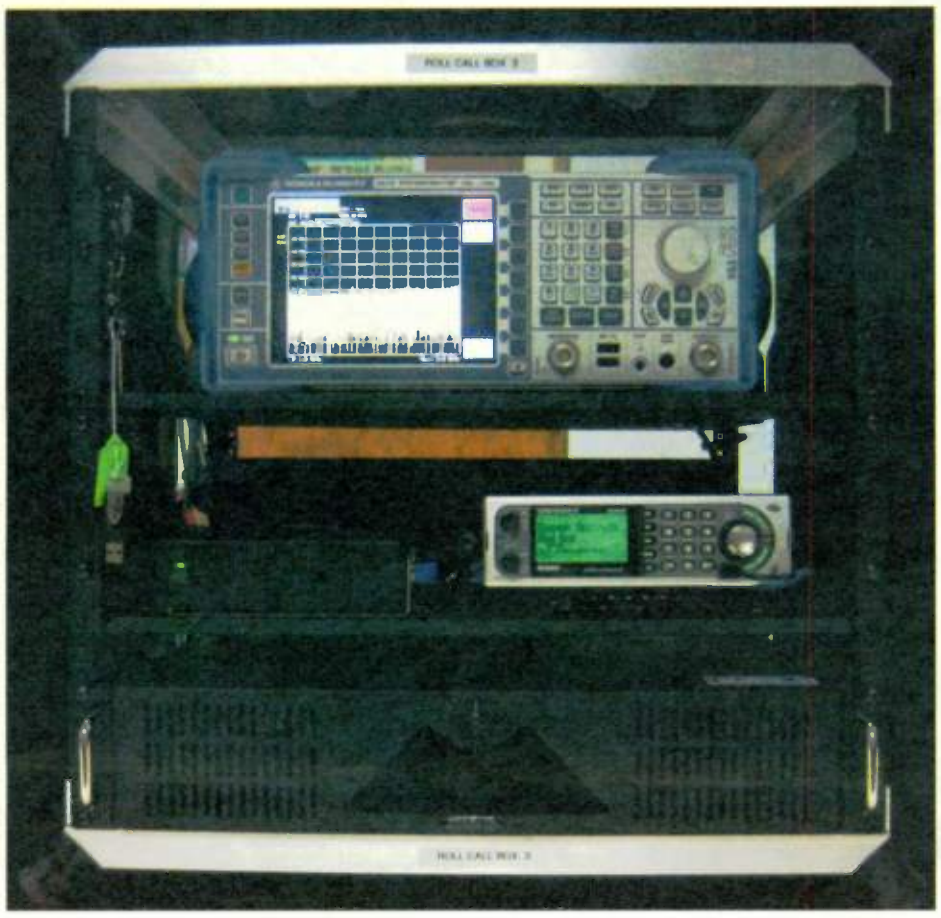
▶ Continued from page 1

To that end, representatives from the FCC's Public Safety and Homeland Security Bureau say that a renewed spirit of cooperation between the commission and FEMA, to make sure their efforts complement each other, will result in improved public warnings and quicker restoration of broadcast services after a disaster.

After the commission reviewed 2008 hurricane data, Derek Poarch, chief of the bureau, said, "We have learned much that will allow us to take steps and use those lessons learned to prepare for the next disaster."

He spoke at a hurricane "summit" in December that focused on communications and coordination among state, local and federal governments.

This year, the FCC expects to emphasize the Project Roll Call system, a joint program with FEMA that uses data collected by commission field engineers equipped with spectrum analyzers to measure disaster broadcast activity within a 30 mile radius before a threatening event, and again afterwards.



In his presentation, Joe Casey, associate bureau chief of the FCC's Public Safety and Homeland Safety Bureau, discussed the Project Roll Call equipment which includes a Rohde & Schwarz FSL3 spectrum analyzer (top shelf); an ICOM PCR2500 receiver (middle, left), a Uniden 996 scanner (middle, right) and a computer (bottom). The gear is mounted in a shock-protected box.

•Pre and Post Incident Analysis

Capabilities

- 30 Mile Radius
- Deployable and Fixed Platforms
- Validates who should be "on air"
- Provides data on who is "off air"
- Deploys at the request of FEMA during a broad spectrum of incidents

Project Roll Call establishes a baseline of station activity prior to the event to give emergency managers an immediate idea of who is on the air broadcasting critical information to the public, said Shawn Lapinski, associate chief of the bureau.

"FCC field engineers collect the data with a spectrum analyzer prior to a forecasted disaster and then go back in after the disaster to determine (if any stations) may need some help," Lapinski said.

Project Roll Call was implemented three times in 2008; the commission will use it more often in the coming year, Lapinski said. The system also can measure public safety, wireless phone and other critical infrastructure communication systems, such as two-way communications.

FEMA and the FCC acknowledge that Project Roll Call is only beneficial when officials can see a threat coming and field engineers have time to get to the geographic area that could be affected. It is not intended for use after unforeseen emergencies.

Representatives of the broadcast industry at the summit spoke of issues facing broadcasters in the hours after a hurricane.

Ann Arnold, president of the Texas Broadcasters Association, said broadcasters along the Texas Gulf Coast region had trouble accessing transmitter sites in the aftermath of Ike last year.

"Credentialing remains a major issue and how to get through the multitude of roadblocks by local police and the National Guard. Moving in and out the affected areas to repair damage is very troublesome for broadcasters," she said.

Arnold said the number of area radio stations knocked off the air by Ike went up the after the storm as generator fuel ran out.

Pat Roberts, president of the Florida Association of Broadcasters, said there are ways broadcasters can improve the preparation and restoration processes.

"Pre-positioning of assets is crucial for the commercial sector. Having fuel and water reserves in place is important. Prearranged contracts with fuel providers is also crucial," Roberts said. "Florida broadcasters are doing a better job of doing all of those things."

It appears broadcasters in other states are, too, industry observers said. At least some broadcast groups, such as Clear Channel and Cumulus, have implemented specific hurricane readiness plans along states on the Gulf Coast.

Arnold and Roberts feel FEMA has been mostly unsympathetic to the infrastructure needs of broadcasters after catastrophic disasters. Others say the issue isn't that simple.

"Broadcast is very important. We understand that," said Dr. Gordon Fullerton, director of systems engineering and technology development for FEMA. "However, by legal statute, (FEMA) is strictly prohibited from assisting for-profit organizations. FEMA cannot give a generator to a radio station.

"However, there is a caveat. When it comes down to being a public safety hazard, we try to get around the legal obstacles when we can. We are not going to let people die when it comes to getting out public safety information."

Arnold was complimentary of actions taken by the FCC. "We are appreciative of the FCC being proactive and impressed by their efforts and expertise" during and after last year's storms.

Hurricanes Fay, Gustov and Ike were the most dangerous and damaging storms of 2008, contributing to more than 100 deaths in the United States.

Colorado State University forecasters predict the 2009 hurricane season to be "above average," with 14 named storms in the Atlantic Ocean, and seven of those becoming hurricanes.

World Radio History

Who's standing behind our consoles?

(A lot of guys who wish they had chairs.)

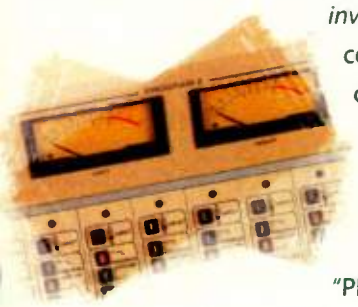
Experience matters

Now and again we're asked "You're a **division of Telos** — you are great at making phone systems and codecs. But what are your qualifications for building radio consoles?"

Fact is, we're uniquely qualified to do so, thanks to a brilliant R&D team whose experience in designing and building successful radio consoles spans decades. A team that's driven to create the most **useful, powerful, hardest-working** consoles in the world.

How it began

"20-odd years ago," says Axia President Michael "Catfish" Dosch, "I was designing custom consoles for recording studios. Somebody at **PR&E** liked what I was doing and invited me to move there. Work with Jack Williams, the guy who practically *invented* the modern radio console? I jumped at the chance; BMX consoles sounded great, and were very nearly indestructible!



"PR&E was a dream job. Jack taught me how to design consoles without compromise — how to **over-engineer** them. It's great to see, 15 or 20 years later, that many of the boards I designed are still on-air.

"By the late 1990s, computers and routing switchers were becoming an essential part of the broadcast studio, and I'd been thinking about how useful it would be to combine console, router, and computer network. I shared some of my ideas with Steve Church, who'd introduced digital phone hybrids and ISDN codecs to radio. He thought the same way I did about using computers in radio studios, and we decided to work together."

First Axia console prototype. Nice test stand, Catfish.

A new kind of console

"In 2003, we launched Axia to make digital consoles, but with a twist: Axia consoles would be integrated with the routing switcher, and **networked** to share resources and capabilities throughout the studio complex. This intelligent network of studio devices lets Axia build consoles that are **more powerful** and easier for talent to use than ever before."

Axia's team of engineers have blended the best ideas from old-school analog consoles with innovative new technology to produce **bullet-proof boards** that can actually make shows run smoother and sound better.

And we invented a way to network studios, consoles and audio equipment using Ethernet. It's called **Livewire™**, and it's now an industry standard. Livewire carries hundreds of channels of real-time, uncompressed audio plus synchronized control logic and program-associated data on one skinny CAT-6 cable. Thanks to this scalable network technology, **integrated router control** is a standard feature of every Element. Any source in any studio can be loaded on any fader with no need for add-on panels.

Feature packed

We designed Element to be user-friendly, yet have all the power of a full-on production board.

For example, Element **Show Profiles** let operators recall their favorite settings with the push of a button — audio sources, fader assignments, and personalized Mic Processing and Voice EQ settings (so the midday guy will stop badgering you for "just a little more low end").

Did we say **"mic processing"**? You bet. Every voice channel has studio-grade compression, de-essing and expansion from the **processing experts at Omnia,** plus three-band parametric EQ to sweeten the deal. Built-in headphone processing means you don't have to build a separate side-chain just for the studio cans.

Making a mix-minus the old-fashioned way is hard to do. So Element **constructs mix-minuses automatically.** And mix-minus settings are saved for each audio source, so sources, backfeed and machine logic all load at once. Plus, every fader has a "Talkback" key to **communicate with phone callers,** remote talent or other studios using the console mic.

Board-ops have enough distractions without having to reach for an outboard phone control panel. Element has **hybrid controls with dedicated faders** for Telos talkshow systems; jocks can dial, pick up, screen and drop calls without ever diverting their attention from the console.

The plastic module overlays used on most consoles crack and chip — especially around switches and fader slots, where fingers can easily get cut on the sharp, splintered edges. Element overlays are **inlaid on the machined aluminum module faces** to keep the edges from cracking and peeling — expensive to make, but worth it. **Custom bezels** around faders, switches and buttons also guard those edges. Element modules will **look great for years.**

Nearly every air talent has accidentally changed a fader's audio source while it was on-the-air. To prevent that error, **Element "queues" source changes**: the operator must turn the fader off before the next assigned source "takes".

More than just products

Catfish learned something else important from his time at PR&E: "Even the best products are nothing without **great support.**" So Axia has become radio's **first console company to offer 24/7 support**, 365 days a year. Chances are you'll never need that assistance, but if you do, we'll be ready for you. Our 'round-the-clock help line is +1-216-622-0247.

Proudly Over-Engineered

If you're looking for a cheap, disposable console, this isn't it. But if you're one who seeks out and appreciates excellence wherever you may find it... Axia consoles are built **just for you.**

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World Radio History

Workbench

Radio World, February 1, 2009

Past columns are archived at *radioworld.com*

Put Stimulated Emission to Work for You

by John Bisset

Len Watson of Chicago's Scope+Focus Consultants offers a suggestion that should minimize downtime for your satellite connections.

The next time you get a call in the middle of the night that a storm blew through and the satellite is down, you'll start packing gear and be thinking signal chain. The first question that will pop up is look angle. You'll wish you had a quick way to know if the dish has been blown off-axis.

Anticipate this need. Spend 30 bucks now for a waterproof laser pointer and a couple of ground clamps or conduit supports. With the dish aligned properly, mount the laser to a part of the dish that would move if its aim changed — in Fig. 1, on one of the feed horn supports. Then point it to a "driveway" reflector, as seen in Fig. 2. Turn on the laser and you have a quick way to check the axis anytime.

Len suggests you mount the reflector 60 feet away. At this distance, the laser will move about one foot per degree off-axis.

Len provides two sources for waterproof laser pointers. Go to *www.leisurepro.com* and enter product code AQUULP in the Search field. Or try *www.roithner-laser.com/Pointer.htm* and scroll down to the underwater pointers.

Watson can be reached at *len@scopefocus.com*.

★ ★ ★

WA1MIK, Bob Meister noted a comment about a missing tower identification in the picture in the Nov. 19 *Workbench* (Fig. 3).

Bob adds a clarification for readers. Even though there is no tower identification sign visible by the tower, it's certainly legal to post such a sign at the entrance to the tower site. Two signs (one at the tower and one at the property entrance) are not necessary.

"Let's be fair," he writes. "How many tower ID signs do we really need at a site?"

Great point. In fact, I'd say the sites I've visited are divided 50/50 between signage on the tower and at the entrance. The advantage to having signage at the entrance to the property is that information can be

Fig. 1: Mount a waterproof laser pointer to your satellite dish to verify alignment.

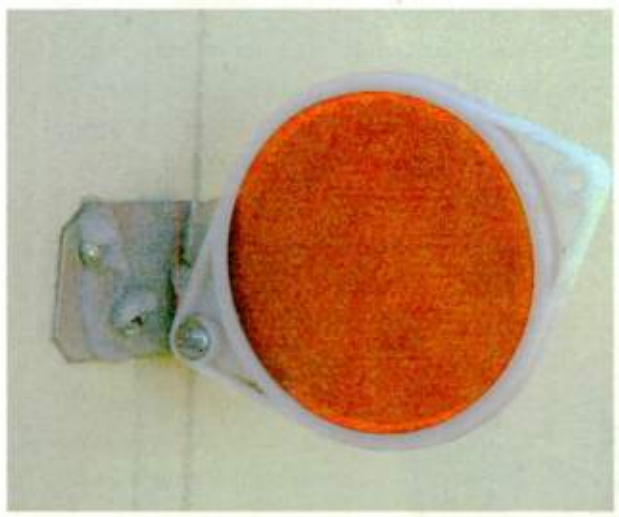

Fig. 2: A driveway reflector, mounted 60 feet away, completes the alignment setup.

Fig 3: Make sure lines entering the transmitte

copied easily from the road; site entry is not necessary.

Do you need a source of tower site signage? Try Antenna ID Products in Glenmoore, Pa., at *www.antennaid.com* or e-mail *antennaid@msn.com*. Another is Curt Bennett's Sign Pro of Lexington, Neb., co-owned with KRVN(AM). Call (888) 230-7446 or e-mail to *signpro@atcjet.net*.

Let them know you heard about them from Radio World.

One thing that grabbed Bob Meister's attention in the

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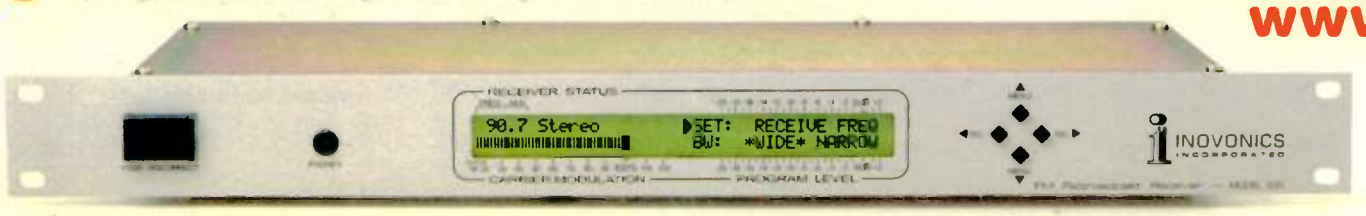

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World Radio History

photo was the lack of ground wires on the coax feed line or any other cable entering the building. These lines should be grounded outside the building, close to the entry point, as well as the base of the tower — basically anywhere they change direction by 45 degrees or more.

Lightning will continue to follow a straight path; you want it to go down the ground wire rather than into the building, where it can do more serious damage. Of course, ground connections inside the building won't hurt either.

Although we can't see the incoming electrical service, it bears inspection, too. Who knows what evil lurks around that entry point? Ditto with the incoming telephone lines.

building are grounded properly.

Is there water and sewer service to the building? What about outdoor lighting, especially over the entry door? Is there a backup generator? What's the condition of the generator enclosure? Fuel source? Fuel tanks? Fuel line? Any nearby satellite dishes? STL antennas on the tower? GPS receiver antenna for the HD Radio exciter? Any windows in the building? Are they barred securely?

The list can go on and on.

★ ★ ★

On a different subject, awhile back we had a discussion of running uninterruptible power supplies with backup generators and how some couldn't cope with the "less-than-perfect" power.

An AM station where Bob Meister works has that problem. They're using a TrippLite online UPS — an inverter runs the load 100 percent of the time — and they have an old Onan mechanically-governed generator at the transmitter site. The UPS refuses to accept the incoming AC power when on the generator, so it runs exclusively on its batteries, not even trying to charge them.

Since this is an AM station, the load on the generator naturally varies with the audio content. It's impossible to guarantee 60.0 Hz operating frequency. After running half an hour, the UPS has no choice but to bypass itself and revert to the incoming AC power, no matter how good or bad it is. Of course all the equipment continues to function fine.

When the commercial power comes back, the generator shuts off, but the UPS with dead batteries can't do anything about that momentary outage, so all the powered loads lose power for a few seconds. Not good for equipment running Linux, such as HD Radio exciters.

Bob contacted TrippLite, which told him there's nothing it can do to its units to allow them to accept "less than computer-perfect power; that's what their units expect and require," as he quoted the conversation.

If you're going to have perfect power all the time, who needs a UPS? This is the real world. Power fails.

Bob investigated the market and found that Liebert makes a similar online UPS (GXT2 series) that accepts AC power from 40 to 70 Hz and claims to be compatible with standby generators by not being so critical of incoming power. After all, it's just charging the batteries and keeping the inverter running. It shouldn't care about the voltage or frequency of the incoming power; the inverter will clean it all up and feed the load anyway.

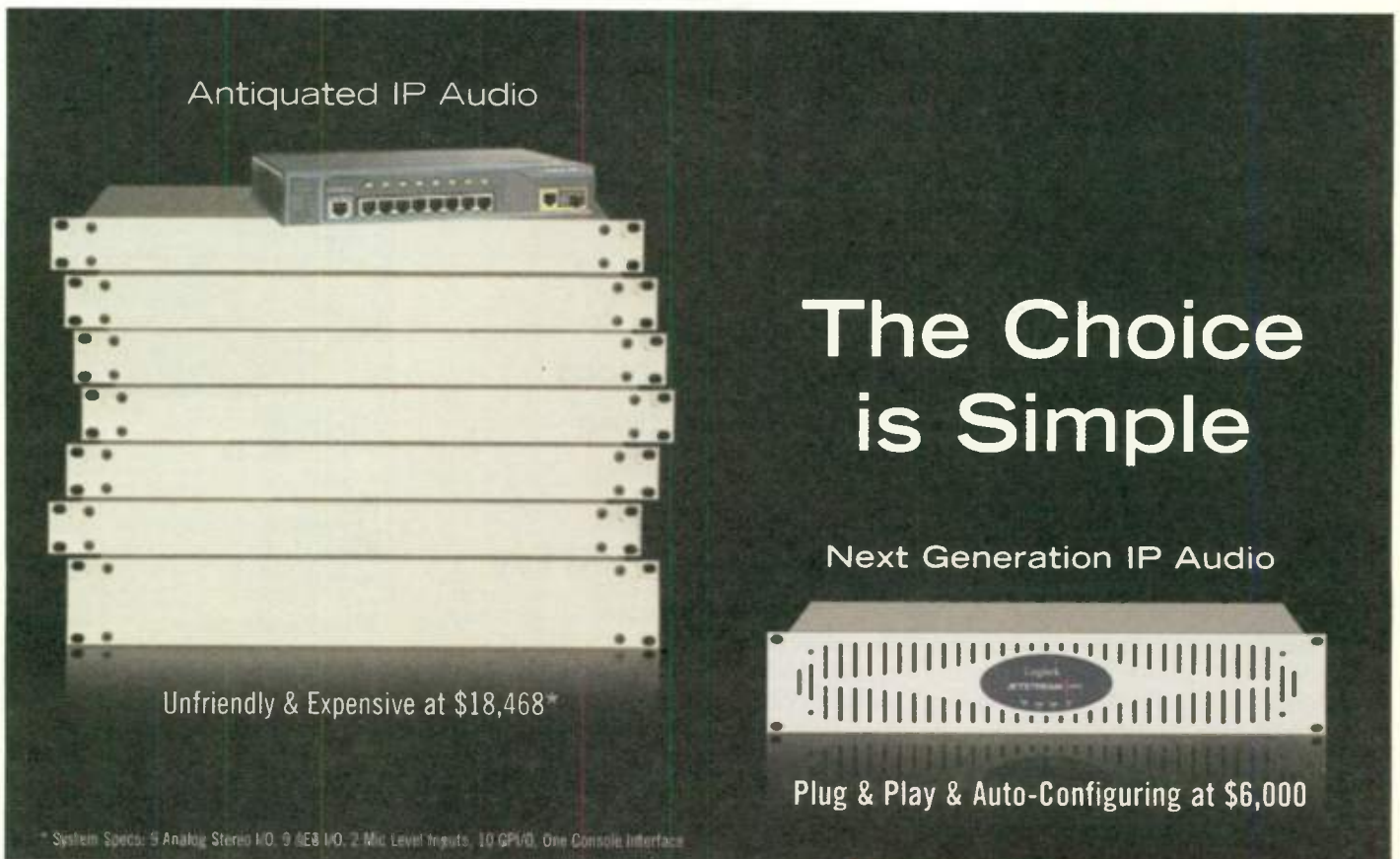
Bob bought one of the company's units but has yet to drag it down to the transmitter building and go through a power-fail situation to see how well it does. But at his house with a standby generator running at 60.5 Hz, the Liebert model works fine. It would seem that Liebert listened and designed a UPS that eliminates many of the problems people have with older generators. Not everyone can afford a computer-controlled genset that holds the output frequency at exactly 60.0 Hz.

From the Liebert Web site, *www.liebert.com*, one of the features is the unit's compatibility with backup generators. The unit boasts the ability to handle frequency variations and other power fluctuations that occur during generator operation.

Bob Meister can be reached at *walmik@comcast.net*.

John Bisset has worked as a chief engineer and contract engineer for 40 years. He recently joined Nautel as regional sales manager for Europe and Southern Africa. He was SBE's Educator of the Year for 2006. Reach him at johnbisset@verizon.net. *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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World Radio History

NEW MEDIA LEADERS

Kris Fay: A Hand at the Online Tiller

He Directs the Online Efforts of Rose City Radio's KXL and KXTG

by Tom Vernon

As radio continues to expand into new media, the people who design and implement a station's online strategy become key players in the management team.

This month, RW begins a series of interviews with radio's new media leaders in search of best practices for stations seeking to enhance their online presence.

In Portland, Ore., Kris Fay directs the online efforts of Rose City Radio's KXL(AM), Newsradio 750, and KXTG (FM), 95.5 The Game. Rose City is co-owned by Microsoft co-founder Paul Allen. The stations have distinguished themselves in this competitive market with a viable and growing online presence.

Fay's job description is all-inclusive.

Kris Fay

> Stations should look beyond simulcasting their content on the Web. They can do that by offering more opportunities to interact with personalities through blogs and video 'Webisodes,' and by putting additional content online.
>
> — Kris Fay

"I manage the online endeavors, the Web, streaming, e-mail and the IT department." His formal preparation for the job was a bit unusual. "I did a double major in English and history at Lewis & Clark College here in Portland."

Living in Japan during the early days of the Internet, Fay taught himself HTML and Web basics. Later he did an internship at Rose City Radio. "One thing led to another, and it turned into a full-time job."

In the past year, Fay has worked with station personalities to be more proactive with adding content to the Web site. "We urge them to put extra interviews and unused stories on the Web, do a blog and podcast some of their content.

"Podcasting is particularly attractive," Fay said, "because it is inexpensive to set up, and the ROI is great in terms of what we can sell them for." Download numbers and subscriptions are tangible stats that can be pitched to advertisers, who usually place their ads preceding every podcast.

In addition to podcasts of on-air content, many stations, including KXL, are adding Web-only podcasts. Local horse races and golf programs are regularly posted on the KXL site.

In addition to reaching out to listeners with additional streaming services for iPhone and other mobile devices, and peer-to-peer connections, the station started a WOMF — a Word of Mouth Forum — on Sept. 1.

Portland.womf.com is a local online community striving to be the best source for finding quality local businesses.

"About the same time we were starting up the WOMF, the local Portland blog was shutting down," said Fay, "so it was good timing for us." The WOMF is expected to bring a different demographic to the online audience.

Value add

Fay thinks one of the best online strategies for radio is a value-added concept.

"Stations should look beyond simulcasting their content on the Web. They can do that by offering more opportunities to interact with personalities through blogs and video 'Webisodes,' and by putting additional content online."

There are also more opportunities in sales for listeners to interact with advertisers who sell products and services.

"Online media has a tremendous capacity to identify and target very specific groups of listeners for advertising in ways that traditional radio simply cannot," said Fay. "Different subscribers to podcasts and other online services hear different ads, depending on their location or preferences." He adds that this increased granularity is both a blessing and a curse, however.

"We can work with a client to target a very specific audience with a message. By the same token, advertisers get very specific information on how well a campaign did or did not work. It puts the onus on our sales staff to use that feedback to make the next online campaign better than the last."

Fay notes other online activities at KXL include more tie-ins with Google, as they branch out more into media.

"Most of our work has been with mapping and search engine optimization to make it easier for listeners to find our clients." He adds that not all of Google's tie-ins are well received by radio stations.

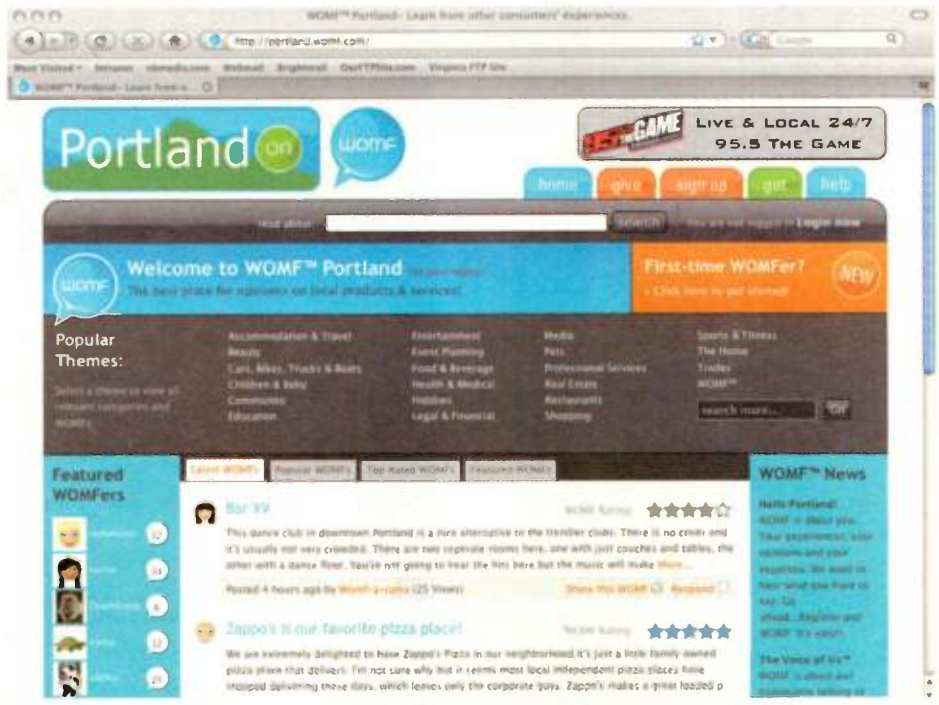
"They offer a service where they can fill your available ad placements, but that entails giving them access to a lot of sensitive information about sales and ad revenue."

Some stations, including KXL/KXTG, feel it is too much of a risk and instead opt to give some unused spots to local advertisers as a bonus. Fay adds that Google's ad placement program seems to hold more interest for small-market stations.

Fay sees video as one of the technologies that will revolutionize radio.

"A few hosts are already doing video blogs, but if we can perfect the way we use video and make it cheap to produce, it can draw listeners in on a daily basis."

How is your radio company interacting with today's consumers? Tell us about your organization's new media strategy. Write to radioworld@nbmedia.com.



Among its new media efforts, the station recently started a WOMF — Word of Mouth Forum — on *Portland.womf.com*.

MARKET PLACE

Low-Power FM Line From BE Is Scalable From 1 kW to 5 kW

Broadcast Electronics used a trade show in India to introduce a low-power FM transmitter line scalable from 1 kW to 5 kW with integrated FM exciter.

The STX LP solid-state transmitter's design is in response to customer requests for an FM transmitter that could scale up or down in power, said Vice President of RF Products Tim Bealor. BE said this is the "only scalable, frequency-agile LPFM transmitter with built-in exciter at the sub-$7,000 price point."

The manufacturer believes it will be of interest to independent broadcasters who are implementing low-powered stations as a result of FM privatization in India and elsewhere.

Available in 1 kW, 3 kW and 5 kW models, the STX LP transmitter fits a small profile and can be power upgraded in the field by adding PA modules. It includes IP connectivity for configuring and monitoring operation remotely from any laptop or PC, and is HD Radio compatible for eventual conversion to the U.S. iBiquity digital radio standard.

For information contact the company in Illinois at (217) 224-9600 or visit www.bdcast.com.

The Big Picture

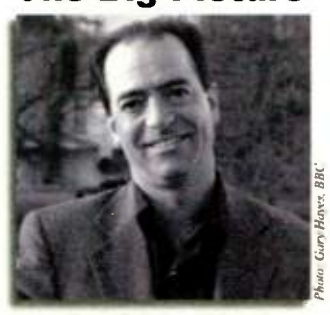


Photo: Gary Hayes, BBC

by Skip Pizzi

Skip Pizzi's column is on hiatus; he will return next issue.

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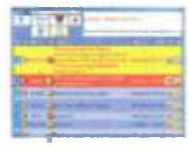

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World Radio History

STUDENT RADIO

IBS Alliance Shows Its Early Fruits

Arrangement With Backbone Is a Boon to Student Broadcasters, Its Creators Say

by James Careless

In early 2007, the "IBS Student Radio Network by Backbone," or IBS SRN, was launched.

Using Backbone Networks Corp.'s high-speed networks and servers, the Intercollegiate Broadcasting System was able to create a 24/7 Web-based network for its 1,000 high school and college radio members.

The cost to participate was nominal: $750 per student station, which included a $75 setup fee and three months of Backbone hosting at $225/month. Once signed up, the student station simply connected its Mac-based content to Backbone via a standard broadband connection.

In return, each station received up to 250 hours' of programming storage on Backbone's servers, allowing the stations to share content and thus, for the first time, be able to run 24/7 using automation.

Radio World reported on the venture earlier and recently checked in on its progress.

"What started out as a simple partnership to offer schools an inexpensive and reliable way to stream their signal has really mushroomed," said IBS Chairman Len Mailloux.

"IBS SRN started with a handful of stations and within a few months, the people at Apple iTunes decided to get involved and created a College Radio category on the iTunes site that features IBS/Backbone Student Radio Network Stations." He estimated its current roster at "over two dozen stations ... and several more in the process of joining. We're still small but growing."

Getting a spot on iTunes "has increased our world reach exponentially," Mailloux said.

"As an example, I'm the founding general manager of All Independent Radio at The New England Institute of Art in Boston. In our first six weeks on the iTunes site, the station had recorded hits from over 90 countries. Last week alone, AI Radio had over 5,000 listeners worldwide."

Power of the network

Being able to share programming is the tip of the iceberg when it comes to the benefits enjoyed by IBS SRN member stations. In the old-fashioned broadcasting sense of the word, they are now connected to the same network, letting them work together on multi-station national broadcasts in real time.

An example of this power occurred in September when IBS SRN member stations held IBS-Palooza, a multi-venue network broadcast featuring live music captured by IBS stations around the country and fed into the IBS SRN for all to share. During IBS-Palooza, the show could be heard on each participating station's Web site, the IBS' online "WIBS" and Apple's iTunes Radio, College Radio category.

"The IBS-Palooza idea really came from the folks at Backbone," Mailloux said. "We've been talking about ways to create a cooperative working relationship between affiliates and they came up with the idea of a live music weekend. We had a couple of conference calls to get acquainted with each other, and thanks to George Capalbo's engineering abilities at Backbone, it all went very well."

If all goes to plan, IBS-Palooza will become an annual event.

IBS SRN member stations held a multi-venue network broadcast in the fall featuring live music captured by IBS stations and fed into the IBS SRN for all to share.

> I'd love to have a promo from Goucher College or Oklahoma State running on All Independent Radio in Boston.
>
> — Len Mailloux

"This was the first real 'project' for the new IBS/Backbone Student Radio Network but we've already started talking about some other special programming in the months ahead," Mailloux said. "We've floated the idea of a Halloween special and are considering another IBS-Palooza event in late winter or spring."

It may seem presumptuous to call the IBS/Backbone alliance a quantum leap in U.S. student broadcasting, but that is how the IBS chairman sees the venture.

"Being on this network gives student broadcasters access to a world audience that was not possible before and makes them part of something much bigger," he said. "It also gives us all a chance to learn from each other.

"In good schools, the students are taught well. In great schools, everyone teaches each other. I'd like to see that happen with the IBS/Backbone Student Radio Network and in academic broadcasting in general."

In terms of the IBS SRN's next steps, "I'd like to triple the publicity both inside and outside the network and IBS, and I'd like to see the schools work even more closely together in future.

"One idea is to have the participating affiliates cut promos for each other promoting the event and inviting listeners to tune in. I'd love to have a promo from Goucher College or Oklahoma State running on All Independent Radio in Boston. It would make the whole effort more cohesive and give the students a chance to branch out a bit with their work."

When this whole project was proposed, some wondered if student broadcasters and a commercial broadband carrier could actually achieve the lofty goals embodied by the IBS SRN. Looking back on that doubt and what has happened since then, "I think the biggest lesson learned is that we can actually do this," said Mailloux. "We can bring academic broadcasters together from around the country in a common effort. It sounded great in theory and now it's reassuring to know that it works."

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With three decades of experience covering the industry, she is based where our industry's news and opinion leaders are at immediate hand, including the headquarters of the National Association of Broadcasters, the Federal Communications Commission and the Consumer Electronics Association, as well as Capitol Hill.

Sign up at: *http://www.radioworld.com/leslie_report*

MARKET PLACE

Kaltman Expands Analyzer Line

Kaltman Creations rolled out a handheld RF spectrum analyzer that it promotes for notable performance at its price point.

The Spectran HF60100 retails for $4,975. Specs include a frequency range of 1 MHz to 9.4 GHz, sensitivity of –130 dBm, bandwidth resolution of 1 kHz, stability of 0.5 PPM and accuracy of +/- 1 dB.

The HF60100 is sold as an analysis kit that includes the RF analyzer, SMA stick antenna, handheld log periodic antenna, AC charger/adaptor, aluminum carrying case, mini-tripod stand, USB cable, PC software and documentation. An optional internal pre-amp is available.

For information call the company in Georgia at (678) 714-2000 or visit www.rfanalyzers.com.

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World Radio History

RADIO IT MANAGEMENT

Does Your Yotta Byte?

Some of the Hot New Broadcast Technologies And the Associated Terms We Hear About Them

by Andrew P. Janitschek

The author is director, program and operations support for Radio Free Asia in Washington.

Terms like gigabyte and terabyte are part of our everyday language. Others like 1080p, HD Radio and HDMI can also be classified as part of our daily technical vernacular in the radio business, but only a few years ago they were virtually unknown to most.

This is a brief study of "the now" in broadcasting and a glimpse at the not-too-distant future.

The focus of engineers continues to be on larger storage capacity, faster data transmission, smarter broadcasting and greener engineering.

Just in terms of data storage, most of us are only now poised to think in terms of terabytes and petabytes. Data transmission rates of gigabits-per-second will give way to terabits-per-second too.

Radio World readers are familiar with HD Radio, Digital Radio Mondiale and Digital Radio Express/FMeXtra. But what other technological advances will change the way we live, work and speak?

Where do you come from?

The English language is in a constant state of evolution. Many words common in the 1800s and 1900s are no longer considered useful in the 21st century.

According to the Global Language Monitor, there are approximately 1 million words in the English language. A personal vocabulary of 7,500 words is considered to be necessary in order to write and speak fluently.

As you can guess, there are many words that will cease usefulness as others find their way into our everyday parlance. While a spittoon is certainly not in vogue any more, when was the last time you heard someone ask for an ashtray? Sure, these are not technical terms, but they have seen their day. When was the last time you heard someone talk about dropping a needle on a record?

Let us take a moment and examine the word "radio."

We have all been touched by this technology throughout our personal lives and careers. Radio originally was called "wireless telegraphy," which was shortened to "wireless." The word "radio" was first used in 1897 by French physicist Edouard Branly when he wrote about radioconductors. The term is based on the Latin word "radius," which means "the spoke of a wheel; a ray of light."

The use of the word "radio" as we know it appeared in a 1907 article by Lee de Forest but creation of the word is credited to a marketer, Waldo Warren.

In 1912, the U.S. Navy adopted the use of the word "radio" and by the time commercial broadcasts began in the 1920s, "radio" became the common word used to refer to the actual transceiver.

It is interesting to note that the term "wireless" has been revitalized. One hundred years ago, "wireless" was used to describe radio; today it is used as a reference to wireless networking and Internet connections.

Jargon is words specific to a profession, group or activity. If you sail, you would be familiar with jib, halyard and leeward. If you are a philatelist, terms like perforations, hinges and possessions take on new meaning. Computer-related jargon continues to grow as technology improves and needs of users evolve as quickly.

Can you remember the first time you heard of Microsoft Vista or XP? At first these sounded strange; now most of us use them as commonplace terms.

According to the Global Language Monitor, the most common jargon in the world is "O.K," the abbreviation for Old Kinderhook, the nickname of our eighth president, Martin Van Buren. Kinderhook is a reference to the town of his birth in New York. In Van Buren's 1840 campaign for re-election, his slogan was "Martin Van Buren is O.K." Today, the term is synonymous with "all is well."

The Monitor recently published the "10 Most Confusing Yet Frequently Cited High-Tech Buzzwords" of the past year. Here it is, with its original comments:

1. *Cloud Computing* — Distributing or accessing programs and services across the Internet. (The Internet is represented as a cloud.)
2. *Green Washing* — Repositioning your product so that its shortfalls are now positioned as environmental benefits: Not enough power? Just re-position as energy-saving.
3. *Buzzword Compliant* — Including the latest buzzwords in literature about a product or service in order to make it "resonate" with the customer.
4. *Resonate* — Not the tendency of a system to oscillate at maximum amplitude, but the ability to relate to (or resonate with) a customer's desires.
5. *De-duping* — shorthand for de-duplication, that is, removing redundant data from a system.
6. *Virtualization* — Around since dinosaurs walked the planet (the late '70s) virtualization now applies to everything from infrastructures to I/O.
7. *Web 2.0* — Now there's talk of Web 3.0, just when we were finally getting used to Web 2.0.
8. *Versioning* — Creating new revisions (or versions) with fewer bugs and more features.
9. *Word Clouds* — Graphic representations of the words used in a text, the more frequently used, the larger the representation.
10. *Petaflop* — A thousand trillion (or quadrillion) floating point operations per second. Often mistaken as a comment on the environmental group.

(As a matter of reference, the 2007 list included iPod, Flash, Cookie and Nano. Past entries include HTTP, Voice Over IP, Megapixel, Plasma, Robust, WORM and Emoticon.)

Storage

In 1991 I purchased my first desktop computer for use at home; it was a Packard Bell with a 286 megahertz (MHz) processor with a 40 megabyte hard drive for storage space.

By today's standards, the processing speed and storage capacity are laughable, but this does give us some perspective of how far we have come in relation to the norms for storing data.

Fifteen years ago we were talking of tens and hundreds of megabytes, but in 2009, we are all ready to retire the term gigabytes in favor of terabytes and petabytes as our engineering paradigms continue to evolve along with technology.

As costs for storage go down and the demand for greater storage capacity rises, we witnessed the inclusion of terms like bits and bytes into most every language on the globe.

We were also participants and spectators to the inclusion of terms like kilobyte, megabyte and gigabyte as these larger storage levels were incorporated into our lives at work and at home.

While the use of the terms terabytes and petabytes are achieving greater importance, it is apropos that we look at storage from the bit up to the yottabyte.

For most, this is a simple review of data storage and the terms associated with specific data storage capacities, but it does offer a perspective of how much data is stored at levels we have used, and have yet to use, in our daily lives.

A bit is the basic form of data upon which all others are built. A bit can be one of two digits, a 0 or a 1. As a binary digit, a bit is not only the basis of all digital communications but digital storage.

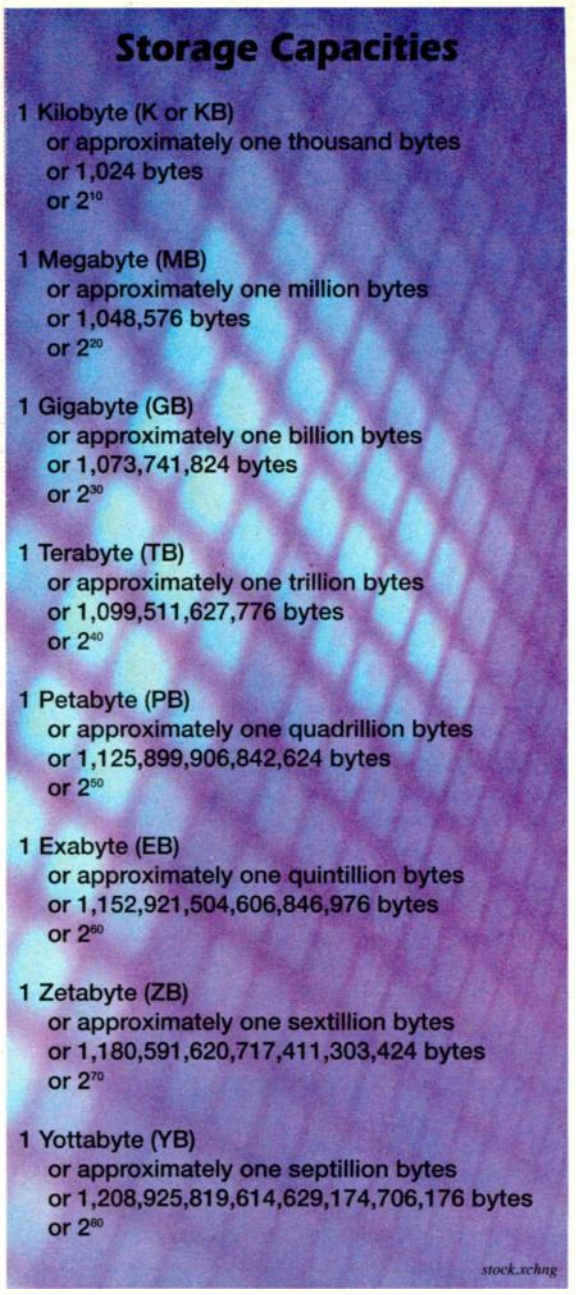
Data transfer rates usually are described in terms of bits per second (bps), but for the sake of this discussion, we will focus on the use of bits as data storage units.

Computers have always used the binary system and will likely continue to do so in the foreseeable future. When stringing a series of bits together, we achieved a byte. When first used, a byte was made of various strings of bits, but it is generally accepted that eight bits constitute one byte. For those of you who prefer, a byte is also called a word.

As the storage capacity needed for documents and computer programs grew, the amount of needed storage space also grew.

When approximately a thousand bytes of space was needed on a hard drive, this was simply called one kilobyte. The true definition of one kilobyte in the binary system is 1,024 bytes, but it is usually used to mean approximately one thousand bytes. In decimal systems, a kilo means 1,000, but a kilobyte is also known by its binary system designation of 2^{10} since this is the power of 2 which is closest to one-thousand.

Kilobyte is often shortened to K or KB, though the Institute of Electrical and Electronics Engineers (IEEE) recommends using the small letter *k* for a kilo in the decimal system while using a capital *K* when referring to a kilo when used in the binary system.



Demands for more storage continued to rise over time. To meet that demand, devices capable of storing megabytes, or thousands of kilobytes, were produced.

The need for one thousand kilobytes (actually 1,024 kilobytes) brought us up to a storage level of one megabyte; 1,024 megabytes took us further to one gigabyte while the need to store 1,024 gigabytes started the use of one terabyte as the next generation of storage and storage terminology.

One terabyte (1 TB) hard drives now are available readily through major electronic retailers for no more than a few hundred dollars each.

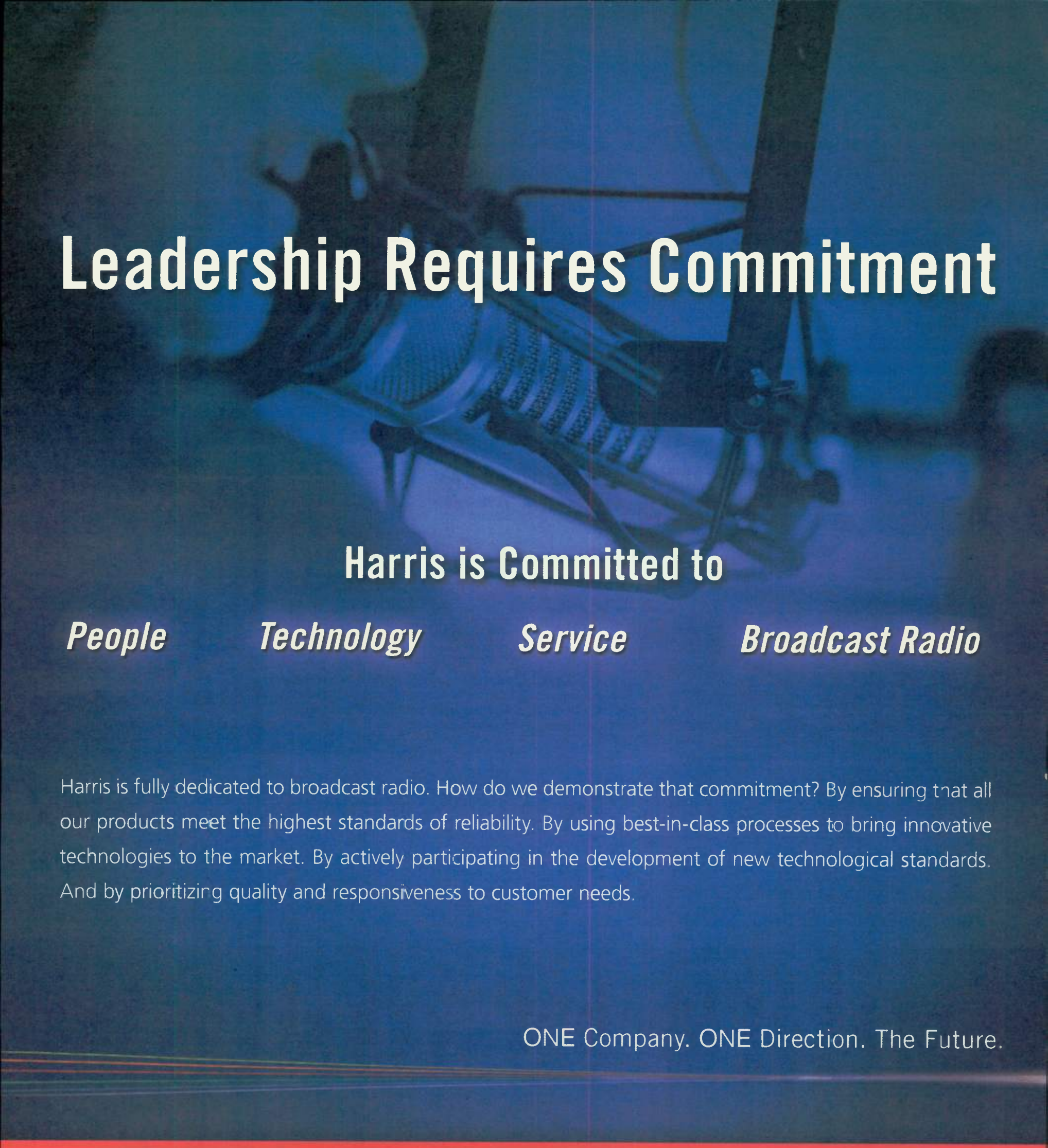
Companies like Cisco work with petabytes of storage capacity, or roughly a quadrillion bytes per petabyte. In 2005, Cisco's storage for their marketing, sales and human resources departments was over two petabytes; in 2007 they reached 11 petabytes. How long before Cisco is dealing with storage area networks with a combined total of exabytes or more?

Fig. 1 sums up storage capacities and their associated terms, some of which we have yet to adopt for everyday use.

There are many terms like gigabyte and terabyte we use regularly and without hesitation. Next time, in the concluding part of this article, I'll touch on other terms that may find their way into our lives as we continue to improve operations through larger storage capacity, faster data transmission, smarter broadcasting and greener engineering.

This article is based on a presentation by the author at the 2008 NAB Show Broadcast Engineering Conference. *Material is copyright Radio Free Asia.*

World Radio History



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World Radio History

MILE STONES

The Sta-Level: Effective Audio Control

Remembering a Simple, Mild, Automatic Audio Gain Control Made by Gates

by Charles S. Fitch

This is one in a series of occasional articles about radio broadcast industry technical milestones. Read past Milestones under Columns at radioworld.com.

In any industry, we can look back and identify occasions when the appearance of a novel product or technique ushered in a new period.

In radio, one was the introduction in 1956 of the extremely successful Gates Sta-Level. This box was an ultra-simple, mild, automatic audio gain control unit using ordinary tube circuitry and hand-wiring concepts ubiquitous at the time.

Because of its reasonable price and simple implementation, it brought effective automatic audio control to countless medium and small radio stations throughout the country. Within limits, the cost-effective Sta-Level could tame unruly audio and increase average modulation, especially when used in conjunction with a peak limiter.

What's in the box?

The standard approach to audio processing design at the time was to build an amplifier with a high-level output such that audio samples of that output could be easily rectified, proportionated and modeled to fit our hearing sensibilities; then this DC signal was introduced back into an earlier low-level stage to control the audio. Balanced push-pull circuitry was used to help cancel harmonic content as well as to simplify control, remove artifacts and enhance fidelity.

The Sta-Level was no different, with three gain stages yielding an overall maximum 62 dB of gain (literally –55 dBm mic level to +8 dBm line level). A maximum output level of +24 dBm (0.25 watts into 600 ohms) was possible with the removal of the output pad.

A sample from the plates of the 6V6 pentode power output tubes was rectified in a 6AL5 double diode tube and then the DC combined to form the control signal, which is essentially a variable negative bias level introduced into the grids of the two sections of the GL-6386 input/control tube.

The OB2 voltage regulator was used to provide a stable positive bias of about 25 volts that had to be exceeded before a control voltage could be rectified, effectively setting the threshold level for control.

The Gates designers were able to fit all this into an enclosure three rack units high with a fold-down front panel.

Compression and limiting are not the same. Stock from the factory, the Sta-Level was only a modest 3.3 to 1 compressor (a 3.3 dB increase in input produces only a 1 dB change in output). An advantage of starting with a high-level DC control signal is that you can send it through an RC (resistor and capacitor) network to vary the attack time (how fast it controls) and release time (how long it holds down the level) as well as the compression ratio.

Radio engineers tinkered with these values to get that perfect operation to fit/complement a given format's music and voices. Compression ratios of 6:1 were possible and release time constants could be made minutes long.

Wanting to sound loud, rock and roll stations of the era tended to be more aggressive, with heavy compression and fast release modifications. Classical, news, talk and MOR stations left the box in stock condition or with less edgy settings.

Out of the shipping crate, setup usually was straightforward. Connect the output of the main control room board to the Sta-Level, run your regular programming, put the release time switch on your desired position, set the input pot to achieve about –15 dB of compression on the meter, set the fine adjust on the output pad for a workable level into the following connections to the transmitter and, voilà, you and your Sta-Level were good to go.

At most stations in the 1950s, leased equalized telephone lines served as the STLs; in the usual arrangement, the Sta-Level was at the studio keeping up the level for best signal-to-noise to feed into the line, and a peak limiter was installed at the transmitter for final control.

Those of us who had just dry LAD pairs (*unequalized* circuits direct from the studio to the transmitter, just two wires) usually removed the Sta-Level output pad so that we had +24 dBm output with a passive equalizer between it and a Western Electric repeat coil to feed the dry pair at 50 ohms.

Bring up da noise

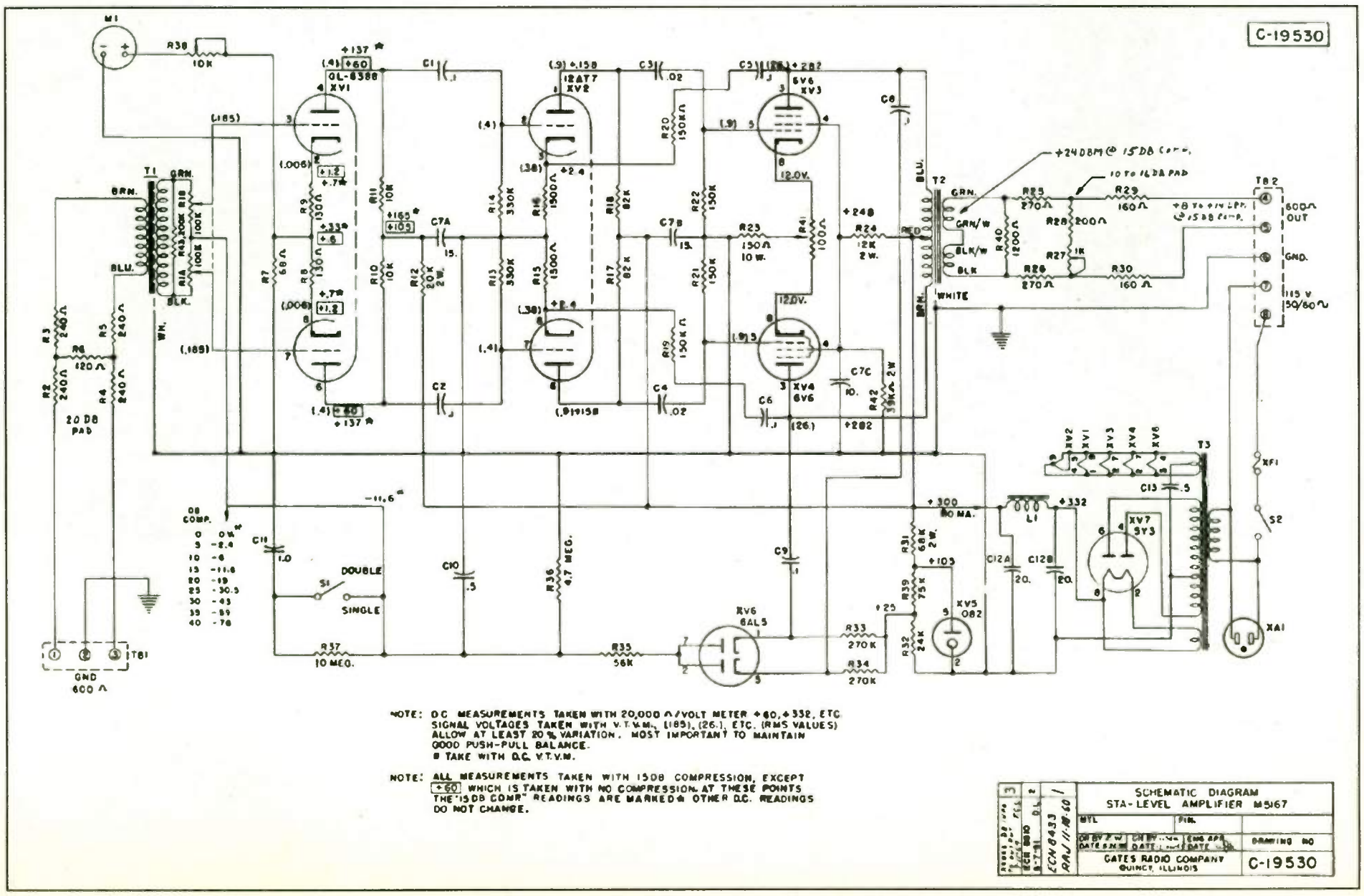
With no audio input, the Sta-Level would release to maximum gain, bringing up the system noise if present. In this aspect it was unlike the later, more deluxe CBS Audimax or Gates Level Devil AGC units, which had a gating feature to hold gain level where it was or return to unity when there was suddenly no audio to control.

Airchecks from these times are full of the swoop of aggressive Sta-Levels and the full "echo" return sound from the announcer mic reverb chamber.

No matter what the configuration, the Sta-Level was a stalwart, raising the average modulation levels across the country, extending the range of stations and providing a more uniform listening level. Even after they were removed from air service, many stayed on for years, pre-leveling audio for production rooms, incoming telephone calls, actualities and live recordings.

You can now buy a recreated version of the Sta-Level from Retro Instruments. Our friend Paul Gregg recalls selling the original product for a retail price of around $275. The Sta-Level now brings top dollar in private sales and on eBay for its unique sound in audio production and for its place in the history of the industry.

Charles S. Fitch, W2IPI, is a registered professional consultant engineer, member of the AFCCE, senior member of the SBE, lifetime CPBE with AMD, licensed electrical contractor, former station owner and former director of engineering of WTIC(TV) in Hartford, Conn., and WHSH(TV) in Marlborough, Mass.



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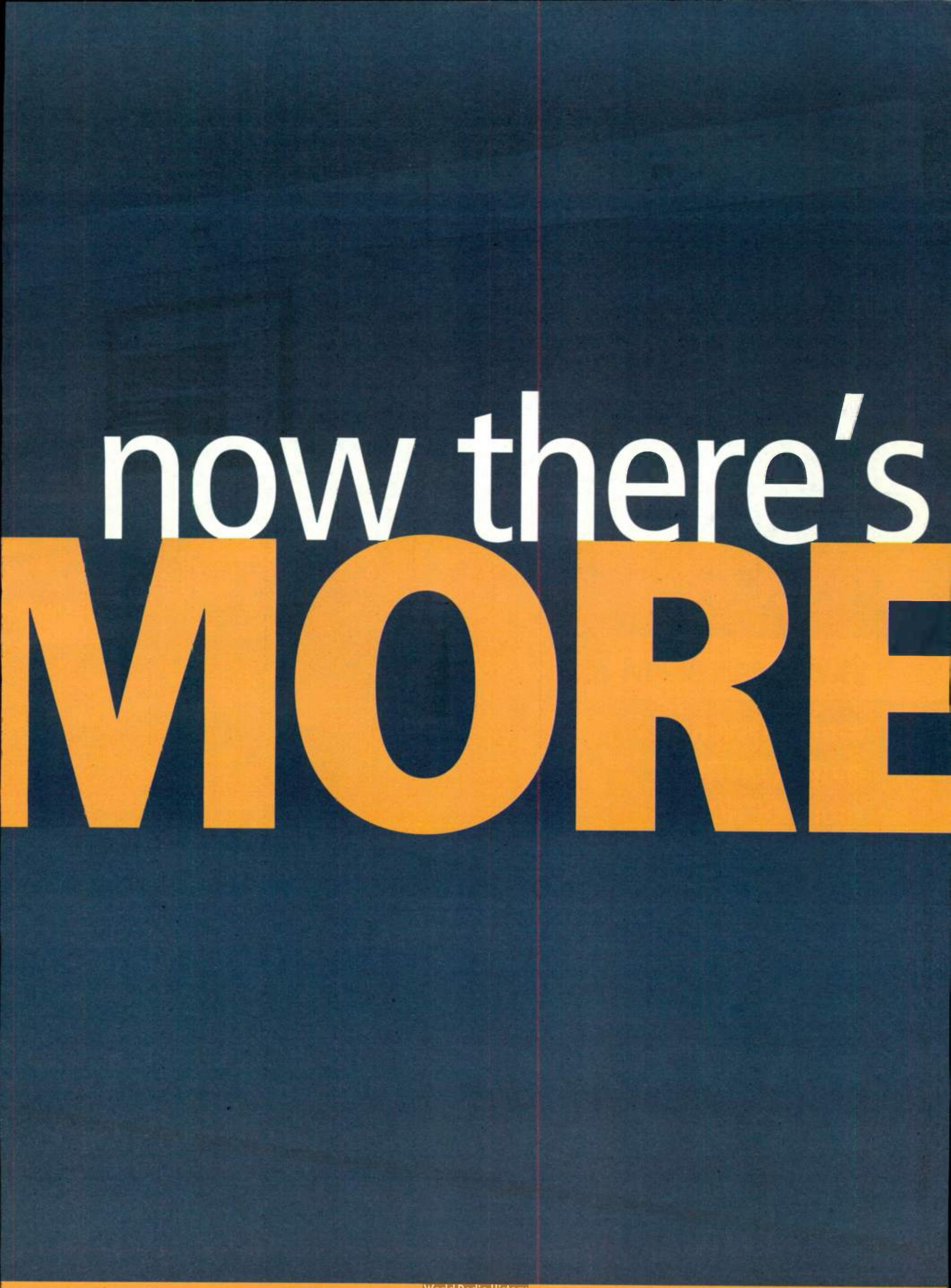
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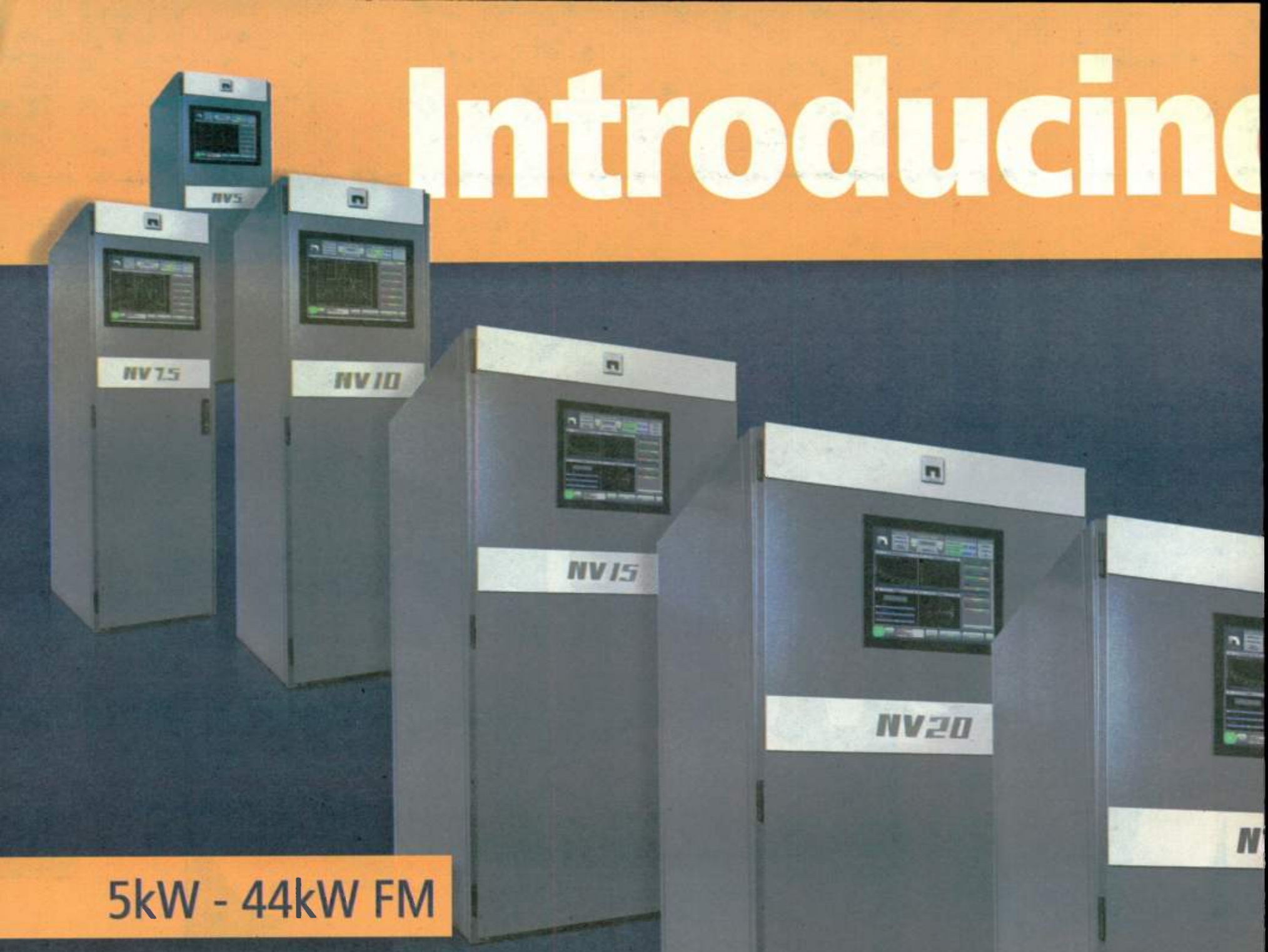
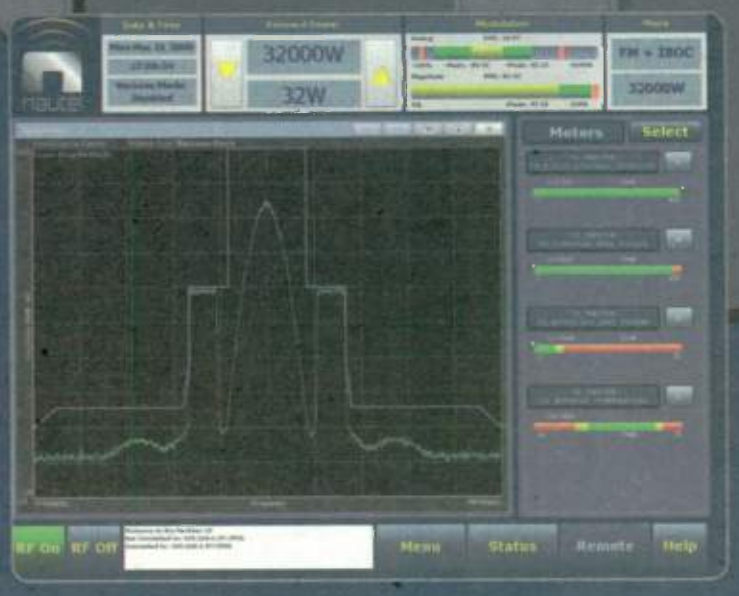
Introducing



5kW - 44kW FM

more **POWER**
more **CONTROL**
more **OPTIONS**

Following the extremely successful launch of the NV40 FM transmitter, broadcasters asked when they could get the advanced features of an NV40 in a midrange power transmitter? The answer is now. Introducing the NV Series of FM transmitters with power outputs of 5kW to 44kW. All NV transmitters come complete with an integral advanced digital exciter, Nautel's Advanced User Interface, built in instrumentation and all of the redundancy, hot-swap serviceability and reliable rugged design that you have come to expect from Nautel.

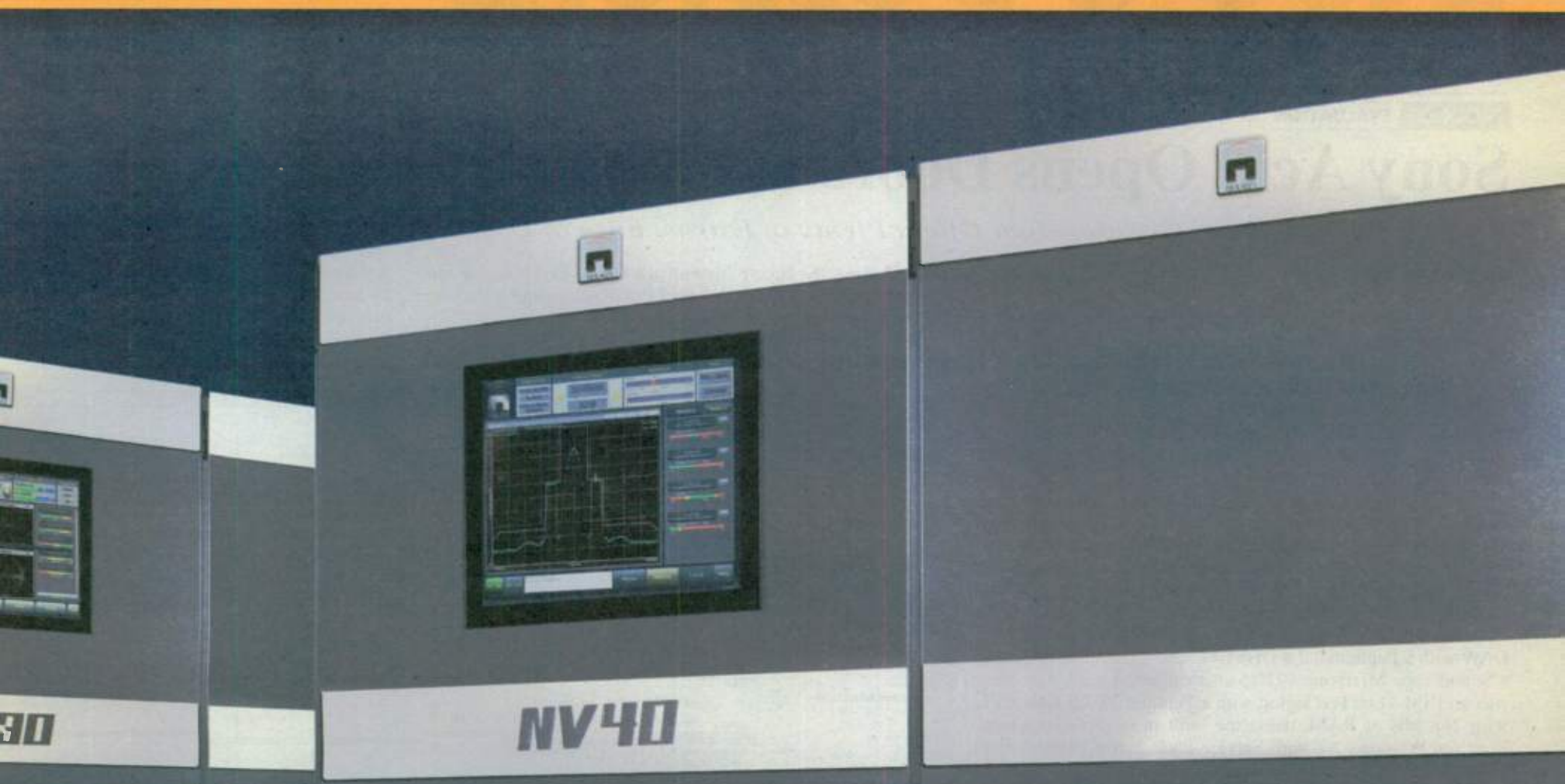


Advanced User Interface

LEARN MORE – Sign up for the NV Series launch webinar at nautel.com/expectmore

World Radio History

g the NV Series



Rewriting the Rules for High Power FM

Common wisdom was that tubes provided the best value for high power FM. All that changed when Nautel introduced the award winning NV40, the first and only high-power solid-state transmitter with tube comparable affordability. Now the expanded family of frequency agile NV Series transmitters gives broadcasters even more solid-state options at all power levels. Expect more reliability, easier maintenance, compact footprints and no tuning or tubes.

5 year warranty*

HD Radio Pure Digital. Clear Radio.

Making Digital Radio Work.

nautel

*Its Nautel's 40th anniversary: all NV Series transmitters purchased in 2009 will receive a 5 year warranty

World Radio History

Studio Sessions

Product Guide

Inside

Radio World — Resource for Radio On-Air, Production and Recording — February 1, 2009

PRODUCT EVALUATION

Sony Acid Opens Doors of Creativity

Feature-Packed Music Creation Tool Offers Plenty of Extras, Ease of Use

by Curt Yengst

When I was asked to take a look at Acid Pro 7 audio editing/creation tool from Sony Creative Software, I jumped at the chance.

I've been a long-time user of its sister program, the video NLE Vegas, so I was curious to see not only how Acid stacked up against other audio platforms I've used, but how similar it was to Vegas, which began as an audio production platform but later moved into digital video.

Acid hit the scene in 1998 as a sample-based loop editor and music creation tool. Over the years it evolved in that direction, but in 2006, Version 6 included basic audio recording and editing features. Version 7 brings those features to a new level, adding a new mixing console window, time stretching capability and a powerful MIDI sequencer.

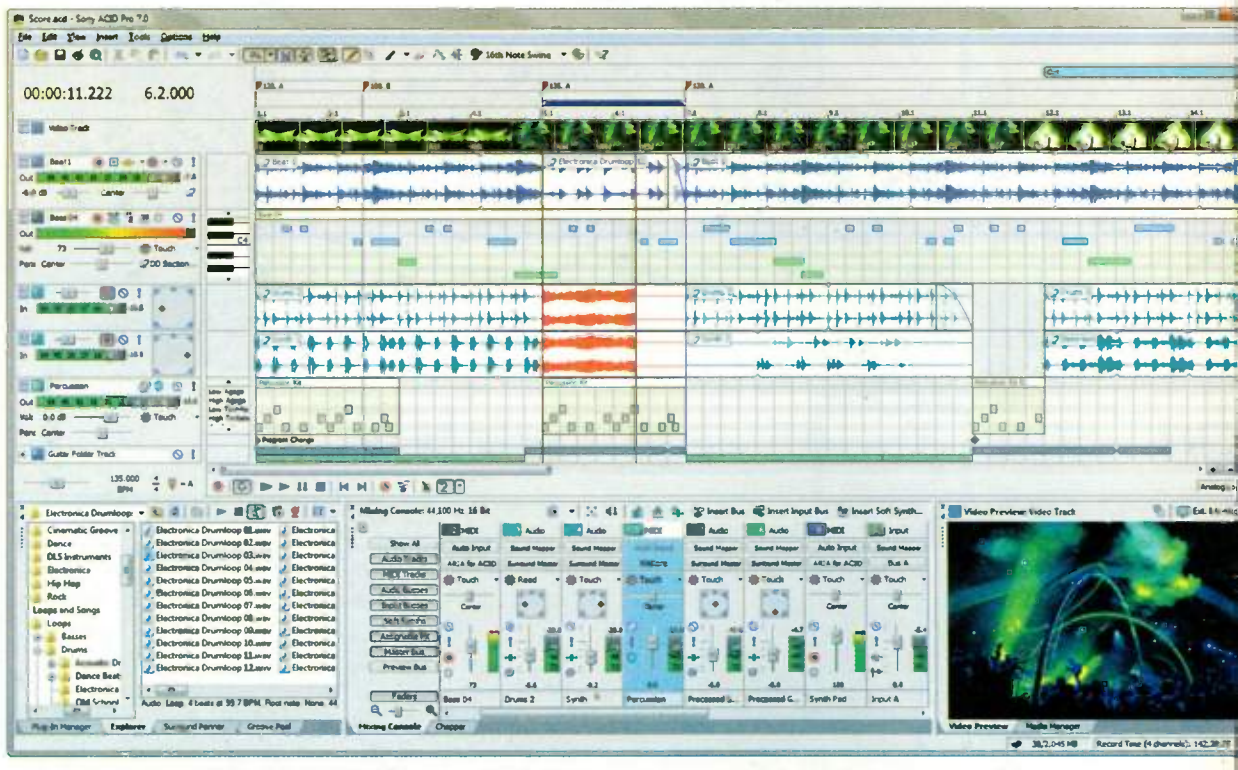
I used Acid Pro 7 on two platforms. One was a custom-built DAW with a Pentium 4 2.4 GHz CPU and 1 GB of RAM, using a Soundscape Mixtreme 192 16-channel sound card. The other was an IBM ThinkPad laptop with a Pentium M 1.7 GHz CPU with 768 MB of RAM, using the built-in stereo sound card. Both run Windows XP with Service Pack 2. Not exactly state-of-the-art, but not antiques either.

Layout

The install went smoothly on both machines, and neither had any problem running the software. The software supports a host of files, from WAV to MP3, AAC, WMA, FLAC, JPEG and just about anything else I could think to throw at a Windows-based DAW. It handles audio up to 24-bit/192 kHz. It also supports DirectX and VST third-party plug-ins, although it comes with plenty of processing and effects goodies of its own.

The Acid Pro 7 package also includes an additional $500 worth of extra software including the Acid Pro Effects Rack from iZotope, the Native Instruments Guitar Combos amp simulator, the Garritan ARIA for Acid Pro player sound library and the Submersible Music KitCore drum file library.

The workspace in Acid is fairly simple. You have one screen with a timeline, where the various tracks reside and the editing is done. Above that there are various menus, followed by the customizable toolbar. Below the timeline is the Window Docking Area, where the Mixer, Explorer, Media Manager and any of several other windows reside. Any of these windows can be "undocked" and dragged to any other part of the screen at your convenience, as well as resized. The desktop color scheme can be customized, along with keyboard shortcuts. In short, if there's something the user doesn't like about the layout, it can be changed.



Sony Acid Pro 7 brings its features to a new level, adding a new mixing console window, time stretching capability and a powerful MIDI sequencer.

Using a few basic tools, it is possible to cut, splice and otherwise manipulate audio clips with relative ease.

The most common tool I found myself using was the Draw tool. Moving audio clips, called "events" in Acid-speak, was easy enough. If I wanted an event to be shorter or longer, I simply had to place the tool at the edge and, while holding the left mouse button, drag the edge of the event to where I wanted it.

Fading a piece of audio in or out is as simple as grabbing the top corner of the event and dragging. The fade appears instantly, and its duration is determined by how far you drag. Right-clicking on the fade brings up a window that gives you several fade envelopes from which to choose.

These and a few other features are obvious carryovers from Vegas, and are similar to other platforms, which makes learning the program easier.

Other tools include the Paint tool, which allows you to place audio across several tracks at once, and the Erase tool, the name of which is self-explanatory.

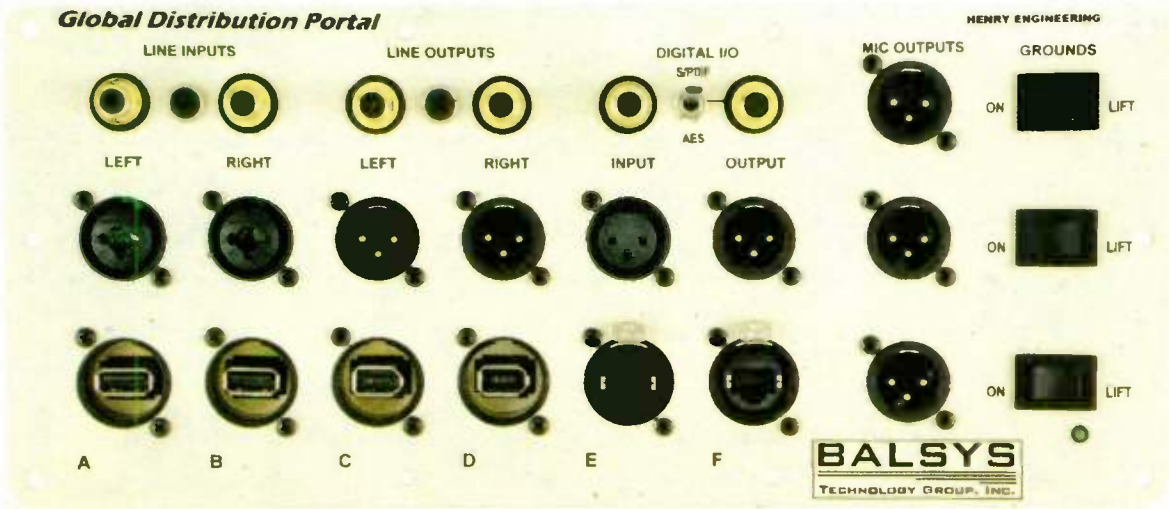
Since Acid was designed to be a music production tool, the timeline is laid out according to beats and measures, but a time ruler of hours:minutes:seconds is

Universal Studio Connectivity

Don't Build A Studio Without One!

The **Global Distribution Portal** provides convenient two way interface between any Studio / Central Audio System and external equipment. Active circuitry supports both Analog & Digital Stereo I/O in both Professional & Consumer formats, utilizing the most commonly encountered audio c onnectors.

3 Mono Summed Output Feeds at Mic Level. Independent Ground Lifts. Spaced to permit use of Wireless "Butt Plug" Transmitters.



6 Utility Feedthrough Connectors. Standard configuration is 2 each USB, Fire Wire, and RJ-45, but all are interchangeable and can easily be field configured as desired.

3RU High - Rackmount Adapters optionally available.

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World Radio History

Product Capsule:

Sony Creative Software Acid Pro 7

Thumbs Up

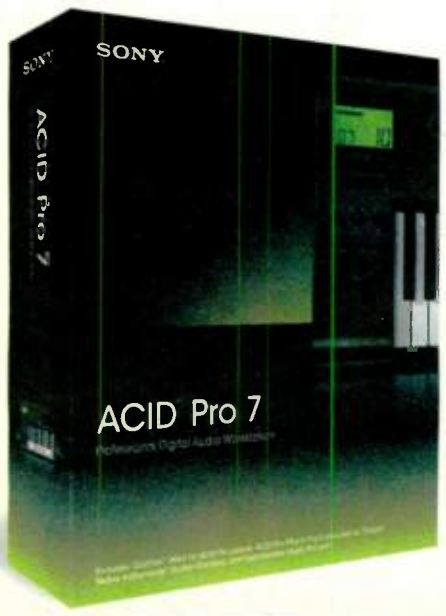
- ✓ Good value for the money, reasonably priced
- ✓ Lots of included content, as well as access to additional content
- ✓ CD burning built in, no need for additional software

Thumbs Down

- ✓ Timeline grid limited to music-based timing

PRICE: Starts at $299

CONTACT: *Sony Creative Software at (608) 204-7703, or visit* www.sonycreativesoftware.com.



available. This took getting used to. I would have liked to be able to change the timeline grid to follow the time ruler instead of being stuck with beats and measures. But this is hardly a deal-breaker.

Each track in the timeline has individual controls for level, panning, phase, solo and mute, as well as automation, bussing, effects and a little scribble strip for name the track. There's also a level meter. The controls for each track are duplicated in the Mixer window, which is laid out intuitively. The Mixer view is customizable, allowing the user to choose which features are visible.

Another interesting feature of Acid is the ability to create what are called "Folder Tracks." As a means of reducing workspace clutter, users can take any number of individual tracks and place them in Folder Tracks. Think of them as subgroups. If there are 10 tracks devoted to drums, all can be placed in a single Folder Track; then collapse that folder in the timeline, making it easier to navigate through your mix.

At work

Recording in Acid is about as straightforward as it gets.

Add an audio track (if one does not already exist), select which soundcard to use, arm the track for record, and hit the record button. When done, Acid asks what the track should be named, and whether it should be kept it or deleted. When a track is armed, the meter for that track shows the incoming level. This can all be accomplished from either the Timeline or the Mixer. Recorded audio, as well as imported audio, can be Beatmapped to accommodate mixing with sample loops later.

Since Acid started out as a sample loop editor, it of course retains that pedigree and all the features that go with that. Each new project has a user-selectable tempo, time signature and key. Any sample loops imported into the program automatically are transcribed and speed-adjusted to fit.

So where do these sample loops come from? Did I mention that Acid Pro 7 includes about 4 GB(!) of content in the form of loops, patterns, and templates in every genre from classical to techno? Crayola *wishes* they made a box of crayons this big.

It's a simple matter to grab any number of loops or "one-shots" (what Acid calls musical bits that are not meant to be looped), and create custom music beds, stingers and bumpers of any length in any style. Imagine the money you can save on production music.

It burns!

If the included content isn't enough, users can create their own, or visit Sony's Web site (*www.sonycreativesoftware.com*) where users can download eight free new loops every month. The sample loops can also be combined with separately recorded loops or MIDI tracks. I was able, simply by plugging in the correct tempo, to replace the drums in an already recorded project with a sample loop. Acid also has a Groove tool that can be applied to drum loops, imparting a more "human" feel to the rhythm. There are dozens of grooves at your disposal, from rock to swing to polyrhythms.

Of course it burns. It's "Acid," after all.

I was pleased to see that one of my favorite features of Sony Vegas was included in Acid, namely the ability to burn CDs directly from the editing timeline. Some DAWs include CD burning, but you usually have to first render the mix to a stereo WAV file. Not so in Acid.

Simply arrange the tracks, make edits, add plug-ins, set levels and when the mix is satisfactory, add Track ID markers to the timeline, drop a blank CD in the burner, and from the Tools menu select one of two methods of burning a CD. Select Track-at-Once for burning one track at a time, or the more popular Disc-at-Once, which turns what is seen in the

See ACID, page 24 ▶

EVENT 5800
HIGH CAPACITY BIDIRECTIONAL STUDIO TRANSMITTER LINK

TRANSPORTS UP TO 9 RADIO STATIONS, UNCOMPRESSED, OVER A SINGLE LINK

EVENT 5800 IDU

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The Moseley Event 5800 — is a carrier class T1/E1/IP Ethernet radio link. Combined with the Starlink SL9003T1, the Event 5800 creates a high capacity bidirectional STL/TSL.

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World Radio History

Acid

▶ Continued from page 23

timeline into a duplicator-ready, Red Book-compatible, audio CD.

This feature is a great timesaver. You don't have to create a stereo file of your mix in order to put it on CD; and you no longer need a third-party application to burn it.

Because I'm reviewing Acid for radio applications, I have concentrated on the features that would be most useful in a radio production environment. But that only covers some of this program's capabilities.

It is also an able-bodied MIDI recorder and editor, allowing artists seamlessly to incorporate their MIDI sources and controllers into their DAW setup. It also has a video track and video preview window, allowing users to do audio post-production and sound design work.

Speaking of video, Acid can mix in 5.1 surround and export surround mixes as Dolby AC-3 files for use in DVD production.

Another useful feature for the broadcast user is the "Fit to Time" feature, which automatically adjusts a project's tempo to a specific time. For example, if you have a music bed that needs to be 30 seconds long, but you don't know the exact tempo it should be to fit; by using the "Fit to Time" feature, the exact time the audio should be can be selected. Acid will automatically adjust the grid and tempo to match this exact time.

Litmus test

I found that Sony Acid Pro 7 delivers considerable bang for the buck, especially at its competitive $300 street price.

Its editing and production features, in my opinion, leave many well-known DAWs in the dust, and without the need for proprietary hardware that some require. It proved to be stable as well.

While it is primarily geared more toward music production, I found it to be equally adept at handling just about any piece of audio I threw at it. The fact that it comes with an additional $500 worth of software plug-ins and content certainly makes it well worth the price of admission.

As with any platform of this nature, the learning curve can seem daunting. Even with my intimate knowledge of Vegas, it took getting used to. A thorough read of the included Quick Start Manual will get the beginner well on way with the basics (the full manual can be downloaded from the Web site). The included Interactive Tutorials are great for walking you through some basic procedures.

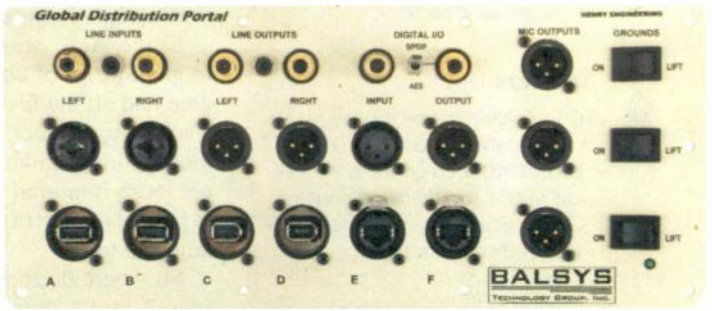
Another piece of advice: Make good use of the right mouse button. Right-clicking on just about anything in this program will reveal pop-up menus that contain handy features and shortcuts. But I can almost guarantee that, three or four months into using it, you'll still be discovering features. Whether that's a plus or a minus depends on your point of view. An argument could be made that Acid is trying to be all things to all people; I think it's simply taking the original concept of a music production application and kicking it up several notches.

Either way, it's worth your time to download the demo and see for yourself.

Curt Yengst, CSRE, is assistant engineer at WAWZ(FM), Zarephath, N.J. He is also a freelance recording engineer.

PRODUCT GUIDE

Balsys Seeks Global Dominance



While its name might be a bit more ambitious than its capabilities, the Global Distribution Portal (GDP) from Balsys should be a useful tool in many a network.

Using a mix-and-match system of connectors, the GDP sums them to mono and offers three mic-level outputs. All outputs offer ground lift.

Connector types include USB, FireWire, RJ-45, XLR and RCA. Analog and digital (AES or S/PDIF) audio are supported.

Balsys CEO Larry Lamoray said the portal is "ideal for providing a universal broadcast studio audio interface to the outside world without requiring intrusion into the studio, as well as for many remote and mobile applications. The fact that it supports all the audio connectors commonly used simplifies third-party interface without having to search for special cables."

For information, contact Balsys at (407) 656-3719 or visit www.balsys.com.

Vorsis Upgrades Processors

The Vorsis AP2000 and FM2000 processors have received upgrades.

Software version 1.3.0 is available for download. It includes an improved main clipper that should improve performance all around. An improved Sweet Spot Technology (SST) algorithm has better overall performance as well.

The 31-band limiter has rescaled delay times for more enhanced customization options.

Also new are factory presets for Dance Energy, News Talk Medium and Time Machine, amongst others. Finally, the GUI has been tweaked to squash a few bugs.

Meanwhile, Wheatstone's Vorsis VP-8 processor has a new software package available for download. Version 1.5.0 Four Mode adds FM/AM HD Radio processing to its base FM and AM processing powers.

Another new goodie is an improved FM and AM clipper. The new clipper is designed for smoother handling of the upper level signals without the oft-heard deadening of the overall highs, perhaps better described as trimming.

Also added in is some reorganization of some operating parameters. Saving presets promises to be simpler and connected to the mode that the preset was created in. However, presets can be transferred between the modes.

For information, contact Vorsis/Wheatstone at (252) 638-7000 or visit www.vorsis.com.

Waves and Dorrough Develop Soft Meters

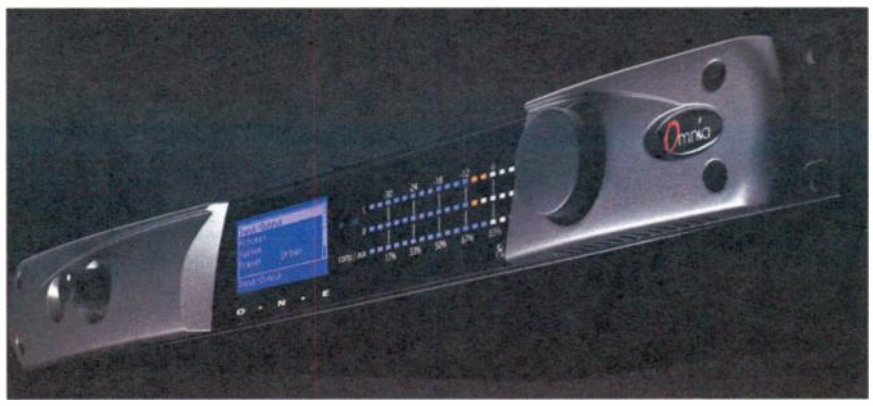
Meter manufacturer Dorrough Electronics has teamed up with software developer Waves to create the Waves Dorrough Meter Collection.

The package consists of software versions of the Dorrough Model 280-D, 380-D and 40-AES/EBU. Available controls include peak (auto, hold, reset), overs (display, reset) and meter mode (phase, sum/diff, left/right). A 40 dB scale is measured in 1 dB increments.

The GUIs mimic the actual hardware, including tricolor LED meters. Unlike the hardware, users can change the shape (horizontal, vertical or arc) or size of the meters on a whim. The package is available in TD and Native standards.

For information, contact Waves at (865) 909-9200 or visit www.waves.com.

Omnia Adds One to One



The latest in the Omnia One family of processors is the Omnia One Studio Pro.

The Studio Pro shares many similarities with the other Ones such as Livewire connectivity and basic broadcast processing but offers a different menu of software applications and settings.

The Studio Pro is essentially a four-band compressor/limiter designed to have minimal delay. A four-band AGC and four-band bass enhancer are included. The limiter offers a "look-ahead" mode.

Other tools include a phase rotator, four-band crossover, bass clipper and mixer. It ships with factory "broadcast" EQ presets and will store user presets.

The onboard sample rate converter changes 24–96 kHz input signals into the Studio Pro's native 48 kHz sample rate.

Input and output can be analog or AES/EBU digital. External digital sync sources can range from 32–96 kHz. It is fully compatible with sister company Axia's Livewire Ethernet network system.

The front panel hosts LED meters, headphone jack and headphone level control, jog/shuttle wheel, LCD screen.

According to Omnia President Frank Foti, clients had been asking for a multiband preprocessing unit.

For information, contact Omnia Audio at (206) 241-7225 or visit www.omniaaudio.com.

World Radio History

SHORT TAKE

LightSnake Takes a Bite Out of Recording Problems

by Paul Kaminski

SoundTech, a division of U. S. Music Corp. has bundled a combination of its LightSnake XLR-to-USB adapter cord, a folding mic stand, a performance microphone and some of Sony's free Acid XMC software to make an all-in-one box podcasting solution called the SoundTech Podcasting Kit.

The backbone of the kit is the XLR-to-USB cable. Plug it into a USB port and the computer automatically will recognize the LightSnake as a USB audio card. Plug in a microphone and both ends of the cable will glow green, indicating an active connection. When transferring audio, the cable ends will blink.

Depending on the audio editing program, the LightSnake automatically will connect at a 44.1 or 48 kHz sampling rate. Published specs indicate an input impedance of 1 Mohm, and a frequency response (at 48 kHz) of 20 Hz–19.2 kHz, with a signal boost range of 20 dB.

Snake's tail

The signal input range for the LightSnake is 0–2.88V. The user will likely need to use the onboard sound card as the playback device (which is selected in the sound settings usually found in the Windows Control Panel or preferences in the audio editing program); audio level setting is done on the mixer input in the computer's basic audio control section.

The cable measures 10 feet, a bit too long for my usual news kit; three feet would be an ideal length, but that's a personal preference. The LightSnake worked with my Dell Latitude D600 and Audio-Technica AT897 microphone with no problems in the field to cut perfectly acceptable voice tracks for my "Race-Talk" program.

The kit comes with Sony's Acid XMC audio editing program and a one year subscription for AcidPlanet's ProZone for hosting podcasts. As it ships, the MSRP is $149.95; the price may be lower at certain retailers. I have audio editing and podcast generating programs (Audacity and Podifier) already installed so I didn't need to install those programs from the enclosed CD.

As it's configured, the kit is a good introduction to the podcasting process.

The included cardioid microphone has 600 ohm impedance and a frequency response of 100 Hz–14 kHz with an on-off switch. Users can substitute any dynamic microphone; the unit does not supply phantom power for condenser microphones. The folding mic stand tripod is made to fit tapered body microphones; the mic stand adapter unscrews and adapters for other microphones can be installed.

One could easily use the kit in and around a broadcast facility. For example, if a voice booth was needed (say at a transmitter site, or during a reconstruction or in an ad hoc emergency situation), an engineer could build out a small soundproof closet or less noisy alcove with a keyboard, monitor and mouse, a dynamic announce mic connected to the LightSnake — all of which could be connected to a desktop computer running Acid XMC (or Audition/Cool Edit, Audacity, Sound Forge) to record and process the voice work. The computer does not have to be in the room or alcove, and that makes it even more quiet, thanks to the 10 foot length of the LightSnake cord. Connect headphones to the computer and the equivalent of a studio has been built for a lot less money. The connections I described could be made by an operator or even an intern, thus freeing engineering talent for maintenance and creative problem-solving.

The SoundTech Podcasting kit has enough versatility to solve problems around any radio station and do so for not a lot of money.

Info: SoundTech at (800) 877-6863 or www.soundtech.com.

Paul Kaminski is the news director for the Motor Sports Radio Network and a contributor for CBS News, Radio. He writes the "Radio Road Warrior" column for Radio World. His e-mail is motorsportsradio@msrpk.com.

PRODUCT GUIDE

Marantz Adds SD Recorder

The latest in the long-serving Marantz PMD line is the PMD661, a handheld digital recorder that uses SD cards as its media.

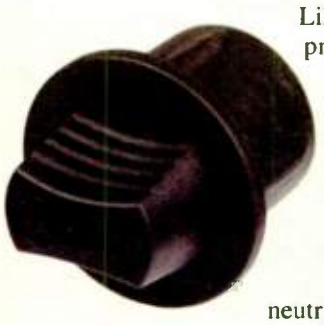
For pros the PMD661 uses balanced XLR connectors. An S/PDIF input is also available. The PMD661 tops out at 24-bit/96 kHz performance but offers standard 44.1 kHz and 48 kHz sample rates as well for increased recording time. File formats are MP3 and BWF.

Phantom power (48V) is included as well. Other features include a pitch control, headphone jack (1/4-inch), onboard speakers, basic editing functions and OLED screen for easy viewing.

A USB 2.0 port allows for transfer of files to a DAW without having to remove the SD card. It is fully battery (AA) operational

For information, contact D&M Professional at (630) 741-0330 or visit www.d-mpro.com.

DummyPLUGs are a Smart Idea



Like the guy or gal who realized that donut holes might be a marketable product (and tasty too!), Mr. Neutrik and his band of connector elves noticed that all of those unconnected connectors were a market yet untapped.

The solution? The dummyPLUG.

The dummyPLUG is a rubber plug designed to cover Neutrik SpeakON and PowerCon connectors. Besides keeping dirt and liquids out, the dummyPLUG can also help in keeping wiring schemes consistent by closing off unneeded and incorrect connectors.

For information, contact Neutrik at (732) 901-9488 or visit www.neutrik.com.

Magma Offers Room for Expansion

For computer-based production shops and integrated networks who are finding their servers and workstations running out of PCI Express slots, Magma offers its ExpressBox7 as a solution.

The ExpressBox7 offers seven full-length PCI Express slots in a separate, fan-cooled rackmountable box. Communication between the ExpressBox7 and the host computer is via a controller card and a high-bandwidth cable.

Cards in the ExpressBox7 are hot-swappable. It is compatible with Windows XP and Vista, Mac OSX 10.4 and above, Solaris and Linux kernel 2.6 and above. Options include a redundant power supply, track slide and a hard drive cage for internal use.

For information, contact Magma at (800) 285-8990 or visit www.magma.com.

Denon Ships Slim CD Player

Thinking lean, Denon has introduced the DN-C620, the latest in its varied line of CD players. The slot-loading DN-C620 is a single rack unit in size. Besides standard CDs, it will play CD-RWs and MP3-encoded discs.

It displays ID3 and CD-Text messages. Large DJ-style cue and play/pause buttons highlight the control options. Other controls include pitch control (±12 percent), A-B, track hopping and skip-back.

Professional XLR connectors along with RCAs also demonstrate the pro level of the unit. The same could be said of the AES/EBU and S/PDIF digital modes.

The DN-CD620 also understands AMX and Crestron control schemes

For information, contact D&M Professional at (630) 741-0330 or visit www.d-mpro.com.

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GM Journal

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The Brand Extension Is Dead
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GUEST COMMENTARY

A Lesson From the Ghost of Radio Past

Indiana Broadcast Cluster Finds That 'Live and Local' Can Also Be Profitable

by Jerry Arnold

Beginning in the late '80s, in my opinion, radio became nothing more than a jukebox, and in nearly all cases, not even a good one. Thanks to this economy move, the playlists at music-oriented stations saw the same 12 or so songs played over and over ad nauseum. We saw disc jockeys becoming mere "time and temperature" announcers. The "click" of radios being turned off became deafening.

People who choose to listen to the radio do so to be entertained as well as informed. They *want* local interaction with their announcers. I have worked with PDs who have gone as far as docking a DJ's pay because he said too many words between one of the 12 songs in the rotation. Voice-tracking and automation systems only exacerbate the problem.

Interestingly, if one listens to many of the bigger powerhouse stations, one common thread becomes apparent: They are *not* using voice tracking. And in the case of a few, they have begun to drop the jukebox.

We actually are witnessing a small renaissance in radio, where full service — providing what a *community* and not a *consultant* wants — become paramount.

We're gonna need more spots

A little over a year ago, I founded a group called The Crosley Radio Players, dedicated to the preservation and live recreation of 1930s, '40s and '50s radio. Our shows became an instant success; we were in quite a bit of demand performing to packed audiences around the Terre Haute, Ind., area.

So when it came time to do a Christmas show, I began to think of doing it not only for our audiences at the venues but for a much larger audience who couldn't attend.

Kevin Berlen, left, portrays Bob Cratchit, Steve Hall is Scrooge and Jerry Arnold is Orson Welles. Note the RCA 77DX and two 44B stage microphones. Some sound effects were done from the stage such as the 'clanking' of chains and the opening and shutting doors.

We initially started with only four packages to sell to advertisers. Much to everyone's surprise, we sold out those packages in less than three hours. In total, 32 packages were sold in less than four days.

I made a suggestion to the management of Midwest Communications, where I am employed as director of engineering, to carry this Christmas show live on one of our four stations.

To the credit of management, instead of a no I was asked a number of pretty good questions about the logistics of putting it on, including how to get the signal back to our studios, whether it would sell and a few others.

The decision was made to proceed with

See SALES, page 29 ▶

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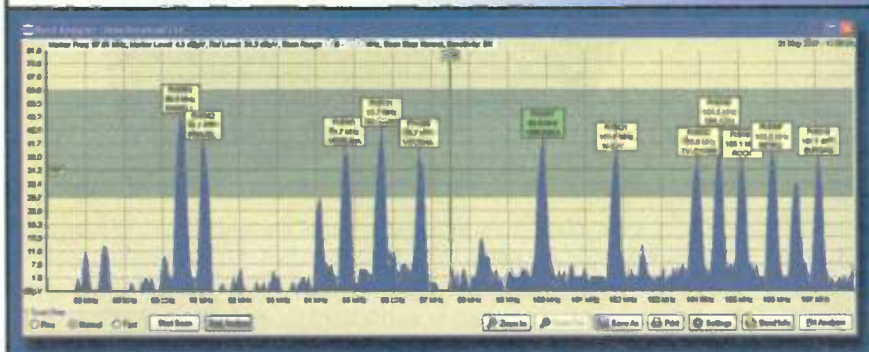

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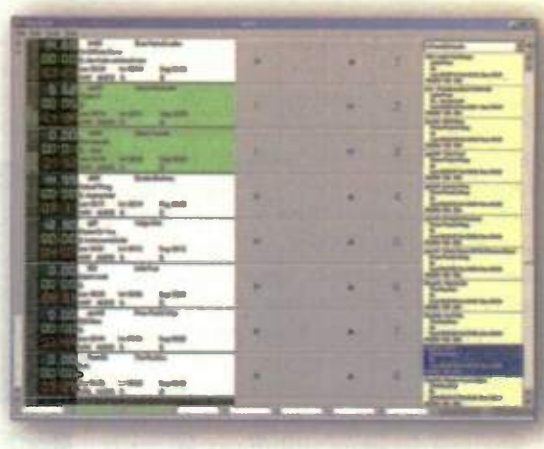

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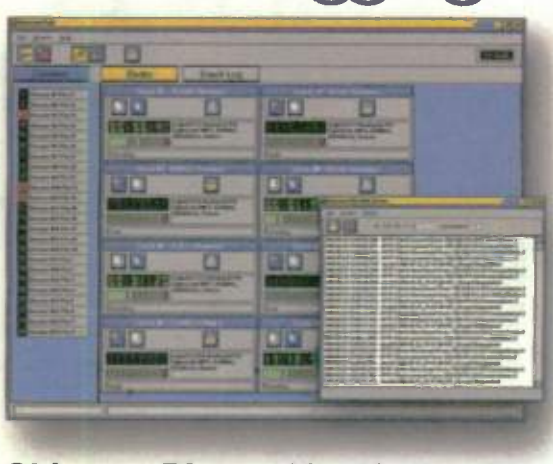

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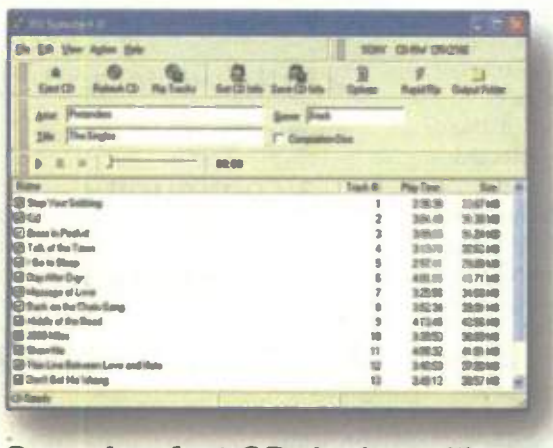

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World Radio History

SMALL-MARKET RADIO

Unusual Show Celebrates 59th Birthday

Auction Has Been Broadcast Since Its Inception On KXAR(AM), the Oldest Radio Station in Hope

by James E. O'Neal

One of the longest running shows in radio history has just completed its latest season in Hope, Ark., playing to a full audience.

That program, "The KXAR Lions Club Christmas Auction," has been broadcast continuously since 1950, and is deeply rooted in this small community. It's been heard by at least three generations of southwest Arkansans and the station originating it now operates under its fourth set of owners.

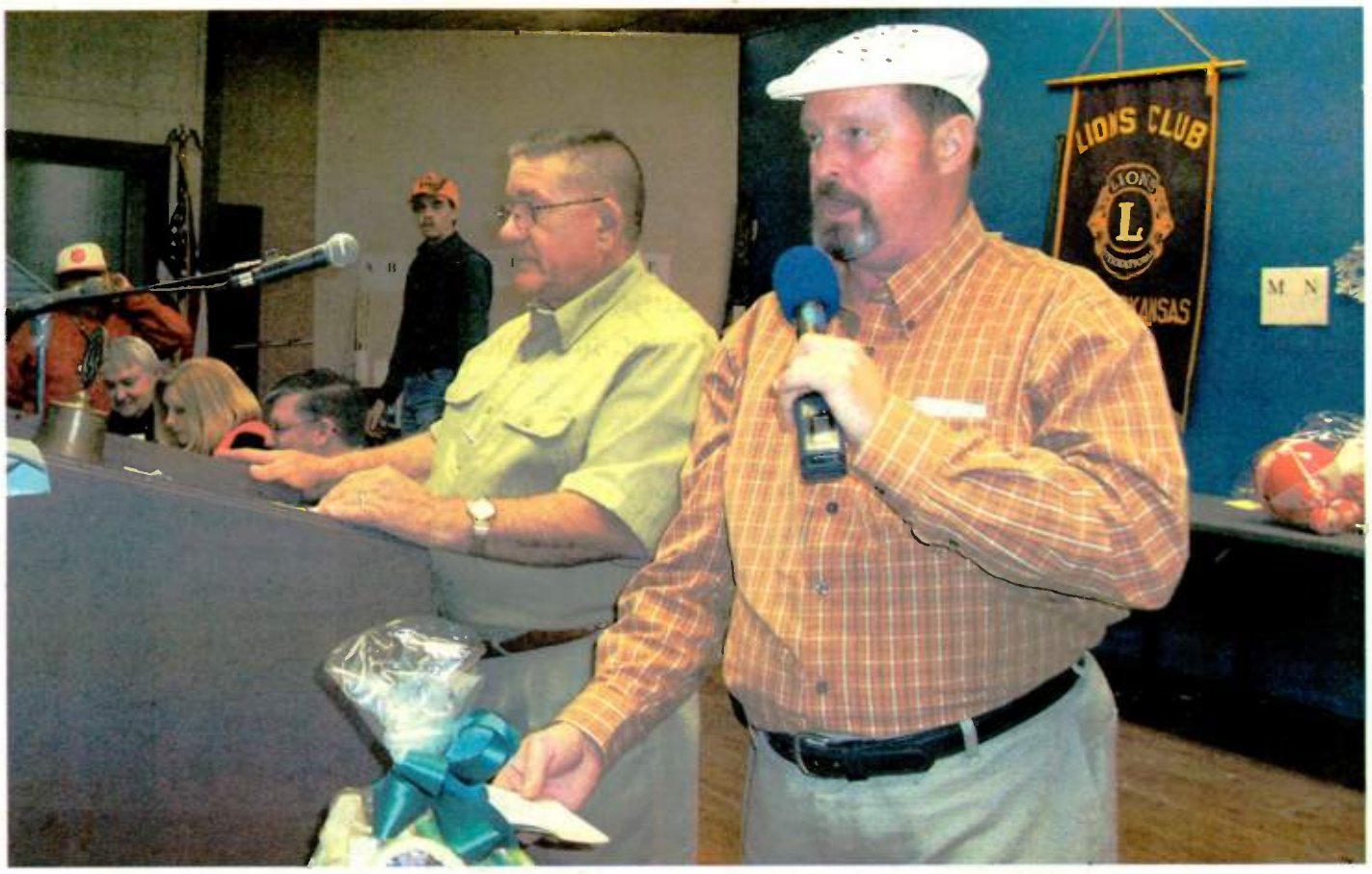
The live program still draws as much or more community interest and audience as it did when on an early December evening 59 years ago, station manager Luther (L.B.) Tooley stepped up to the one of the station's RCA 74 ribbon microphones and announced that the Lions Club Christmas Auction was on the air.

Admittedly, the show has a somewhat short season, a three-night run during the first week of December. But even after nearly six decades it still manages to maintain a high degree of popularity and audience participation.

Holiday spirit

The radio auction has its basis in the Christmas spirit of giving and helping others. Beginning early each November, local Lions Club members canvass town merchants for merchandise and services — and more recently, gift certificates — to be auctioned off to the highest bidders. All services are donated, including air time, with the money raised going toward the purchase of food baskets to be distributed to the community's needy at Christmas.

"This year we raised around $25,000, which is not too bad considering the economy," said Mark Keith, director of Hope's Chamber of Commerce, and also sign-on man at KXAR. "We've identified about 125 families in need of a little something to make their Christmases a little brighter."



Hope (Ark.) Lions Club President Dave Phillips, right, describes an item while auctioneer Ed Flagg waits to take bids at the 59th annual Hope Lions Club Christmas auction.

KXAR celebrated its 61st birthday on Dec. 12 and has provided time for the broadcasts since the idea for the fund raiser originated. Originally, the auction was conducted in the station's studio, but within a few years had outgrown that space and became a "remote" broadcast. It moved to venues all over this community — from an old opera house building, to the city hall auditorium, and even a court room, before settling in a decade or so ago at the coliseum building at a town park.

Even the influx of television in the 1950s and beyond hasn't really affected the show's popularity.

"People have just been turning off their television sets and turning on the radio during this one special week of the year," said Keith. "We have a low-power TV station here now and they've been covering the auction too, but we find that people still listen in on their car radios, and once they hear what's going on want to get involved and they drive on out to Fair Park and the auction site."

A battery of volunteer telephone operators take bids from those who don't attend in person and according to Keith, they are kept quite busy.

Do I hear $75 to put this goat in Judge Brown's front yard?

The auction hasn't always been strictly about goods and services.

At one point in its run, it became popular to bid on the installation of goats, sheep or other livestock in the front yards of prominent townspeople. After the bidding was finished and arrangements had been made to tether a certain animal on the lawn of an elected official, automobile dealership owner or other businessperson, another auction would immediately follow to allow the "victim" to block the animal's visit and have the critter ensconced on someone else's property.

The yearly broadcast also became a means for local musical talent to add radio appearances to their résumés, as acts were staged to give auctioneers a break and to entice even more area residents to tune in to hear their friends and family members perform.

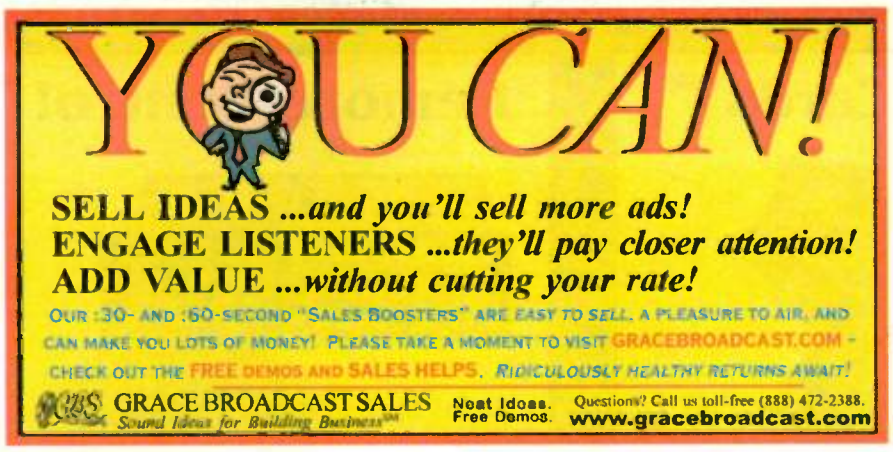
> In this day and age of TV, video games and the Internet it's good to see people put these aside for a little while and come together as a community.
>
> — Mark Keith

"It's just been a lot of fun over the years," Keith said. "And it's all in the spirit of helping the needy. In this day and age of TV, video games and the Internet it's good to see people put these aside for a little while and come together as a community."

Keith, who's also something of a radio historian, said that to his knowledge only the "Grand Ole Opry" and the "Ernest Tubb Midnight Jamboree," which run on Nashville's WSM(AM) and started in 1925 and 1947 respectively, can top the "KXAR Lions Club Christmas Auction" for having the longest continuous run time.

The author is a frequent contributor to Radio World.

STATION/STUDIO SERVICES



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World Radio History

Sales

▶ Continued from page 26

the live broadcast on WINH(FM), 98.5 MHz.

Having lived in this community for almost 30 years, I naturally have developed many friendships and business relationships, and I called upon them to help sponsor the broadcast.

Our sales manager (who is also a Crosley Player) and I put together an attractive sponsorship package. The show we were recreating was the Dec. 24, 1939 Campbell Playhouse version of Charles Dickens' "A Christmas Carol." This play, heard on CBS each year from 1934 until 1953, was the brainchild of Orson Welles and starred Academy-Award winning actor Lionel Barrymore as Ebenezer Scrooge.

The original radio play had only one commercial break at the midpoint, so we started with only four packages to sell to advertisers. Much to everyone's surprise, we sold out those packages in less than three hours.

It appeared that there was a lot of community interest in this. Our sales manager asked if there was any way to add additional breaks. We reviewed the script and found two places where natural breaks could be inserted without affecting the flow and continuity.

This gave us room for four more sponsors. These sold out in less than two hours.

We always record our shows and make CDs for the members. So the sales manager asked if we could use the recording, remove the commercials from the first broadcast, re-sell it and then re-broadcast the radio play on Christmas Eve. I saw no problem with that.

The sales force sold out these eight packages in less than six hours.

Now the management was seeing dollar signs. After a brief conference it was decided to simulcast the show on WWSY(FM) at 95.9.

The live broadcast was sold out in less than a day, and the recorded re-broadcast in just over one day.

In total, 32 packages were sold to local advertisers in less than four days. Even I sold a couple packages.

The reaction was phenomenal. The most commonly-heard reaction was, "Wow. That's great! Real radio again!" Sponsors asked if they could attend the performance. We even got three *new* clients who had never been on radio before.

WMGI(FM) morning personality Tim Shelton portrays nephew Fred.

Old is new

Doing the show from our venue was conventional.

Our sound engineer provided an output from his mixing board to feed our Marti RPU transmitter, which was in our station's van just outside the theatre. Commercials were done at the studio; we monitored the station off-air for direct cues. The audience at our venue was caught up in being part of a live broadcast event as well.

One member of the Crosley Players, Tom McClanahan, is news director for Terre Haute's WTWO(TV); he brought their station's live van, doing two cutaways telling viewers about the event on the 5 and 6 p.m. newscasts.

At 6:30 p.m. the board operators of both stations played the show's opening, which we were monitoring at the site, and as they potted up the Marti's audio, we began. I had the honor of doing Orson Welles' part as narrator.

This show, including three commercial breaks, took about 50 minutes to broadcast. Reaction afterwards at the live venue was one of amazement by the audience. Several people asked members of the Crosley Players for autographs.

The next day, when I went to lunch, I overheard a couple talking about listening to it on one of our stations. Calls began to come in asking if it was going to be repeated and whether there would be more live broadcasts of this nature. Still other callers asked if they could buy a copy of the broadcast on CD. We even had an inquiry from a business in the listening area that wanted to hire the Crosley Players to do a show from their place.

Now I know what you might be thinking: "That's OK, but it doesn't fit our format." For the record, WINH's format is modern country and WWSY's is '80s hits. It didn't exactly fit either of them.

Part of radio's problems stem from the cookie-cutter approach that so many stations have taken in regard to their programming. They may be sticking with their format even as they continue to lose listeners and advertising revenue.

While a radio play certainly is nothing new from a broadcasting standpoint, it *is* new to three generations who didn't grow up having them to listen to.

Perhaps your station could benefit.

Jerry Arnold is director of engineering at Midwest Radio in Terre Haute, Ind., and a recent inductee to the Richard M. Fairbanks Indiana Broadcast Pioneers Hall of Fame.

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World Radio History

In Sudan, Internews Taps the Wind

California-Based Organization Provides Reliable News in War-Weary Country

by James Careless

Independent, trustworthy news provided in a community's local language: That is the goal of Internews, a California-based, non-governmental organization, for every area it works.

In Southern Sudan, as part of furthering the goal of independent local media in the region, Internews has established four community radio stations, some of which are powered by a mix of solar and wind-generated electricity.

"There's very limited infrastructure in the Southern Sudan, which means there's no electricity," said Deborah Ensor, Internews Sudan program director.

Photos by Melita Denneit & Matt Buck/Internews

Internews hired local women to carry more than a ton of equipment up the mountain to build the transmission tower for the Kauda radio station.

"Meanwhile, generators are expensive and they are somewhat difficult to maintain. So we use solar and wind power where we can."

Internews' most striking Sudanese installation is atop Kauda mountain, a rugged peak in the Nuba Mountains region of South Kurdufan.

The mountaintop site provides a coverage radius of about 45 miles, but there is no easy access to the site. In fact, all the equipment for the facility had to be carried in by hand — or head.

"We had over a ton of equipment that had to go on the top of this mountain, including six batteries that weigh about 60 kilograms [132 pounds] apiece, four mast sections and more than 50 kilograms of tools that we had to haul up and down every day," said Ensor. "It's a 90 minute hike to get up the hill in 105 to 110 degree heat."

The batteries were hauled up the hill by local men; four to a battery. The rest was borne by local women, who carried 40 to 70 pounds of equipment on their heads, apparently without breaking a sweat.

Solar panels help power the station Voice of Community in Kauda.

"They are laughing and singing along the way, and it was very easy for them," said Ensor. "Me, I'm just carrying a bottle of water and I was worn out by the time we got to the top."

At the base of the mountain, the station's facility is powered by a mix of solar power and a generator.

By using solar and wind power, the Kauda site is entirely self-sufficient. So are the radios — hand-cranked sets provided by international aid agencies in the region — used by their audience.

Via reports and other content gathered by the residents themselves, the Internews audience has access

See INTERNEWS, page 31 ▶

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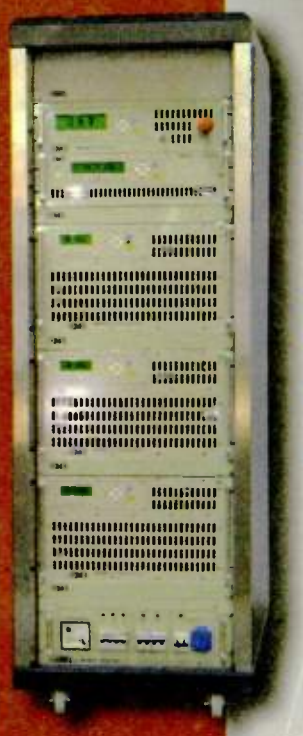

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Turbine to Trim KILI Costs

High winds regularly sweep South Dakota's Porcupine Butte, home to the KILI(FM) transmitter tower, making it an ideal location for a wind-power generating station.

In June 2008, the Voice of the Lakota Nation, serving the Pine Ridge Indian Reservation of southwestern South Dakota, built a 65 kW wind turbine at the transmitter site, which is also home to the KILI studio building. Thirty years ago, the same building was designed to use solar power to heat its water.

Courtesy Honor the Earth

The refurbished Nordtank turbine is capable of generating 92,191 kWh of electricity each year. This will save KILI about $12,000 annually in utility bills — money that can be better used to maintain the station, while also reducing its carbon footprint.

For KILI, being able to generate its own power is about more than saving money. It also demonstrates the determination of the station to be environmentally responsible while serving listeners on the reservation.

The station allied with two national native organizations — Honor the Earth and the Intertribal Council on Utility Policy (Intertribal COUP) — to bring the project to fruition.

Initial research into the wind patterns at the KILI transmitter site began six years ago.

"Wind energy is the fastest growing energy source in the world, and active communities have an excellent potential to be a part of that trend," said Winona LaDuke, executive director of Honor the Earth. "We see the KILI wind turbine as a flagship project, a springboard for a broad, tribal renewable energy initiative."

According to Intertribal COUP President Patrick Spears, tribal wind power can create a "dynamic transformation" in electricity generation, away from fossil fuels and nuclear power and toward energy production that protects the Earth.

At this writing, the station was still the wind-power generator was in a testing phase.

"We are still testing it," said KILI Director Melanie Janis. During a two-day trial, the turbine generated enough power to supply 65 percent of KILI power requirements.

Once the turbine is online fully, said Janis, the station expects to completely generate the power it needs to operate and, hopefully, some surplus energy to sell to the local rural electric cooperative.

— James Careless

World Radio History

Internews

▶ Continued from page 30

to independent news that reflects their communities' concerns and priorities.

"It provides them with information about things like early marriage and why is it important for young girls to stay in school," said Ensor. "If there's a malaria outbreak, the station informs the listeners what to do and where it's happening. Plus, there's a lot of truly local programming, where people come in and make local announcements, talk about issues or just sing songs on air."

The four stations broadcast in more than 10 local languages, and also provide a wealth of information about the Comprehensive Peace Agreement between the Sudanese government and the Sudan People's Liberation Movement/Army and the upcoming elections.

Terry Thiele/Internews

An Internews-trained journalist interviews women for the Kauda radio station in a remote area of South Sudan.

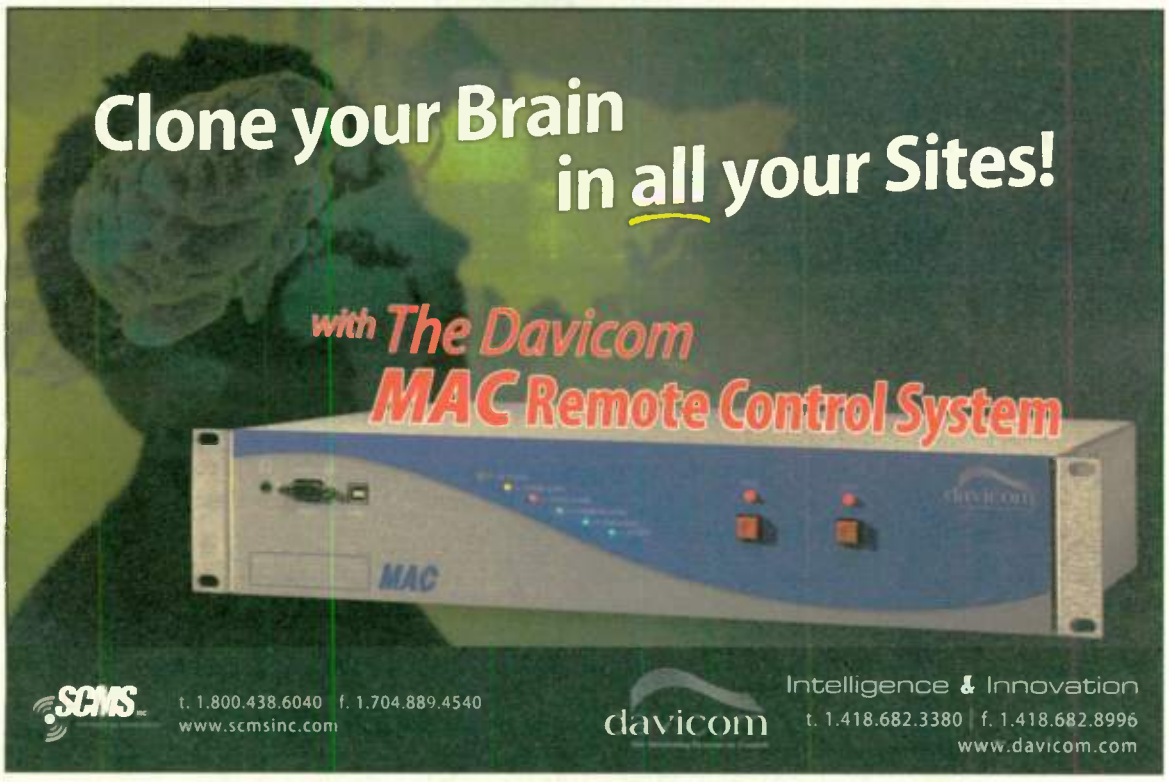
As the country recovers from war and communities work towards building peace and reconciliation, this kind of programming is invaluable for the future of Southern Sudan.

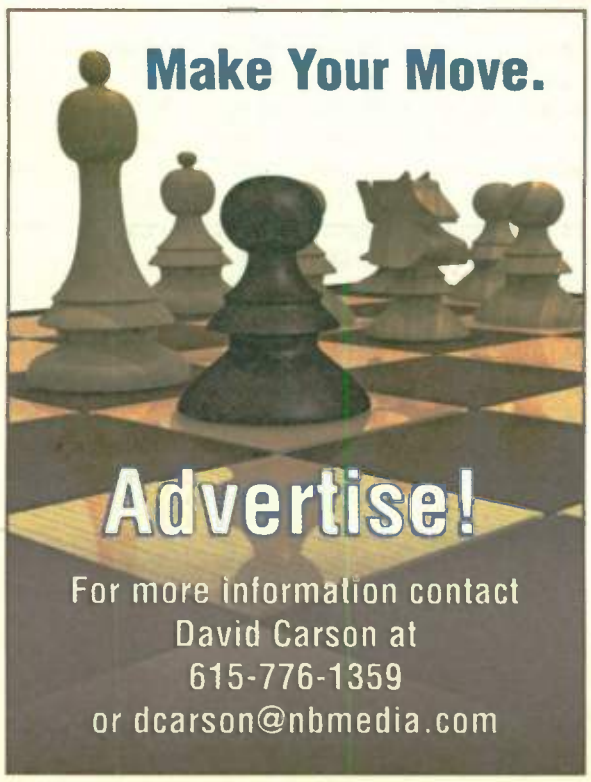
"The radio promotes peace and reconciliation and brings out the voice of marginalized people," explained a reporter at one of Internews' stations. "For me, being a journalist means a lot. It is to educate, advocate and entertain the outside world and my community."

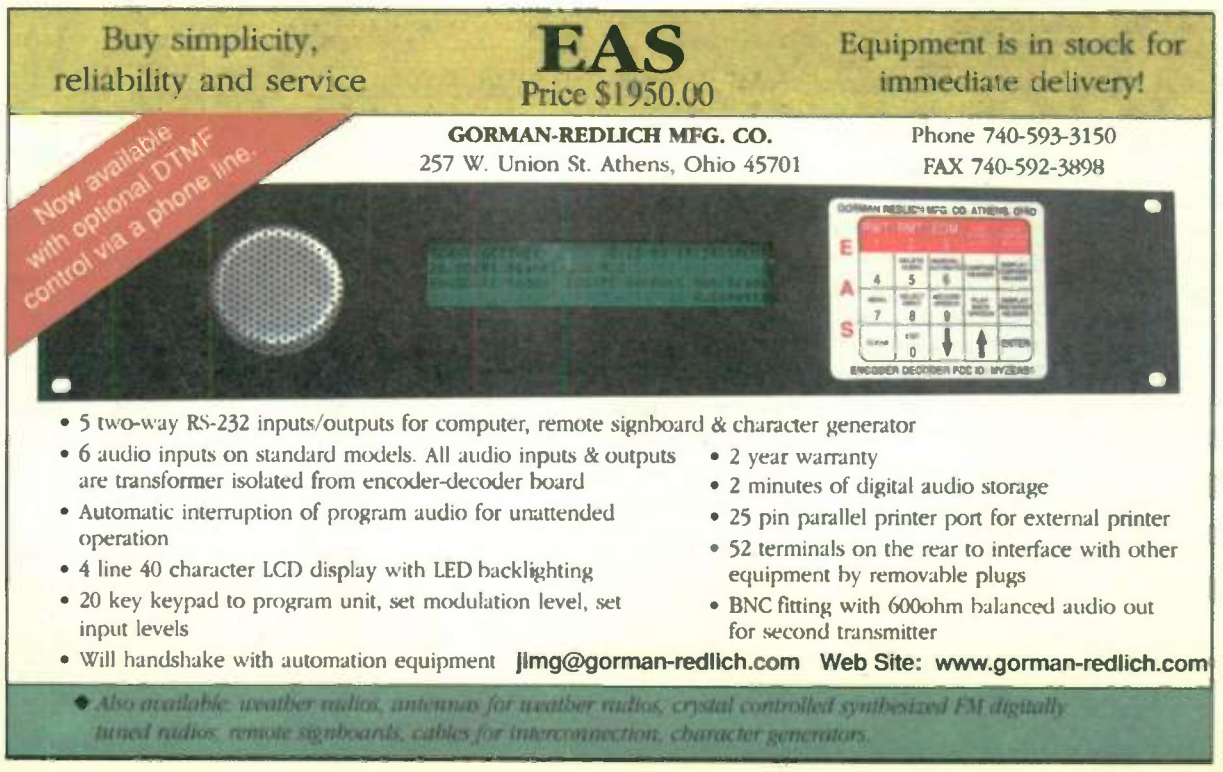
The only threat to the stations comes from wandering livestock. With cows and goats running loose, Internews has to ensure that its transmitter and tower sites are protected properly.

"You're trying to record audio and, in the background, you can hear the bleating of goats and cows walking by," said Ensor. "So when you are setting up sensitive equipment, you have to be sure that it's fenced off, so that roaming animals don't destroy it by accident."

Products & Services SHOWCASE







World Radio History

HD Radio: The Brand Extension Is Dead

PROMO POWER
BY MARK LAPIDUS

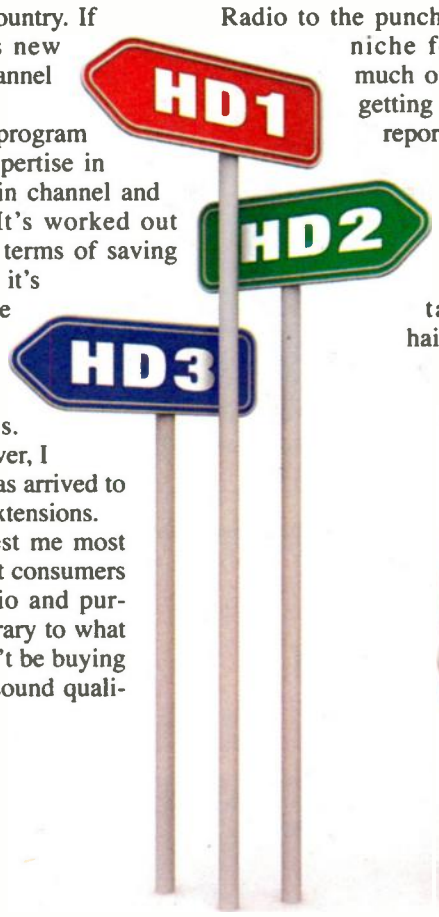
A theory that's gaining momentum is that our time is running out to get the public interested in HD Radio. There have been numerous letters to the editor in this very publication where readers compare HD Radio to AM stereo technology. It sounded pretty good if you ever got the chance to hear it, but so what?

Here's a news flash: Assuming the public can receive the signal, HD Radio is not really about the technology. It's about the content.

AM stereo had a serious flaw: it lacked original content. Sure, the music sounded better on AM stereo than standard AM radio, but FM had already won that battle. Let's not make the same mistake with HD Radio.

Niches

Four years ago, three things drove radio to create brand extensions on the then-new HD Radio dial: technology, paper diaries and laziness. Many people don't understand this, so please permit me to offer an explanation.



The time has arrived to ditch HD Radio brand extensions.

iStockphoto/Palto

First, technology: The approach in the United States of creating digital radio — on-band, in-channel — gave us HD-R channels next to our main frequencies on the new receivers.

Next, paper diaries demanded we create brands that listeners could recall to write down and hopefully confuse with our main channels, so that we might actually improve our ratings.

Finally, it's much easier to create a format brand extension than a totally different format. If the main channel was country, the next HD Radio channel was destined to be classic country. If the main channel was new rock, the HD Radio channel would be classic rock.

Typically, the same program director had enough expertise in the genre to do the main channel and the brand extension. It's worked out great for companies in terms of saving time and money. Sadly, it's done little to excite the person we should care about: the consumer.

I know there are some stellar exceptions. For the most part, however, I advocate that the time has arrived to ditch HD Radio brand extensions.

The ideas that interest me most are the ones that will get consumers talking about HD Radio and purchasing receivers. Contrary to what many believe, they won't be buying receivers for the great sound quality. They'll be buying those receivers because they can hear programs, shows and formats for free that they can't get anywhere else.

There's no question that there is an appetite for niche formats, which satellite radio has done an excellent job of serving. Brand extensions on HD Radio could easily be replaced by niche music stations: blues, bluegrass, various forms of jazz, world music and acoustic/folk. These niche formats in themselves will certainly draw in listeners. However, because satellite radio had beaten HD Radio to the punch, it's unlikely these niche formats will create much of a buzz in terms of getting consumers talking or reporters blogging.

To create HD Radio formats that get people excited, we will have to take chances not taken since long-haired kids played their own records on the new FM dial in 1967.

Here's another news flash: We will need new talent to create these significantly different music and talk formats. We need young people in our business who don't understand — or even care about — the format rules we have codified over the last 40 years.

Before you get scared, consider that if you are an FM HD Radio station, you have multiple HD Radio channels. Can't you use one as a format incubator? Maybe you try blocks of time on that one channel with different concepts, until one emerges the winner by listener demand.

I would be remiss if I did not also advocate — as I have in past articles — that every company lease at least one HD Radio channel in every major city to a university. Let their students play live music and present classroom lectures and debates — things that used to exist on the early FM "community stations" that were gobbled up later by religious broadcasters and NPR affiliates.

With our country's new political era and economic challenges, markets may even be riper for innovation of this kind.

No budget for new content on your HD Radio channels? If that's the case, let someone else take a chance with your digital spectrum.

Don't let your station atrophy by continuing to air that automated brand extension … right up until the day you switch off the transmitter because nobody is listening.

The author is president, Lapidus Media. Contact: marklapidus@verizon.net.

RADIO BUSINESS

Radio: Suffering, But Not Alone

In issuing its latest forecast for radio revenue in 2009, Wachovia Capital Markets also published this summary of its Media Team's advertising estimates. Dollar figures omit six zeros; thus, the projected total for radio in 2009 should be read as $16,837,000,000, or about $16.8 billion, a drop of 13 percent from Wachovia's estimates for 2008.

"Radio has, in our view, hit bottom," given penny levels of stocks, significant debt, lack of mergers & acquisitions, "nonexistent credit" and significant revenue and EBITDA declines, Marci Ryvicker and Timothy Schlock wrote. "In 2009, radio groups will focus on avoiding potential delisting and bankruptcies" rather than revenue generation.

Data in the chart comes from Wachovia Capital Markets Media Equity Research Estimates (by John Janedis, Marci Ryvicker, and Jaime Neuman), as well as the Newspaper Association of America, Interactive Advertising Bureau and Universal McCann.

	1960	1970	1980	1990	2000	2005	2006	2007	2008E	2009E
Newspapers	**3,681**	**5,704**	**14,794**	**32,280**	**48,671**	**49,435**	**49,275**	**45,375**	**37,989**	**33,100**
YoY % Change	0.0%	-0.2%	6.7%	-0.3%	5.1%	2.5%	-0.3%	-7.9%	-16.3%	-12.9%
Magazines	**975**	**1,354**	**3,279**	**6,803**	**12,370**	**12,847**	**13,168**	**13,787**	**12,960**	**12,701**
YoY % Change	0.0%	-3.8%	7.4%	-1.8%	8.2%	4.9%	2.5%	4.7%	-6.0%	-2.0%
Broadcast TV	**1,627**	**3,596**	**11,416**	**26,716**	**44,802**	**44,293**	**46,880**	**44,521**	**43,872**	**38,481**
YoY % Change	0.0%	0.3%	12.4%	5.3%	12.0%	-4.0%	5.8%	-5.0%	-1.5%	-12.3%
Cable TV	**0**	**0**	**72**	**2,457**	**15,455**	**24,011**	**24,659**	**26,375**	**27,521**	**26,971**
YoY % Change	NM	NM	NM	17.3%	23.0%	11.5%	2.7%	7.0%	4.3%	-2.0%
Radio	**693**	**1,308**	**3,702**	**8,726**	**19,819**	**21,455**	**21,665**	**21,310**	**19,348**	**16,837**
YoY % Change	0.0%	3.5%	11.8%	4.8%	12.1%	7.2%	1.0%	-1.6%	-9.2%	-13.0%
Yellow Pages	**0**	**0**	**2,900**	**8,926**	**13,228**	**14,229**	**14,349**	**14,218**	**13,676**	**12,816**
YoY % Change	NM	NM	NM	7.2%	4.6%	1.4%	0.8%	-0.9%	-3.8%	-6.3%
Direct Mail	**1,830**	**2,766**	**7,596**	**23,370**	**44,591**	**55,218**	**58,643**	**60,225**	**59,021**	**57,545**
YoY % Change	0.0%	3.6%	14.2%	6.5%	7.7%	5.8%	6.2%	2.7%	-2.0%	-2.5%
Business Papers	**609**	**740**	**1,674**	**2,875**	**4,915**	**4,276**	**4,447**	**4,647**	**4,716**	**4,716**
YoY % Change	0.0%	-1.6%	6.3%	4.1%	15.0%	5.0%	4.0%	4.5%	1.5%	0.0%
Billboards	**203**	**260**	**701**	**2,600**	**4,780**	**6,301**	**6,806**	**7,350**	**7,415**	**6,848**
YoY % Change	0.0%	10.6%	15.9%	74.7%	-1.1%	9.2%	8.0%	8.0%	0.9%	-7.6%
Internet	**0**	**0**	**0**	**0**	**8,087**	**12,542**	**16,879**	**21,206**	**23,897**	**26,287**
YoY % Change	NM	NM	NM	NM	75.0%	30.3%	34.6%	25.6%	12.7%	10.0%
Miscellaneous	**2,342**	**3,848**	**7,559**	**16,452**	**32,083**	**36,585**	**36,478**	**37,390**	**36,268**	**34,817**
YoY % Change	0.0%	0.9%	-21.5%	5.8%	12.6%	5.6%	4.8%	2.5%	-3.0%	-4.0%
Total US Advertising	**11,960**	**19,576**	**53,693**	**131,205**	**248,801**	**281,192**	**293,249**	**296,404**	**286,684**	**271,120**
YoY % Change	--	0.7%	9.9%	4.8%	10.9%	4.7%	4.3%	1.1%	-3.3%	-5.4%

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WANT TO SELL

Orban Optimod-FM 8000A, serviced by J-Squared 3/23/06, new caps & calibration, manual, taken out of service 8/15/08, $1000. Carroll, KXO Radio, 760-352-1230 or jcb@kxoradio.com.

WANT TO BUY

CRL stereo AGC amp, mdl SGC800 & CRL mono AGC amp, mdl AGC400. B Barry, 615-889-1960.

Teletronix LA-2A's, UREI LA-3A's & LA-4's, Fairchild 660's & 670's, any Pultec EQ's & any other old tube compressor/limiters, call after 3PM CST - 214 738-7873 or sixtiesradio@yahoo.com.

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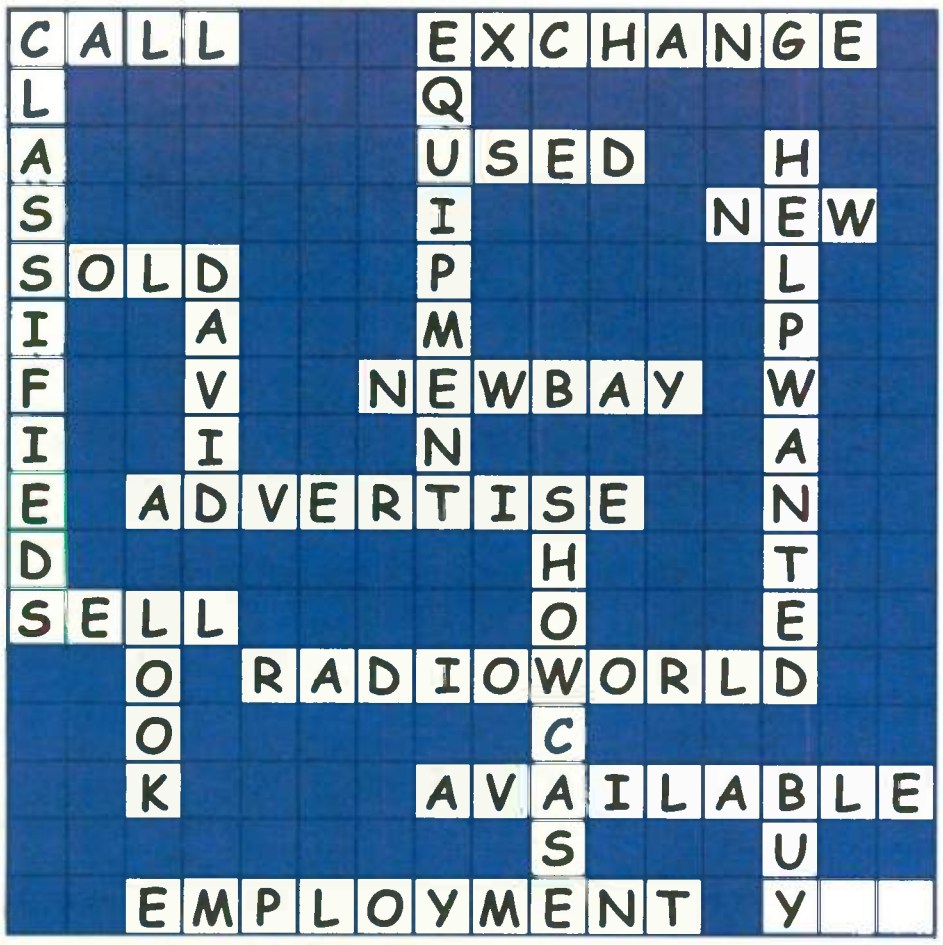

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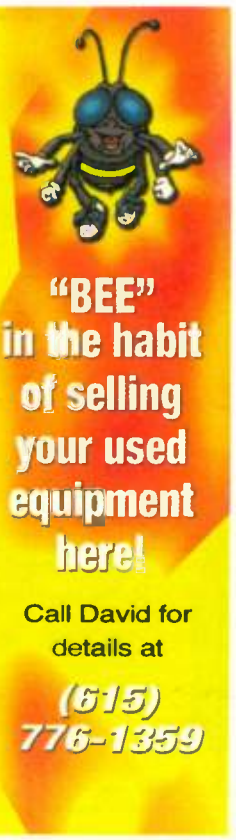

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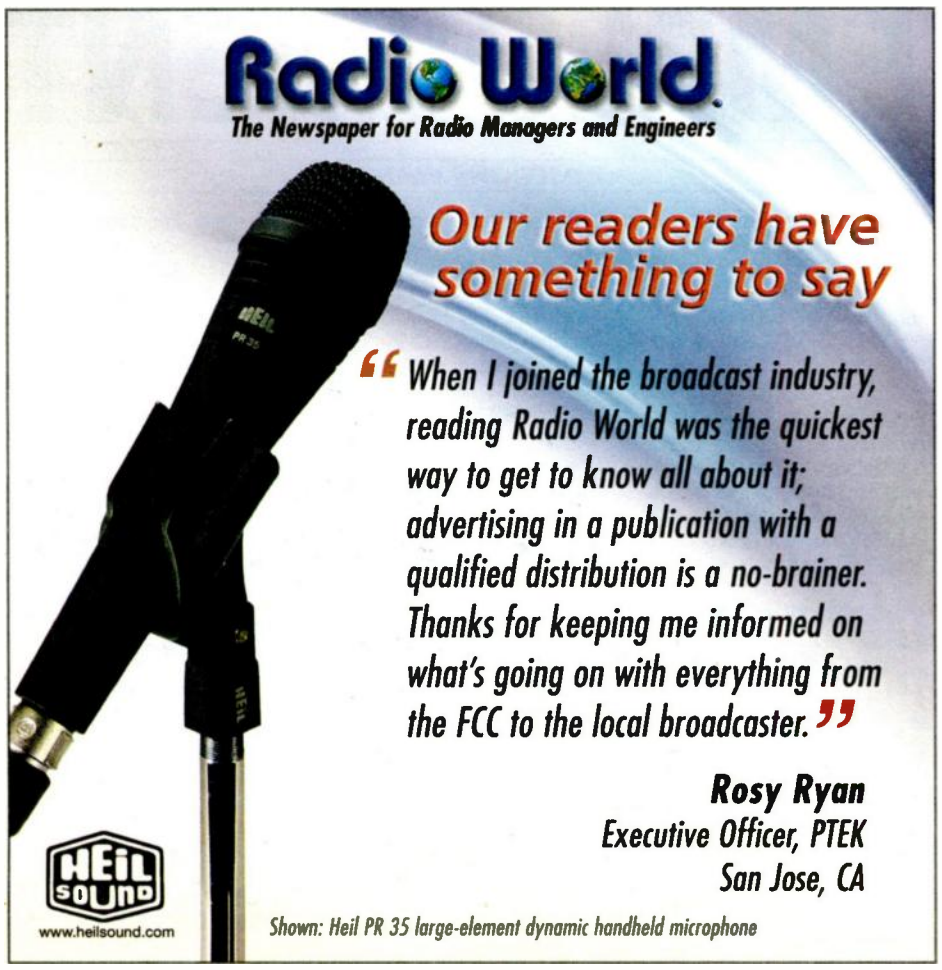

GUEST COMMENTARY

New Rules Make AM Band a Friendlier Place

Let's Correct Some Misinformation and Unnecessary Worry About Computer Modeling

by Raymond C. Benedict

In a long-awaited and much publicized action, the FCC recently enacted new rules that will allow AM broadcasters to use computer modeling for performance verification of many directional antenna systems.

The new rules give broadcasters some new options and provide for a much more affordable means of tuning and proofing an AM antenna. This represents a new paradigm in AM antenna work. To borrow a popular advertising phrase, "This is going to change everything."

However, since the proposed rules first hit the radar screen of the trade press and message boards, there has been a good bit of misinformation floating around.

Owners should recognize the cost savings this option represents.

Even the release of the Second Report & Order back in September did not clear most of this up. As a result, there is much confusion and unnecessary worry throughout the AM broadcast community.

The AM Directional Antenna Performance Verification Coalition, which proposed the new rule, wishes to put these worries to rest by clarifying what the new rules and procedures mean for broadcast station owners, operators and engineers.

Strictly optional

First off, antenna modeling represents an *option* for broadcasters. It is not mandatory for station owners to have their arrays modeled. Stations can continue operating under the terms of their existing licenses as before.

But if there exists a condition, such as an out-of-tolerance monitor point or tower work above the base insulator that would otherwise require adjustment and either a full or partial proof of the array, the *option* now exists to instead construct a model of the array, calibrate the sample system and adjust the array to the model-indicated parameters.

In these days of high gas prices, that sure beats driving a bunch of radials! But if a traditional proof is a more comfortable route, that remains an option as well.

Only *series-fed* (i.e. insulated-base) towers are eligible for the modeling option. This rules out skirt-fed ("folded unipole") elements and shunt-fed towers using a slant wire. Arrays using other than insulated base series-fed towers will have to stick with the old proof method.

Unequal height towers are eligible for the modeling option, provided that they are series fed.

Top-loaded towers are also eligible for the modeling option, again provided that they are series fed.

Monitor points will be a thing of the past for stations licensed pursuant to the modeling option. Instead, some *reference field strength measurements* are made with the modeling option. These measurements are filed along with the model, but they do not have licensed maximum values as monitor points do.

Recertification of the sample system is required every 24 months for stations employing the modeling option. This consists of the same measurements and tests made initially during the array tune-up, namely checking the current/voltage/phase linearity of the base sample devices (TCTs) or checking of the consistency of the impedance of the sample loops, and checking the sample lines for electrical length and loss. Also once every 24 months, the reference field strength measurements must be repeated. Again, these aren't monitor points, so a higher field strength at a point than one filed with the license application does not constitute a "violation."

Finally, it is not necessary to file an FCC Form 301 to employ the modeling option in most cases. The station license can be modified for eligible stations with a Form 302-AM.

Savings are real

AM station owners and engineers should recognize the *cost savings* that the modeling option represents.

Most if not all the variables associated with the old way of doing things can be eliminated, leaving a fast, fixed-cost means of tuning up and "proofing" a directional array.

Rather than days, weeks or even months of trial and error adjustments and measurements, the modeling and adjustment process can be completed in a couple of days. Instead of days or weeks of walking and driving radials and making field measurements, and instead of countless hours documenting the measurements, with the modeling option as soon as the array is adjusted to the model parameters and three field measurements are made on each pattern minima and maxima radial, you're done. You can file the 302-AM and go home.

With this new option, gone are most of the excuses for having an out-of-adjustment array.

For a fixed sum, most arrays can be retuned using a model, eliminating the likelihood of a big fine and clearing up interference caused by the out-of-adjustment directional pattern.

That, we believe, will make the AM band a decidedly friendlier place.

The author is chair of the AM Directional Antenna Performance Verification Coalition, director of spectrum management for CBS and a past president of the Society of Broadcast Engineers.

World Radio History

GUEST COMMENTARY

The Consumers Are Now in Charge

We Need to Provide What They Want, When and in the Form They Want It

by Mark Durenberger

Commenters on the state of the radio industry are passionate and engaging, striving to energize management and their troops in the creation of new ideas.

Some may miss the point. The ultimate reality is that radio will have to *totally* reinvent itself. The concept of "top-down" broadcasting from a radio tower to passive listeners in real time is no longer relevant. It's now dangerous to buy a station for stick value and do cash-flow analysis and projected ROI based on "expected sales."

Consumers ("listeners") are now in charge. They seek content they can manipulate; delivered *when* they want it, in the *form* they want it, and containing *only* what they want. Radio stations operating in real time can't do this. Multiple HD Radio channels might provide limited content choice but can't sort, prioritize or manipulate content to the continued satisfaction of their constituents.

Some visionary radio operators are creating programming for a new mobile audience, an audience that will, in its "radio" purchases, forgo the "radio" for a fully compatible wireless receiver that also handles telephone calls, real-time alerting, messaging, weather/news/sports et al.

At the moment that's the cell phone. A few weeks back we saw the comment that radio will use "tagging" to help resurrect value. Ironically, that same day the city of Baltimore announced a new "4G" wireless platform that has the potential to do an end run on AM/FM broadcasting, by providing new Internet services to the mobile environment.

Microsoft and others are working on Wi-Fi service to cars; Chrysler has announced Wi-Fi receivers. Presto: The automobile audience will have thousands of new listening choices and access to the world of information. Car satellite radios will compete for a while, and then Sirius will adapt to the new mobile competition.

Broadcasters who believe their 100,000-watt stick will remain the best way to reach 100 percent penetration may be suffering from a form of "digital paralysis." Electronics manufacturers move toward a truly universal "radio" that will decode Internet services and satellite radio ... and *maybe* the heritage AM/FM signals. At some point, before we get much older, all these services will ride a common platform.

Once that platform is in place, success can only be measured by content value. My good friend Stanley S. Hubbard was fond of saying, "Give me comparable coverage and I'll compete with anyone." In that respect, many of the industry's boosters may be correct. New ideas will be needed, energy and leadership top-down and bottom-up, to create successful content.

But that content's form and accessibility will have to have the attributes that appeal to consumers ... and will have to be delivered in a form that's compatible with the rest of the new information/entertainment delivery media technologies. That's why many stations are streaming.

At radio's birth, many entrepreneurs fell by the wayside when faced with the real cost of operating their experimental AM stations. Almost a third of the operators on the air in 1920 and 1921 were silent by 1925. That of course was before AT&T tried advertising on WEAF. And the rest, as they say, is history. Today, when not filling much of each hour with spots, operators are developing business plans based on how many separate spots can be inserted in the Internet stream.

The concept of 'top-down' broadcasting from a radio tower to passive listeners in real time is no longer relevant.

Today and in the future, radio broadcasters have to break away from that traditional thinking. Michael Bloomberg has been quoted as saying, "Broadcasters haven't had an original idea since 1929 ... they just play follow the leader." Elitist as this sounds, it's sometimes demonstrably true. While terrific ideas for a revitalization of radio have appeared in RW and elsewhere, some industry leaders are unwilling to rock the boat. "If it cash-flows, we'd better not mess with it," goes the mantra. "We'll have to continue cost-cutting to meet the expected budget goals." And there are some who continue to look at everyone else in the business for that "great idea" that'll save radio.

Seven-minute stop sets will have no place in the new "broadcasting" world,

Mark Durenberger

where broadcasting competes with innovative Internet programming from such disparate authors as creative kids in their basements and successful program moguls who want to see their content distributed as widely as possible.

And why would the great radio talent be limited to clearance on a small group of their own stations when they can reach everyone via a new "universal radio" delivery technology?

Stan Hubbard had another saying: "Provide what the public needs and the profits will take care of themselves." This may be why the successful news/talk AM stations still have a future. But their services will be heard over delivery systems quite different from just a radio tuned to 700 on the AM dial.

Visionary broadcasters are investing in new ways to reach an audience that will no longer haul that radio around with them. After all, their programming costs are high; they must be defrayed over enough delivery vehicles to aggregate serious audiences. That formula's been operative since it justified the first radio networks 80 years ago.

(Sidebar: Major sports were a bedrock revenue opportunity for those stations willing to pay the rights for such exclusive programming. It's easy to look to the future of that part of the business. Just note that a few years ago, Major League Baseball sold its game package to the satellite radio folks.)

A further irony: Broadcasters' investment in HD Radio and other technology improvements is made in an effort to "compete" with other delivery systems. It's an expensive investment in an era of cost-cutting mandates. On the AM side, IBOC will effectively limit the former wide-area reach of the big stations, and reliable digital coverage will not extend much farther than the metro and related inner markets. That seems to be okay with most; with some exceptions, these 50-kilowatters have already taken on a "metro" identity in their marketing.

Traditional radio has had a long run, far longer in fact than most delivery media, with the exception of the printed page. "Over-the-air" radio broadcasting has always had legs. But tomorrow's radio must meet the needs of the listener who's fully armed with choices. That means an overhaul of content ... and a recognition that the AM/FM signal will be but one of a plethora of delivery methods.

I've been in radio since the 1950s and I've tried not to look back. In fact, I'm paid to look past tomorrow. It doesn't take a terrific leap of faith and comprehension to realize the radio world we've known has changed more in the past five years than it did in the first 80. You can take that to the bank when you ask for development funds to invest in the new wireless world.

The author, a long-time contributor to Radio World, has more than 50 years of broadcast engineering experience and says he is "now working well into the future, on the technology design team for a 'Smart House,' the new Minnesota Twins baseball stadium in Minneapolis."

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◆ READER'S FORUM ◆

Stop Worrying About the 'Ifs'

As broadcasters, we need to be careful not to let the "ifs" get to us. If the economy continues to tank, if HD Radio is fully implemented, if the Fairness Doctrine returns, if we have to move back to our respective cities of license, if a new music tax will get forced on us ... and on it goes.

We could waste plenty of time coming up with more "ifs." A wise sage once told me that if frogs had glass butts, they'd be in the repair shop all the time. We cannot let these "ifs" allow us to retreat into depression and failure.

Don't worry about them. We address them; but they should not rule us. Sometimes we pull back to save a couple of bucks when success is just at our grasp simply by doing one more positive move. It's that next promotion or the next sales call that may allow us to see the light at the end of the tunnel.

It's necessary to know the value of what we possess here, in the numerous stations that we own and/or operate. They allow us an opportunity to connect with people in an intimate and personal way. Truly, what we do still is appreciated by many. Our vocation is powerful and still useful.

We must do what we can, pull the stops and forge ahead, not retreat. We must be involved in our local communities. We must make the personal connection with our listeners.

Radio is still a medium that, for just a few bucks, allows anyone to pick up a receiver and be informed, entertained and enlightened. If we cease doing this, we will be nothing more than an iPod with commercials.

Jon Yinger
President/CEO
The Christian Broadcasting System Ltd.
Flint, Mich.

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NewBay Media

In Low Orbit Long Enough

Forty-eight years ago this spring, President John F. Kennedy said, "I believe that this nation should commit itself to achieving the goal, before this decade is out, of landing a man on the moon and returning him safely to the Earth." Despite doubts about the scope of the challenge, the country did it; and a great deal of creativity and innovation emerged as byproducts.

When we dream about remaking radio into a successful 21st century enterprise, sometimes our goal feels as far away as the moon must have seemed then.

Like the early space program, radio's recent attempts to transform itself have seen misfires.

Thirteen years ago, the industry's commercial leadership promised creativity and innovation when it urged Congress to approve changes to national communications laws. The changes within the 1996 Telecom Act eliminated national ownership limits and eased local limits with a tier system based on market and cluster size.

Consolidation, industry executives said, would result in new formats and revitalization of the medium. Largely, it did not. Consolidation doesn't produce new formats and revitalization. It won't do so in satellite radio; it was never going to in broadcast radio. Consolidation is a survival and profit strategy. You can argue about whether it is necessary at any given time; but the predictable impact in the product itself is homogenization.

The discussion is relevant now because, with radio revenues falling and with the overall economy causing clear skies to seem farther away than ever, commercial U.S. radio leaders may be tempted to invest new energy in pushing for further deregulation of ownership caps.

Whether the political environment would be favorable for such a move is questionable; but beyond that, we hope that the leadership of radio will choose instead to direct its resources toward improving its product — not out of altruism, but as a survival and profit strategy itself.

Indeed, the economic situation in the country makes this an opportune time to do so. Like most of America, the radio industry must cinch its belt because of the downturn. But the economy also gives radio some temporary, if belated, cover. Our industry's economic woes don't stand out in such stark contrast right now; we're far from the only ad medium suffering. This is a good time to conduct honest self-assessment, to implement changes and to reinvest in ourselves — by which we mean, our content.

To cite the most immediate opportunity, radio is asking how it will monetize new channels such as HD2; yet money will flow only *after* compelling new content — including data services — drives audiences to buy new radios and listen to or use these new channels. Thus RW continues to root for companies that are experimenting on and exploring multicasts.

Creative programming is a mindset that requires the freedom to experiment and fail. Sometimes talking about radio program innovation does feel like dreaming about going to the moon. Day-to-day business concerns at a commercial station are dominated by making goals in the latest book and bringing in enough money for the company to fulfill its debt covenants.

But we hope that while our leaders worry about short-term targets, they also take the time to look up at the long-term goal, the creation of a "must-have" product in the lives of our consumers, and consider how we can get our ship there. Radio has been thinking in low earth orbit long enough. It's not too late to shoot for the moon.

— Radio World

◆READER'S FORUM◆

Power Hike Is a Threat

I strongly object to the content of the Newsbytes story "NAB Engineers Emphasize That Digital Power Hike Isn't a Threat" (Nov. 2008).

With IBOC digital radio stations already causing considerable interference to many stations, there is no way that doubling the digital power will not cause the interference problems to increase. It amazes me that the FCC is authorizing and allowing IBOC digital-created radio interference.

Richard Van Zandt, CPBE
Edgewater, Fla.

Slanted Interest

NPR's concern [about a digital power hike] is well founded, since most of their stations are of lower radiated power, adjacent to higher-powered commercial stations.

Plus, studies from manufacturers of HD Radio tend to slant toward their own concerns, lacking objectivity and impartiality, with conflict of interest.

Richard Brown
Frequency Monitoring Service Technician
Jack N. Brown Associates
Washington Crossing, Pa.

Dorrough On Delano

The Broadcast Board of Governors response (*Reader's Forum*, Dec. 17) to your VOA story and my letter to Delano's mayor is a good opportunity to amplify several important points.

On a positive note, we may have hit a nerve and possibly prevented an immediate frontal assault on Delano. In Letitia King's admirable zeal to defend the continued capacity of the VOA, she reveals a certain institutional disregard for shortwave, and more disturbing, a plan to remove the legendary Delano transmitters. As the mad surgeon said to the patient, "We're going to remove your heart but it won't hurt a bit!"

Once the classic transmitters are gone, there is no going back.

Describing the flagship facility as "part of a network" of many transmitting facilities is like calling the aircraft carrier Enterprise one of many boats. Delano is the biggest and sole remaining example of the classic, audacious, "price is no object" VOA template. Delano was conceived as a broadcast cathedral through collaboration between government and the Columbia Broadcasting System, with unmatched industrial and architectural design teams. The radio community considers the building and antenna structures akin to a broadcast version of a Frank Lloyd Wright project.

We are not striving to save Delano merely for a utilitarian purpose. It is a community and national historical asset with a capacity to serve several practical and even profitable purposes, not to mention being a strategic EMP-proof communications powerhouse.

Ms. King also made this statement: "Some of the Delano transmitters will be moved to broadcast facilities in the Philippines to improve our reach to critical audiences."

Once those wonderful transmitters are cut loose they can just as easily wind up at a scrap yard as in the "Philippines." Is it rational to think that ripping out and then shipping those behemoths halfway around the world is more cost effective than buying new transmitters specifically for the Philippines?

We also know that once the classic transmitters are gone, there is no going back. A vintage car goes into the crusher only after the engine has been removed. This is the pattern we saw at Bethany, Ohio: a death by attrition and a thousand cuts. As with its sister facility, when a bit of neglect creeps in, the towers suddenly will be declared a public nuisance and the ugly pattern of Bethany and Radio Liberty (literally blown up after the VOA took it over) will be repeated.

The magnificent Crosley-designed Bethany facility has been thoughtlessly gutted and, without its towers, is as tragic as an eviscerated elk carcass with its antlers brutally hacked off. That is akin to the shortsighted destruction of New York's classically designed Pennsylvania Station. The loss of that magnificent landmark raised enough public outrage that her sister Grand Central Station was not only saved but restored. The parallel to the Bethany/Delano situation should be obvious.

Landmark/historical status seems the only solution to stop a slow and painful death at Delano. Thanks to Ms. King for helping us to bring this important issue into the light of a public forum.

Mike Dorrough
Woodland Hills, Calif.

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A SIMPLE CIRCLE GOT THE WHOLE WORLD ROLLING.

NOW SEE WHAT A SQUARE CAN DO.

Usually, the best inventions are those that are the most simple. There's currently a crop of Audio-over-IP studio hardware out there that just doesn't get it. It's complicated, it relies on PCs for mission-critical functionality and is, seemingly, in need of 24/7 support. Hmmm.

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