SUDDENLY, PUBLIC FILES ARE HOT. Page 27

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Ohio's Own

The latest inductees join the Radio Television Broadcasters Hall of Fame in Akron.

Page 12

Be Careful Out There

Common sense isn't so common when it comes to safety.

Page 21

Radio World

$2.50 The Newspaper for Radio Managers and Engineers November 19, 2003

INSIDE

NEWS & ENGINEERING

▼ Rohn ponders its options.

Page 3

▼ Technical implementation of HD Radio is seen as closer to success.

Page 10

ANALYZE THIS

▼ *Buyer's Guide* analyzes signal monitoring, remote control and test gear.

Page 33

RAZORBACK PRIDE

▼ A reader in Arkansas wins a Klotz Digital ParaDIGm.

Page 4

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NEWS MAKER

Morris: Third-Gen Broadcaster

ST. PAUL, Minn. Virginia Anne Hubbard-Morris' grandfather started his broadcasting empire with one radio station, the former WAMD(AM), in 1923. Today, 40-year-old "Ginny" Morris heads the radio division of Hubbard Broadcasting and recently completed a lengthy stint as a member of the NAB Radio Board.

Morris began serving on the board in 1999, became vice chairman of the Radio Board in 2001-2002, and finished her term as chairman in June.

Morris is in an unusual position in the industry, a woman at the head of a family-owned radio group who has been involved in industry political issues on a national level. Morris left TV for radio some time ago and says she's never looked back.

Radio World News Editor/Washington Bureau Chief Leslie Stimson spoke with Morris recently about the radio industry and her plans for Hubbard Radio.

RW: Is the economic recovery really happening for radio? While national sales are up, local seems flat.

Morris: What we're experiencing here in

See MORRIS, page 6 ▶

Ad Insertion Faces Patent Claim

A Content-Substitution Licensing Question Could Further Muddy Future of Internet Streaming

by Randy J. Stine

DENVER Two Colorado businessmen say they have patented the ad-insertion process that allows radio broadcasters to substitute content from their terrestrial signal with alternate material for their Web streams. The pair intends to seek nonexclusive licensing agreements to use the process.

For terrestrial radio broadcasters looking to continue or resume streaming their programming online, observers say, the new patent could be yet another financial constraint. According to one estimate, 1,800 radio stations in the United States are streaming. It's unclear how many of those use ad insertion.

The patent, issued by the U.S. Patent and Trademark Office in June to business partners David Minter and Al Baldocchi, covers the real-time removal of content in an Internet radio broadcast.

At least two companies that offer ad-insertion products said they had yet to be contacted by the patent holders.

According to the patent, "The invention is directed to the replacement of the portion of the content in a radio station broadcast that is distributed over the Internet that is local in nature or otherwise unsuitable for the Internet audience with content that is relevant to the broader audience that is capable of receiving the Internet broadcast."

Minter and Baldocchi say they applied for the "Internet Radio System With Selective Replacement Capability" patent in 1999 when both were searching for opportunities to start a consumer-oriented radio Web site, which they later abandoned.

"However, our business model for Internet radio was centered around ad-insertion capability," Minter said. "This was before anyone else was doing ad insertion. We realized that eventually ad insertion was going to be the economic engine to drive Internet radio."

Minter is president of Minter and Associates, a consulting practice that specializes in the entertainment industry, based in Denver. Baldocchi is an independent consultant and investment banker in Boulder.

See INSERTION, page 5 ▶

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◆ NEWSWATCH ◆

Andrew Spins Off Broadcast Division to ERI

Electronics Research Inc. plans to purchase the broadcast products division of Andrew Corp. The companies have signed a letter of intent for the deal, which was expected to close in early November. Price and deal structure have not been disclosed.

Andrew's Broadcast Products Division makes antenna systems for broadcast applications; filters, combiners and RF components for television and FM radio; and rigid line and components.

Andrew will retain its Heliax air cable-manufacturing business and will be the main supplier of air cable to ERI; the latter will distribute the product for broadcast use while Andrew will distribute for non-broadcast use. Andrew retains the Heliax trademark.

After the deal closes, Andrew broadcast products would be manufactured by ERI, which is acquiring all the machinery and inventory, said Kinsley Jones, engineering and marketing manager for ERI.

"We have been expanding the range of our product lines for strategic reasons. This was an opportunity to flesh out our product lines quickly with products that are already made, rather than designed by us," he said.

While most of the products ERI is acquiring are TV-related, two in particular are applicable to radio: mask filters developed for HD Radio by Andrew and the Heliax line.

ERI plans to lease Andrew's Orland Park, Ill., facility temporarily while it transitions machinery and employees to its own main manufacturing plant in Chandler, Ind., said Andrew spokeswoman Greta Brown.

The Gray, Maine, facility for the manufacture of Andrew filters and combiners is part of this transaction. ERI intends to operate that plant as it is.

Andrew has approximately 100 employees in its broadcast division, with roughly 40 in Maine and 60 in Orland Park. ERI anticipates offering positions to roughly 60 percent of Andrew broadcast workers. ERI has roughly 200 employees in Chandler.

Andrew also has a satellite communications business, which is not affected by the proposed sale of assets of the broadcast products division.

Andrew will retain the Heliax line and ERI will distribute it for broadcast.

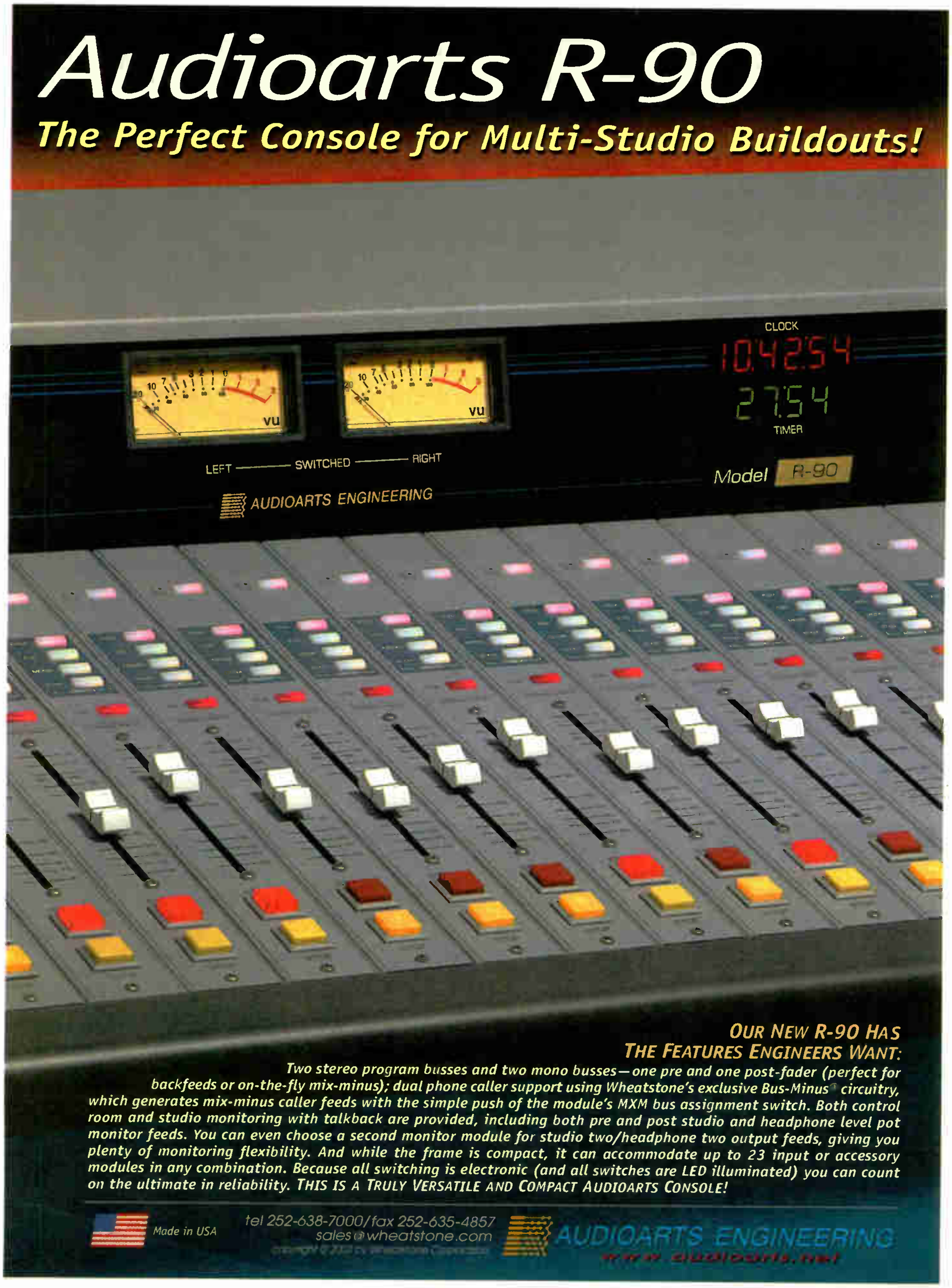
Andrew makes communications products for wireless and distributed communications, land mobile radio, cellular and personal communications, broadcast, radar and navigation. The company started in radio in 1937. In July, it merged with wireless telecommunications equipment supplier Allen Telecom. It could not specify how much of its income came from broadcast products; however, 2002 sales for all of its divisions were $1.4 billion, according to a company fact sheet.

As to why it's leaving the broadcasting equipment business, spokeswoman Greta Brown said the company is focusing on businesses that are $100 million in size, and first or second in their market in sales.

"We're hoping by selling to ERI we're creating a better opportunity for the broadcast product line," she said.

ERI will assume warranties for Andrew's broadcast products. "We're trying to make sure customers are not adversely impacted" by the sale, Jones said.

— by Leslie Stimson



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NEWS

Ad Insertion Faces Patent Claim 1
Morris: Third-Gen Broadcaster 1
Andrew Spins Off
  Broadcast Division to ERI 2
Rohn Ponders Its Options 3
From the Editor 4

FEATURES

HD Radio: 'This Is Going to Work' 10
Ohio's Own Radio-TV Hall of Fame 12
Workbench: Trading
  Pies for Passwords 14
What PARs Will Mean for Radio 18

GM JOURNAL

Meeting OSHA, and Beyond 21
Batscha Was a Dreamer and Doer 21
How to Be a Trend Spotter 26
FCC Lessons in the Public File 27
VOA Looks Back, Perseveres 29
People News 31

BUYER'S GUIDE

Navigator 100 Takes to the Streets 33
WNRN Uses FT-1A as Receiver 33
Total Broadcast Goes to Plan B 34
Ward-Beck PODs Invade Matchframe 35
Santa Barbara Gets Aphex Makeover 41

OPINION

Reader's Forum 46

Rohn Ponders Its Options

Tower Company Is in Chapter 11, Continues Operations; Considers Possible Liquidation

by Randy J. Stine

INDIANAPOLIS Customers of Rohn Industries Inc., known for self-supporting tubular steel towers used by telecommunications and broadcast companies, can expect work to continue on their projects as the company tries to rebound from financial difficulty, the company said.

The Peoria, Ill.-based Rohn Industries and five of its direct and indirect subsidiaries filed in September under Chapter 11 of the U. S. Bankruptcy Code, which allows for a company to remain in operation under the direction of a trustee while it seeks additional capital. The bankruptcy court must approve all significant business decisions while Rohn seeks Chapter 11 relief.

In its voluntary petition on Sept. 16, Rohn listed assets totaling just over $22.5 million and debts of nearly $29 million. It estimated that funds would be available for distribution to unsecured creditors.

The first meeting of creditors was expected to be held in late October in Indianapolis. The estimated number of both secured and unsecured creditors is more than 200. Of the top 20 claims from creditors, none are broadcast companies.

Coinciding with the Chapter 11 filing, Rohn entered into a $9.5 million debtor-in-possession line of credit with lenders who are part of the company's amended credit agreement, which will allow the company to continue operations.

"Rohn continues to operate as a debtor in possession," said Henry Efroymson, the attorney handling Rohn's bankruptcy proceedings.

"The company is exploring all possible avenues, including reorganization and liquidation," Efroymson said.

According to a Rohn Industries press release, "The objective of the Chapter 11 filing is to maximize recovery to creditors by facilitating an orderly sale of assets. The company is currently in discussion with a third party regarding a proposed sale."

Second time around

Rohn manufacturers and installs telecommunications infrastructure equipment for the wireless industry. Many of its products, which include towers, poles, related accessories and antenna mounts, are used in the cellular, PCS, radio and television broadcast markets. Rohn has a manufacturing facility in Frankfort, Ind., along with offices in Peoria, Ill., and Mexico City.

This is the second time in its history that Rohn has filed for bankruptcy. The company, known as UNR Industries Inc. until a name change in December 1997, filed a petition for relief under Chapter 11 of the Federal Bankruptcy Code in 1982. A plan of reorganization was accepted by creditors and shareholders and confirmed by a bankruptcy court in 1989.

According to filings with the Security and Exchange Commission, the company employed nearly 600 workers at its facilities in December 2001. That number was trimmed to 460 employees the following month. The company announced another round of layoffs in July of this year. The number of job cuts was not disclosed.

Rohn's bankruptcy filing in September culminated a thorny 10-month period for the company. In November 2002, the company announced it had agreed to sell substantially all of its assets to an affiliate of Platinum Equity LLC, a Los Angeles private equity firm, for approximately $8.75 million, only to announce termination of the agreement a month later, according to a company press release.

Several members of the company's board of directors resigned in mid-2003, followed by the resignation of Rohn's independent accountant PricewaterhouseCoopers LLP in July. Rohn was then delisted from the NASDAQ Stock Market for failure to maintain the minimum bid price requirement and began trading on the OTC Bulletin Board in July, according to a Rohn press release.

The company reported second-quarter sales this year of just over $11.5 million, a decrease of 54 percent compared to the second quarter of last year, according to company's most recent filing with the Security and Exchange Commission. Company officials said the drop in sales was "primarily the result of the significant reduction in capital spending throughout the telecommunications industry." It also reported a net loss of $1.7 million, or 4 cents a share, for the quarter that ended June 30.

Rohn Industries President and CEO Horace Ward failed to return several phone messages seeking comment for this story.

At least one antenna manufacturer was surprised by Rohn's filing for Chapter 11 protection.

"Rohn has been a very popular tower with our antenna customers over the years. I'm in the dark as to why this happened," said David Allen, Shively Labs sales manager. "I'm sure there will be some broadcasters who are in the final stages of planning new sites who will need to do some scrambling."

Officials with Electronics Research Inc., a competitor of Rohn's in the support structure business, said it appeared that Rohn focused almost exclusively on the wireless market the last few years.

"Rohn was very active in the wireless market, where competition and pricing pressure from major customers was particularly intense. I think they produced a high volume of business but with unacceptably low margins," said Kinsley Jones, engineering and marketing manager for Electronics Research Inc.

Jones said Rohn certainly had a following in the broadcast industry and was primarily known for towers on the small end of the size-scale.

Dwight Rohn, who began manufacturing towers for home television reception, established the company in Peoria, Ill., in 1948. The company was organized as a Delaware corporation in 1979.

◆ NEWSWATCH ◆

WorldSpace Plans Paid Service for U.S., U.K. 'Ex-Pats'

WASHINGTON Virgin Radio UK and WorldSpace Corp. have announced a partnership under which Virgin will be featured as a premium channel on WorldSpace's satellite service.

WorldSpace is planning a new premium subscription service called Home Team Radio, "specifically created for U.S. and U.K. expatriates as well as military stationed overseas," a spokesman stated. Virgin Radio will be part of that paid service, although the channel will be offered free at first.

Virgin claims a weekly audience in the U.K. of almost 3 million people. It also is consistently at or near the top of Webcasting ratings.

Different targeted versions of "Home Team Radio" will be offered to customers in the various geographic markets covered by WorldSpace's two satellites, AfriStar and AsiaStar.

Media Ownership Gets a Day in Court

PHILADELPHIA The FCC's response to opponents of its new media ownership rules, now stayed, is due Nov. 25 in federal appeals court.

The U.S. Court of Appeals for the Third Circuit will hear challenges to the FCC's new media ownership rules on Jan. 12, 2004. Opening briefs for those who thought the changes were too drastic were due Oct. 21; for those who think the commission's new rules don't go far enough to deregulate the industry, Nov. 4.

BE Centralizes Marti Operations

QUINCY, Ill. Broadcast Electronics is centralizing all of its Marti Electronics sales, customer support and engineering in its Quincy, Ill., headquarters. The change was effective Nov. 1.

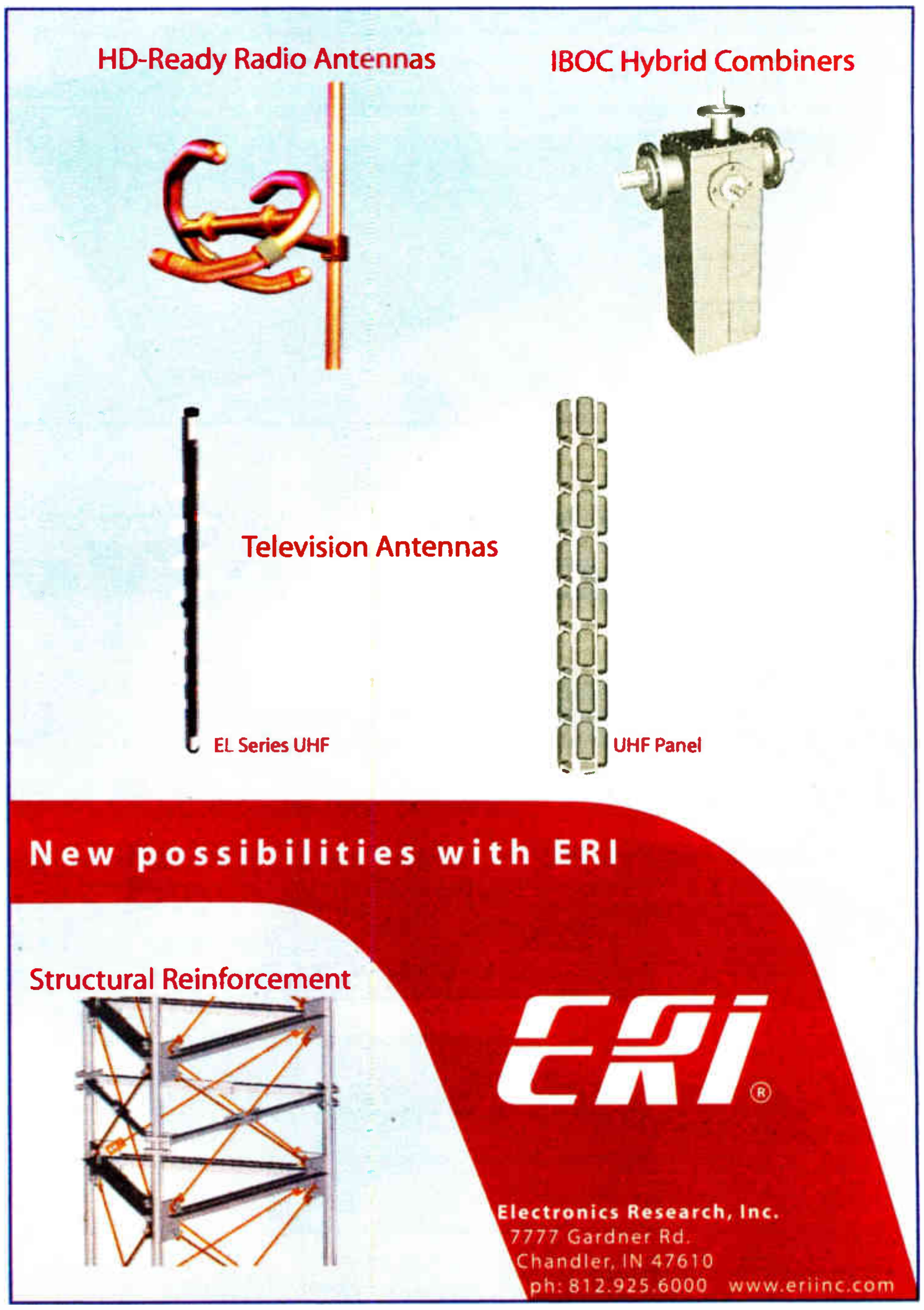
Marti Sales Manager John Lackness will head sales and support in Quincy. Marti President Jim Godfrey "will pursue other opportunities," Winking said. His responsibilities will be absorbed into the Quincy operation.

BE purchased the company from George Marti some years ago, and in 2001 it moved the manufacturing operation from Cleburne, Texas, to Quincy. But it had retained a sales office in Ft. Worth.

"The sales office that was created in Ft. Worth consisted of four people," BE spokeswoman Kim Winking said last month. "One person has already moved to Quincy and another is scheduled to move the first week of November."

"Linking the Marti sales organization more closely with the design, support and manufacturing organizations will improve our ability to focus on new products and customer response," stated Tim Bealor, vice president of BE's RF Systems Group.

Customers now can reach Marti at (217) 224-9600 or by fax at (217) 224-9607.



FROM THE EDITOR

Hey, Boss, About That Raise ...

by **Paul J. McLane**

It's almost annual review time. The accompanying chart of compensation for radio chief engineers may help when you sit down to talk to the boss. The source is NAB's 2003 edition of "Radio Station Salaries," available for $159.95 at *www.nab.org/nabstore*. The survey includes data for numerous radio job categories, sorted by market, revenue, region and format.

The overall average compensation for chief engineers increased about 4.7 percent this year, to $71,060.

This is an excellent resource, although you should use these and any such statistics with caution. When you are dealing with a relatively small universe of respondents — in this case, 199 station operators, managing 531 stations — the numbers can fluctuate substantially. For instance, this year's average compensation (salary, bonus, incentives) for a chief in the top 10 markets was $79,377. Last year it was $92,674. The change is most likely an artifact of a small sample size. Still, the authors believe that the responding stations collectively are responsible for about half of nationwide radio revenues, and that therefore the results in general are "fairly representative."

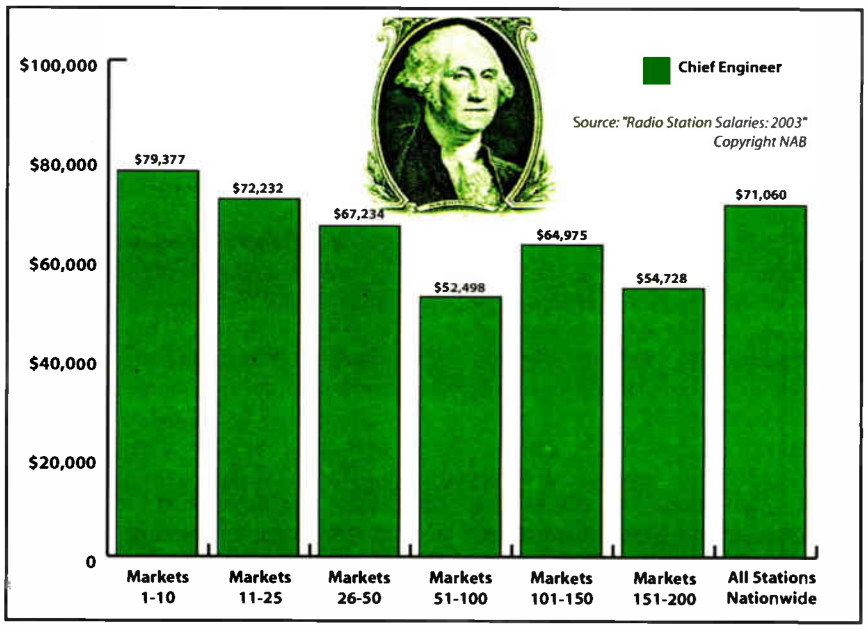
Only commercial stations achieving at least an Arbitron 2 share (12+, AQH) were surveyed.

The lowest salary reported for a chief, by the way, was $27,000; the highest was $141,211.

★ ★ ★

We reported earlier that RDS was starting to make news again. Our coverage turned out to be prescient.

How intriguing to see Clear Channel Radio make a commitment to installing the data technology in 192 of its FM stations by the end of this month. Now those stations can scroll artist name and title playing on the air, call letters, traffic info and other messages for display on radios equipped with RDS. Audemat-Aztec won the equipment order for the dynamic RDS generators.



Source: "Radio Station Salaries: 2003" Copyright NAB

Hey, maybe RDS wasn't such a bust after all. Maybe it just takes our industry 10 years to really embrace a new technology. (Motorola, are you listening?)

It's also interesting to note how Clear Channel is playing this decision. The press release from the company was headlined, "Clear Channel Radio Brings Radio Listeners More *Local* Content." The emphasis is mine; but don't think for a minute that the word *local* is by coincidence. As seen in this press release and numerous others of late, our largest broadcaster has figured out, belatedly, that it was losing the war of opinion, and is finally fighting back with the right tools, emphasizing localism in every way it can.

★ ★ ★

Updating a story I reported earlier, the New Jersey Radio Museum is indeed getting a home.

The Dover Area Historical Society is entering into a long-term lease with the First Presbyterian Church of Dover for use of a former doctor's house as a museum and headquarters. The Dr. Arthur W. Condict house is at 55 West Blackwell Street in Dover, N.J., and will be used by the historical society for displays, classes and a shop. The new radio museum will occupy part of the third floor.

To become a member of NJRM or inquire about donating equipment or money, send e-mail to *njrm@webtv.net*, and tell 'em I sent you. They love hearing from New Jersey radio alumni in particular.

★ ★ ★

Congratulations to Radio World contributor Frank Montero of Fletcher, Heald & Hildreth, who was appointed by the FCC as a member of its Advisory Committee on Diversity for Communications in the Digital Age. The Congressional Hispanic Caucus had submitted Montero's name in June, along with that of David Honig, executive director of the Minority Media and Telecommunications Council.

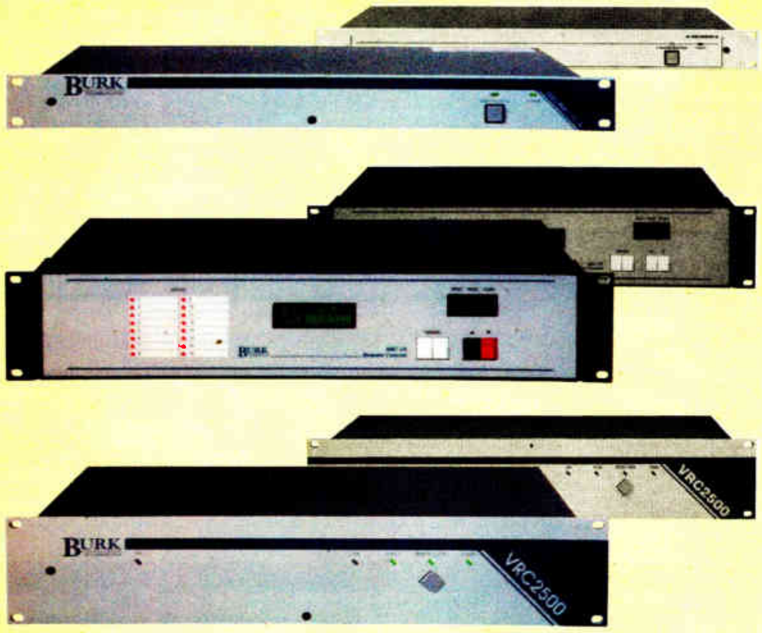
Radio World's New Technology Sweepstakes ends soon, and we're really going out with a bang.

Our winner this time is Sid King, owner/GM of King-Sullivan Radio in Clinton, Ark., whom I reached by phone during morning drive to tell him of his prize. He takes home a beautiful eight-fader ParaDIGm digital broadcast console from Klotz Digital.

The ParaDIGm includes voice processing and three-band EQ on mic inputs; sample rate converters on digital line inputs; and 16 GPI opto-isolated (TTL) inputs and open-collector (TTL) outputs with adjustable pulses for remote interfacing and tally. It offers mode, pan and phase reverse, six faders with A/B switching and two with six-source selectors. An LCD flat-panel screen displays a clock and event timer; it doubles as a setup controller. The ParaDIGm accepts 24 sources and has digital and analog outs.

Layouts can be configured and saved for multiple operators. Busses include PGM, AUX, TEL1, TEL2, and PFL (cue) with cue speaker, mix-minus, and headphone and monitor outputs. Presets and settings can be uploaded/downloaded via optional PC software interface.

The eight-fader ParaDIGm retails for $6,995.



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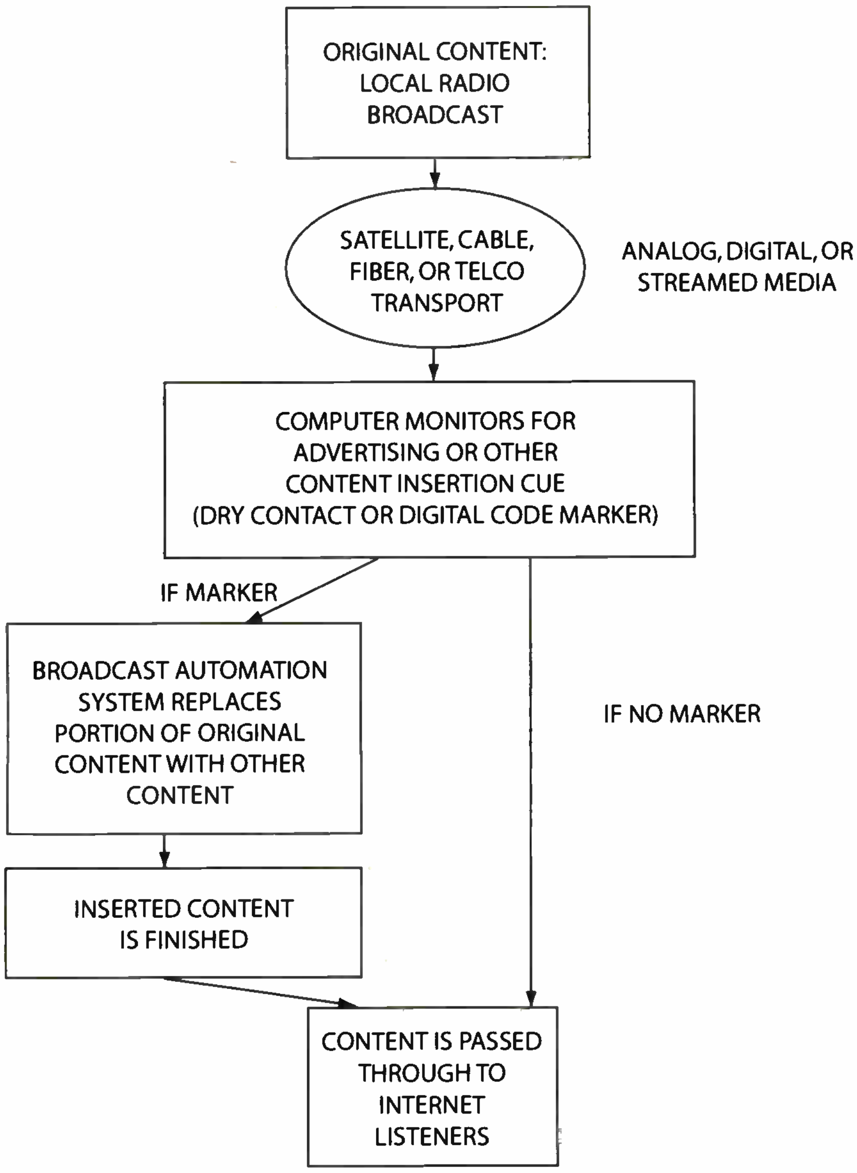
Insertion

▶ Continued from page 1

They said they researched the ad-insertion process with the help of an intellectual property attorney and determined at the time that no one else owned the idea of ad insertion.

Baldocchi said the technology behind the patent is fairly simple and does not depend on any specific software or hardware.

"Very simply, the technology calls for searching a radio broadcast for some type of marker, such as a tone or digital marker, and inserting at that point alternate content in real time, as the broadcast is streamed over the Internet," Baldocchi said.


ORIGINAL CONTENT: LOCAL RADIO BROADCAST
SATELLITE, CABLE, FIBER, OR TELCO TRANSPORT
ANALOG, DIGITAL, OR STREAMED MEDIA
COMPUTER MONITORS FOR ADVERTISING OR OTHER CONTENT INSERTION CUE (DRY CONTACT OR DIGITAL CODE MARKER)
IF MARKER
BROADCAST AUTOMATION SYSTEM REPLACES PORTION OF ORIGINAL CONTENT WITH OTHER CONTENT
INSERTED CONTENT IS FINISHED
IF NO MARKER
CONTENT IS PASSED THROUGH TO INTERNET LISTENERS

According to U.S. Patent #6,577,716 B1, the computer system can process the content regardless of the communications system used to transmit content from the radio station, such as land lines, wireless systems or the Internet.

Baldocchi said the ad-insertion processes covered under the patent are in limited use. "We want to work with those companies to develop rational and equitable licensing agreements," he said.

That includes broadcasters and suppliers, Baldocchi said.

"Our customer will be anyone using ad insertion or selling the capability to another party. Any broadcaster who is using third-party software with ad-insertion capability should insure themselves that they are either not using our technology, or are appropriately licensed," Baldocchi said. "The patent applies to any terrestrial broadcaster looking to repurpose audio for the Internet.

"Broadcasters who are using their own ad-insertion software that employs our process will be expected to license that technology through us," he said. "Broadcasters using third-party software licensed for the technology will not be asked to pay any additional licensing fee."

No licensing agreements are in place yet, Minter said, though he and Baldocchi have a number of ongoing conversations with certain companies. "There are a lot of people we have yet to even contact. We are not releasing any information on prospects, fees or negotiations at this time," Minter said.

Officials with RCS and Lightningcast Inc., two companies that offer ad-insertion products, said they had not been contacted by the patent holders and declined further comment.

Minter said the pair's approach to pricing the non-exclusive licensing fee will be to keep it reasonable as to not discourage growth in the ad-insertion business.

"Internet radio is in its infancy and we don't want to get in the way of its development. But we still have to realize value for our patent," Minter said. "The growth potential is still there with the RIAA (Recording Industry Association of America) stuff seemingly resolved. That coupled with the growth of broadband ...We see a fire lit under Internet radio again."

Using the ad-insertion process allows broadcasters to replace local commercials with material that would be more suitable for an audience over a wider geographical area, Minter said.

"For example, a broadcaster in Denver can swap out a local car dealership ad with an ad for Amazon or Coca Cola, or another national advertiser in their Internet stream," Minter said.

Additional licensing fees could add to broadcasters' concern over streaming costs and other expenses tied to Internet programming, analysts say.

"I would think it could be a barrier to some broadcasters," said George Bundy, CEO of BRS Media, an Internet consulting firm that consults broadcasters in the areas of audio streaming and Web site management.

"However, I would think that as the ad-insertion business matures and becomes an additional revenue source for broadcasters, that any streaming fees would be seen as minimal."

Bundy estimates from his research that a total of 1,800 commercial and non-commercial radio stations in the United States are streaming on the Internet.

Ad insertion came to the forefront in 2001 when many large-market radio stations ceased their Web streams over concerns voiced by the American Federation of Television and Radio Artists about additional talent fees due their members for a second use of the copyrighted recorded material, Bundy said.

Still to be determined is whether broadcasters would have to pay retroactive fees to record companies and artists, as a result of their Web streams, under provisions of the Digital Millennium Copyright Act of 1998.

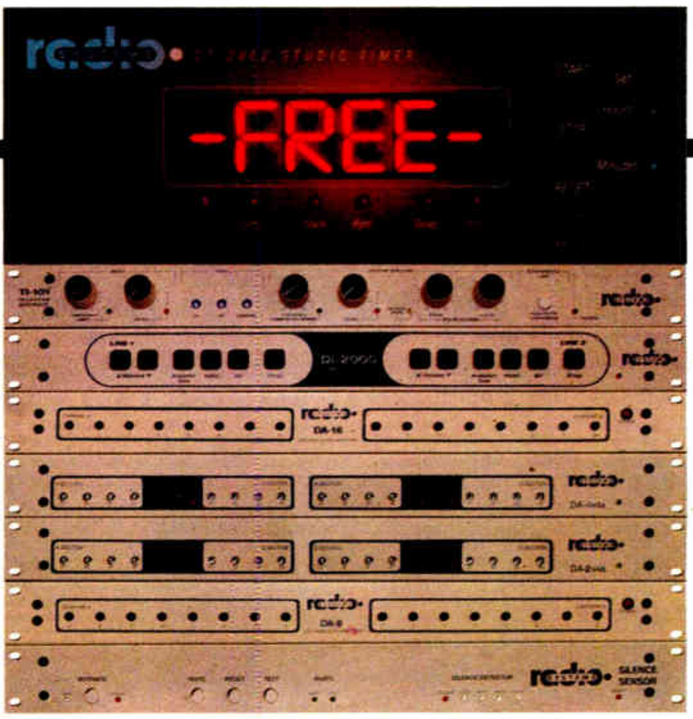
In October, the 3rd U.S. Circuit Court of Appeals in Philadelphia rejected an appeal filed by the NAB and several radio group owners seeking an exemption from paying digital sound recording copyright fees under the DMCA and the Digital Performance Right in Sound Recordings Act of 1995.

◆ NEWSWATCH ◆

NAB, Saga to FCC: 'Retain Contour Overlaps'

WASHINGTON The NAB, joining with Saga Communications, believes the FCC should retain its contour overlap method for determining which stations are in a market for areas not rated by Arbitron. The organizations stated their position in comments to the commission.

NAB and BIA conducted research on several geographical-based ways of defining markets, including two suggested by the commission, cellular markets and a method used by the Office of Management and Budget. But, Saga and NAB stated, "These various geographic markets do not reflect radio service in a consistent, predictable or accurate manner." What's more, using these methods could create more distortions than the current modified contour-overlap method, they argued.



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Morris

▶ Continued from page 1

this very small slice of the picture is that the economy is stabilizing, from our perspective … which I think has to happen before it can really recover. We don't have the benefit of seeing a multitude of markets; from a radio perspective, we're in one market (Minneapolis/St. Paul).

***RW:** What do you think about the new, now stayed, market definition — the fact that the FCC used Arbitron Radio Metros?*

Morris: It's terrible. It's an inconsistent measurement that really doesn't have anything to do with the technical parameters of a given marketplace, and it's fluid, which in and of itself makes it an inaccurate measurement.

***RW:** Because it can be manipulated?*

Morris: Right. Counties go in and out of Arbitron metros all the time. So whether or not it's by conscious effort on somebody's part or just by the general Arbitron procedures, it's not a static universe at all.

***RW:** How did you get your start in the business?*

Morris: TV promotions

***RW:** Did you have an interest in going to the radio side?*

Morris: I'd always kind of hung out with radio folks in the building … and I liked the atmosphere of the radio stations, although I worked in TV. But no, I never thought I'd end up in the broadcasting business at all.

Going back historically, I thought I'd do it just for one summer so that my father (Stanley S. Hubbard) would stop bothering me about it. And I loved it.

***RW:** So he wanted you in the business?*

Morris: He wanted me to at least have a taste of it. He didn't want to force me in. I had siblings who were already working here. He said, 'You're always going to be an owner. Why not figure out if there's anything about it that you like?'

I tried it for a summer and loved it and kind of moved around within the business since then. But once I landed in radio, I thought almost immediately, 'I doubt that I'll ever go back to TV.'

***RW:** How has radio been different for you?*

Morris: Two things that I appreciate about radio are the immediate nature. You were saying earlier you need a football team for TV, and that's so true. You can do so much more, so quickly, so spontaneously (in radio).

I think it's a slightly more intimate medium with listeners, clients as a workplace, more creative, simply because of the spontaneity that it lends itself to.

***RW:** How long have you been managing the radio group for Hubbard?*

Morris: I began running our flagship station, KSTP(FM), in 1990. I ran that day-to-day (for five years), before also running our hot AC station KS95, sort of simultaneous with running the group. It's not really a group, it's half a cluster.

I took operational responsibilities for KS95, then we added a new station, a move in, from New Richmond, Wis. *(Hubbard purchased WIXK(AM-FM) in 2000 and moved the FM to the Twin Cities metro area in 2002.)*

It was sort of simultaneous to that acquisition and my active involvement with the NAB (that) I decided to delegate some more of the day-to-day responsibilities here so that I could do what I wanted to do in Washington and still have time for my kids. At that point, I really stepped out a lot of the day-to-day and tried to stay focused on a bigger picture and have gotten more active corporately.

***RW:** You've probably experienced a lot of changes in radio. What do you think is the biggest change, and is it a change for the better?*

Morris: There certainly are changes. I continue to love radio as much as I ever have. I think it's a creative business and it's an exciting business.

I'm not one who laments the 1996 Telecom Act. I wish that we were in a position to have been able to take better advantage of it as a company. … We were building USSB (United States Satellite Broadcasting Company Inc.) at the time, and that wasn't really in the cards for us. We were one of the original 12 licensees for a DBS (direct broadcast satellite) license.

My father traversed the countryside for more than a decade trying to raise money and build a satellite and get USSB launched. USSB was ultimately purchased by DirecTV in 1999. But we were still very much in the midst of trying to get that business off the ground in 1996 and the years immediately following. So all of our company resources really were directed to that effort.

***RW:** Rather than on acquiring stations …*

Morris: We hope to someday be able to acquire stations again, but not in the immediate future.

***RW:** You didn't think it was such a great idea to use the Arbitron radio metros as the new market definition. Do you think the new definition would have affected Hubbard's ability to acquire more stations if it had gone into effect?*

Morris: I don't know, and we're so under that cap that we'd have to get a lot bigger before we're impacted by any of that. I'm sensitive to what many other people see as the inadvertent, sort of — if you got in before the rule change, you live by one set of rules, and rule changes lock out anybody else from getting that competitive parity from a signal perspective.

***RW:** Does Hubbard use voice-tracking at all?*

Morris: We do in the late evening but that's all.

***RW:** What do you think of all this negativity from Capitol Hill directed at radio? Why, in your opinion, has radio become the example of what went wrong with the Telecom Act?*

Morris: There's a lot of misinformation on the Hill. I think it's become politically popular for people who maybe don't have all of the facts to bash radio and consolidation and its effects on radio. The few anomaly markets really should not — those circumstances, if they're accurate, shouldn't really be extrapolated to speak to the entire country, in my opinion. I just think it's politically popular.

Ginny Morris

***RW:** To bash radio?*

Morris: Yes.

***RW:** Does Hubbard have plans to transition stations to HD Radio either this year or next year?*

Morris: We're hoping to put it in our capital budget for '04.

***RW:** Did you wait until you had money or were you waiting to see how the technology shook out? Some are worried about the potential of AM interference at night.*

Morris: Yes, I'm worried about that. I would have liked to have seen a solution for both bands move forward at the same time.

I don't feel any urgency right now. We're planning to do it in '04 but I don't think we'll be at any competitive disadvantage if we wait until '05.

***RW:** Satellite radio. Has it affected your stations in your market yet?*

Morris: No, although we have begun to consider them in the very long run, as somebody that we need to be aware of. It's inspired us to redouble our efforts to be even more local than we ever have been. Not that we won't look at syndicated programming, but making sure that we pay even more attention than we ever have before to the content between the records.

And making sure that on our music stations, we have more to offer than just

See MORRIS, page 8 ▶

Hubbard Broadcasting: One of the Originals

In 1923, Stanley E. Hubbard licensed WAMD(AM) — "Where All Minneapolis Dances." In 1928, the station consolidated with St. Paul station KFOY to form KSTP, with studios in St. Paul. The building still houses the antique transmitters used to broadcast the station's first signal 80 years ago.

After launching KSTP, Hubbard bought RCA's first television camera in 1938 and launched an independent TV station 10 years later.

The Hubbards have continued to grow their business. In 1981, the company formed U.S. Satellite Broadcasting. The following year, the FCC granted USSB one of the nation's first satellite broadcasting licenses. Hubbard later sold USSB to DirecTV.

Today, the founder's son, Stanley S. Hubbard, is chairman of the board, president, chief executive officer and director of Hubbard Broadcasting. His wife Karen and their five children have ownership stakes through shares of common stock and positions within the company.

Hubbard Radio, a division of Hubbard Broadcasting, operates three radio stations in the Twin Cities of Minneapolis/St. Paul: KSTP(AM), KSTP(FM) and WFMP(FM), plus WIXK(AM) in New Richmond, Wis.

Virginia Morris is president of Hubbard Radio as well as the Hubbard Radio Network, begun in 1999 to syndicate Hubbard's on-air talent regionally. The network has more than 40 affiliates in the Upper Midwest.

Hubbard, based in St. Paul, also has 12 TV stations in Minnesota, New York and New Mexico.

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input 1
mic
line
tape in

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Shaun Kassity from Salem Communications' 104.7 The Fish in Atlanta: **"Thanks to Matrix GSM we had the best sounding remotes ever on our station!"**

Steve Kirsch of Silver Lake Audio: **"The feed was rock solid. I'm very impressed—it sounds much better than I thought it would."**

Collin Mutambo, Radio Simba, Kampala, Uganda: **"We are indeed quite impressed."**

But our personal favorite, from Jerry Dowd of Jefferson Pilot's WBT in Charlotte, NC: **"We hope to keep the betas until you get nasty with threatening letters."** Thanks Jerry. We'll take that as a compliment!

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Morris

▶ Continued from page 6

music and remind ourselves always that we can't afford to be just a jukebox, just a series of songs strung together. For people who just really want to have a certain genre of music, I think satellite radio can deliver that far better than terrestrial radio ever will be able to.

I'm glad that that's not the business that we consider ourselves to be in here at Hubbard Radio, because I think what we do is more three-dimensional, more fun, more relatable, more of a product that people can have a relationship with. …

I do have a satellite radio, but I haven't spent a lot of time with it. … I'm intrigued with the recent announcements by Sirius that there are artists doing channels. I haven't heard that, it's hard for me to envision, but I'm intrigued by what they're trying. Anybody that's willing to try something new from a content perspective in radio, I think it's good. 'Cause if it works, it can be adapted locally. Presumably. …

RW: What technologies are you watching to see how they might affect your stations? For example, are listeners calling up your station and saying they want to get the radios on which they can see the name of the artist and the song on the radio? The Radio Broadcast Data System features?

Morris: A little bit. We had an early experience with RBDS, but the radios just weren't available. But we are a little bit, and we do have plans to make sure that we've got that incorporated in what we're doing. … It's a pretty inexpensive thing to do. We would be doing it right now if it wasn't for the fact that one of the channels that we would need to do that on we're using to feed an outstate network here, so we just need a small technical upgrade.

RW: What are your thoughts on Arbitron's Portable People Meter?

Morris: The diary system is not perfect. I'm much more comfortable with the diary system than I am with what I hear about the People Meter so far, although I've not been a great student of it. …

On the other hand, I think it's great that Arbitron is trying to figure out a way to improve the accuracy of the system. What everybody's known is less than perfect…So, it's a matter of what the right solution is, I think.

> **'I thought I'd do (radio) just for one summer so that my father would stop bothering me about it. And I loved it.'**

RW: A family-owned business is becoming more rare. How is it to work with your family?

Morris: It's wonderful. We're very fortunate to be a third generation of broadcasters who are committed to the future of the industry. And who love the business as much as our grandfather and our father did.

It's a professional but familial relationship that we have with (our father). He worked for his father, so he may be uniquely sensitive to what it's like. But I like to say he's a tremendous boss and an even better dad. …

RW: You have siblings heading up some of the other divisions of Hubbard. How is it doing budgets and handling finances? In many businesses people fight over that.

Morris: I'm never in a position to really negotiate with my siblings about the budget. We all have managers who report to us individually from a budgetary perspective. Everybody's just rolling as hard as they can, doing the best that they can, and we really, operationally, defer to each other, relative to what's best for our own individual divisions that we run.

RW: Has being a woman in a male-dominated industry been difficult or an issue for you?

Morris: No, and I hesitate because I've had more opportunity than most men in this business have. So I know that my experience is unique. Everybody's always treated me with respect and they've welcomed my ideas and tolerated my ideas. …

The easy answer is, "No, never been an issue." The longer answer is sort of a hesitation only because I know it's not been as easy for many people. …

I do think that the more time all of us could spend just considering ourselves broadcasters as opposed to male broadcasters or female broadcasters or big broadcasters or small broadcasters, the privately-held broadcasters or publicly-held broadcasters, if we just focus on the fact that we're all broadcasters, I think that we would possibly be a healthier industry.

RW: How have you found your stint as NAB Radio Board chair?

Morris: I enjoyed it a great deal. I found it to be very interesting; lot of fun. I would say time-consuming but rewarding. It's an experience that I wouldn't trade for anything.

RW: Fun how?

Morris: Fun to be in the midst of everything going on in Washington, all the different opinions and all the different agendas and how it all works. And working through all of that. Knowing what's going on in a more intimate way than you could possibly experience it by not having that experience.

RW: Given your experience and your background, what changes in the industry do you think we'll see in the future?

Morris: I really don't know what to expect because of the up-in-the-air (status) of the ownership rules. … I vacillate between thinking there will be more consolidation and some deconsolidation. Some of the bigger groups might someday, I can only hope, decide that they want to be a little smaller, a little more focused, a little more manageable, and that maybe some of the medium-sized groups will have a chance to get bigger … and that there will be more parity from a sheer volume perspective.

I'm not saying that that's what I think is going to happen. I'm saying, that'd be great if it did.

RW: What kind of changes do you have in mind for Hubbard Radio?

Morris: Our new move-in is programmed as a talk station on the FM band. This is the one we moved in from Richmond (Wis.), FM107 WFMP. We are programming it all talk, local 5 a.m. to 6 p.m. with exception of Dr. Laura, with people who are talking to women … not all women (air staff)…but talking *to* women.

(We're) experimenting with a new format. We're very excited about it and we're getting great reactions … not in Arbitron yet but anecdotally from our listeners. They're responding very favorably.

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◆ NEWSWATCH ◆

Mt. Wilson Stations Hit With RF Fines

WASHINGTON For the first time, the FCC has proposed forfeitures against stations for violating the radiofrequency radiation exposure limits at a multi-user site.

The commission said the power density level produced by each of four licensees at Mt. Wilson in Los Angeles was within acceptable percentages, but the cumulative effect exceeded allowable limits. The commission said the seriousness of the safety violation warrants a proposed fine of $10,000 for each station.

Fined are KBIG(FM), KKBT(FM), KRTH(FM) and KWHY(TV). The licensees are Clear Channel, Radio One, Infinity and Telemundo, respectively. All of the licensees whose transmitters exceed the limits share responsibility for reducing RF to permissible levels, the agency stated.

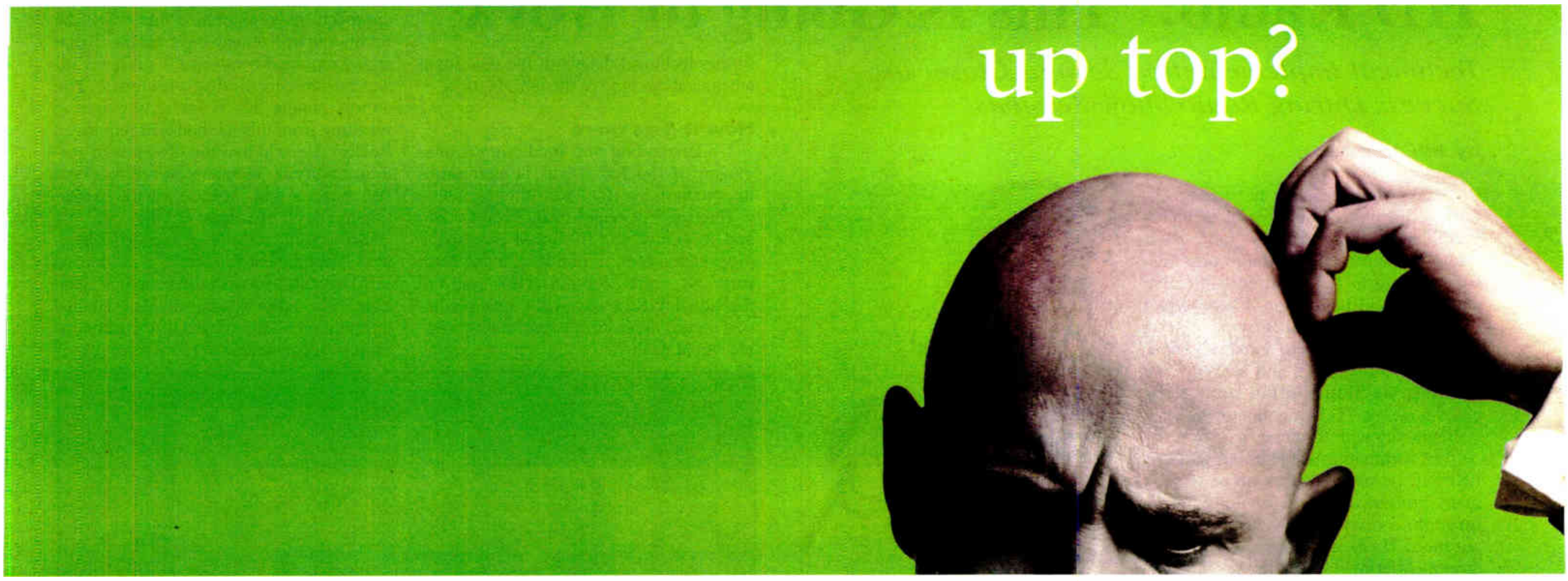
FCC agents inspecting the Mt. Wilson site in July 2002 determined that RF levels in a publicly accessible area, which is approximately 100 feet from a U.S. Post Office, exceeded the maximum permissible exposure limits by 60.5 percent.

The antenna farm was not fully gated and not marked with RF warnings, the agency said. Broadcast engineers familiar with the site told field agents that contractors working at the site mostly likely had taken down the sign. The agents cited the stations for failing to prevent the public from accessing areas that exceeded the RF exposure limits.

The stations installed more fencing and RF warning signs. But during an inspection in September, an agent said, a gate leading to one of the site entrances was left open.

The commission also has directed the licensees to submit their plans to ensure the fences surrounding the antennas are shut and the gates are locked.

Wish you had more up top?



Announcing Omnia-6EX.

There's a lot of buzz about the new HD Radio codec. We've heard it and agree with the many others who like it and say it's now time to get on with radio's transition to digital.

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The new Omnia-6EX won't short-change your listeners. We've built Omnias with sampling rates of 48kHz and higher from the start. All along, we've needed the sampling headroom to keep analog FM audio grunge-free. Now it's essential for HD Radio. Even if some listeners wouldn't notice the missing high frequencies, there's a fair chance they would hear a sharp 15kHz low-pass filter operating within HD Radio's codec range.

The new Omnia-6EX has enhanced processing for analog FM, and is ready for HD Radio with a second limiter section and digital output. Both FM and HD limiters and outputs are included as standard.

Omnia-6EX is also full of processing enhancements that result in yet more bass punch, yet more voice clarity, than the original Omnia-6. A sound so powerful and free of artificial constraints, you'll crave it for your station the first time you hear it.

More than 50% of the US' Top 100 FM stations have already upgraded to Omnia. Maybe you're next?

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NEWS ANALYSIS

HD Radio: 'This Is Going to Work'

Technical Implementation Seen as Closer to Success During Radio Show Sessions

by Jeff Johnson

Thanks to major innovations and technical refinements, attendees of technical certification sessions at this fall's NAB Radio Show sensed HD Radio transmission moving to practical, cost-effective and successful realization. Every aspect of HD Radio technology has seen progress, from codecs to antennas. Those attending the sessions and studying the new introductions on the show floor could now say, "This is going to work."

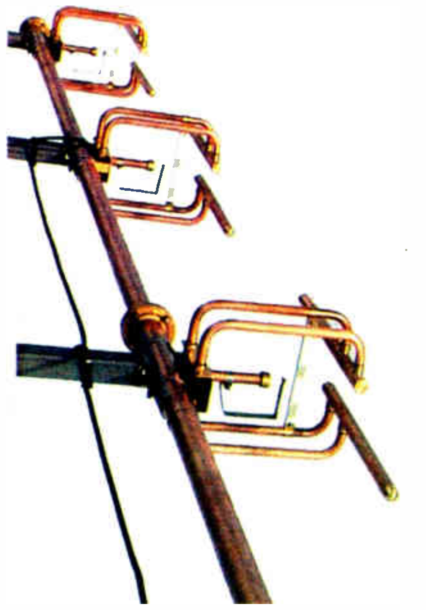
Beginning with the antenna:

Tom Silliman, president and CEO of ERI Inc., introduced what will be seen by many broadcasters as a stunning breakthrough, a dual-input side-mount FM antenna. Until now, the only type of antenna offering dual inputs was the master antenna panel array.

To utilize a single radiating element efficiently for both the HD and analog signals, dual inputs are required, one for each. Lacking dual inputs, high-level combining is necessary with its attendant efficiency compromise.

Having completed a full-scale working side-mount prototype of an omnidirectional, dual-feed, circularly polarized antenna, ERI states that "the design meets the current FCC requirement that all of the elements of an FM array be excited by both the digital and analog FM signals."

The antenna is said to satisfy concerns in many areas raised when planning an FM HD Radio conversion. According to Bill Harland, product line manager of the Antenna Division of ERI, and Eric Wandel, director of product development, wind and weight loading will be comparable to an analog-only ERI antenna of the same gain and power-handling capability.



The interleaved antenna approach was part of the discussion. Here, a photo from Shively Labs is shown.

Thus there should be no tower load or leasing issues, excepting those of the small transmission line for the low-power digital signal. Gain in the vertical and horizontal planes will be identical for both signals, as will the inevitable distortions due to the mounting configuration, thus ensuring optimum digital integration. The antenna will be able to achieve VSWR of 1.05:1 for both analog and digital.

Another important technical specification is the requirement that the two signals be isolated in excess of -30 dB. The dual-input antenna achieves this eliminating any need for a circulator and its attendant cost and insertion loss.

ERI did not produce photographs or further technical details of the dual input antenna at the time of the introduction.

How it gets there

Understanding and predicting propagation of the RF signal is ever more important in the HD Radio environment.

Charles A. Cooper of duTriel, Lundin and Rackley Inc. discussed free-space propagation loss, terrain loss, plane earth path loss, knife edge diffraction loss and the Longley-Rice signal strength prediction algorithm as tools to ascertain probable signal quality.

THE NAB
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NAB
AM/FM Antenna
Certification Workshop
Thursday ... -5pm
NAB
Digital Radio
Certification Workshop
Friday, 9am-4pm
NAB

Bob Surette, Charles A. Cooper and Tom Silliman presented at an antenna certification workshop.

He emphasized that Longley-Rice takes into account environment variables, while the FCC uses simple point-to-point predictions. Both are unreliable in complex RF environments such as urban canyons. Reportedly, HD Radio in practice is quite robust in such circumstances. HD Radio appears to thrive in multipath-ridden zones.

In the instance of a broadcaster with an existing Shively array, Bob Surette, director of RF Engineering for Shively Labs, discussing the interleaved antenna approach, gave assurance that it will be feasible to utilize new bays for the digital signal mounted between the present full-waved-spaced analog elements. The approximately 20-dB interbay coupling resulting from this method will require an isolator. He said that the presence of pattern modifying elements of a directional FM antenna will increase interbay isolation to a level of at least -27dB.

Scott Stull, director of broadcast business development for Ibiquity, introduced Jeff Detweiler, broadcast technology manager, who outlined and provided detailed information on the subject of the technical aspects of conversion to HD Radio.

Information similar to that presented at the spring NAB convention was given, with the important addition of the solution offered by the newly announced ERI dual-input side-mount antenna.

A major emphasis was placed on planning of the total air chain to minimize undesirable artifacting in the final encoding process. One problem discussed was the experience encountered by fans listening to a sports broadcast at the originating venue, frustrated by the "diversity delay" introduced by the HD Radio system. A solution is to broadcast a low-power, non-delayed analog signal within the confines of the venue. Jeff Detweiler stated that it was acceptable alternatively to eliminate the diversity delay during the period of the game by using the same technology as that of a profanity delay, but in reverse. There will remain an inherent latency, but the confusing 7+ second delay will be absent.

Mix engine

Ameliorating the increased complexity of the HD Radio transmission plant can be the simplicity of Ethernet interconnectivity.

"Broadcast facilities are still littered with the ghost of technology past," said Steve Church of Telos Systems. Church and Michael Dosch, also of Telos, provided a workshop session titled "Ethernet for Studio Audio Systems."

In his colorful fashion, Church observed that analog plus the plethora of digital formats such as AES3, MADI, S/PDIF and the many PC audio file types create a "Frankenstein's monster of audio sources. We desperately need a standards-based approach to intelligently combining these disparate pieces."

See DIGITAL RADIO, page 12 ▶

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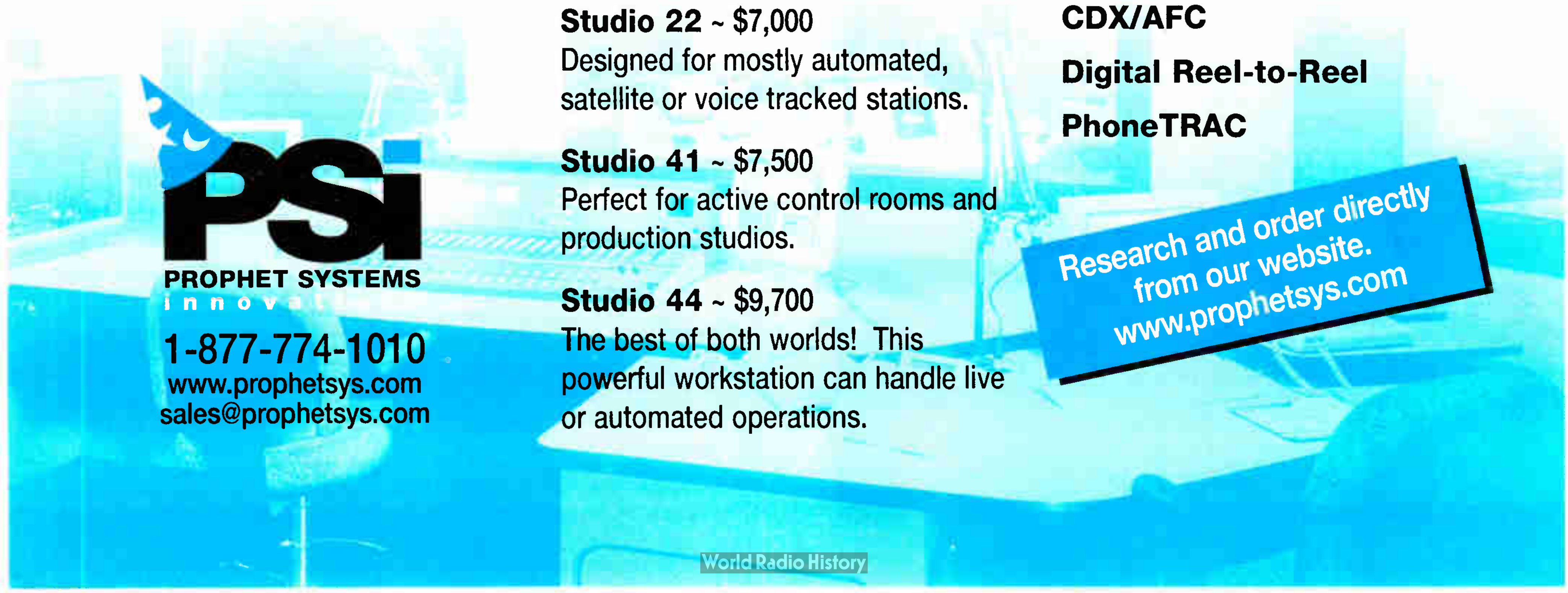

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Ohio's Own Radio-TV Hall of Fame

by Ken R.

Ohio is home to a number of halls of fame, including the Rock and Roll Hall of Fame in Cleveland, the Football Hall of Fame in Canton and even an Aviation Hall of Fame in Dayton.

Why not give broadcasters a shot?

Ask Todd T. Taylor, who spends thousands of dollars of his own money and about 35 hours each week over and above his "day job" to bring the Radio Television Broadcasters Hall of Fame to its fullest potential.

"I'm not sure why I do this," he said. "I don't sleep. I can sleep when I die. For now I have a mission and I'm putting everything I can into it."

Taylor is a 19-year broadcaster who still handles voiceover work for selected clients. He was inducted into the Radio Television Broadcasters Hall of Fame in 1998, but found the structure and performance of the organization lacking.

"I became a board member and we rechartered it and changed our direction," he said. "We decided to focus on the on-air talent candidates and eliminate other categories."

The non-profit (501-C) organization resides in downtown Akron next to Canal Park, home of the Aeros, the town's AA minor-league baseball team. Each year a fresh crop of talented broadcasters is inducted in a fall ceremony.

While the organization can sell ads in its full-color program and barter certain services, finding funds is always a challenge.

"We'd like to get a lot more support from the broadcast industry," said Taylor.

Legends and wild men

This year's ceremony was held Oct. 5 at the Hilton-West in Akron-Fairlawn. Inductees included Cleveland radio legend Johnny Holliday, journalist Paul Orlousky, TV host Ray ("Franz, the Toymaker") Stawriaski, ESPN sports commentator Dan Patrick and "Living Legacy Award" winner Tim Taylor. Denny Sanders, now with Telos Systems, also was among the inductees.

Posthumous awards were presented to radio wildman Pete ("Mad Daddy") Myers who worked in Akron and Cleveland before hitting the big time at WINS(AM) in New York, and "M*A*S*H" TV star McLean Stevenson, who once spun the platters at WERE(AM) in Cleveland.

Last year's inductees included Jack Riley, who was heard on KYW(AM), then a Cleveland call sign, and WERE(AM), also in Cleveland, before going to Hollywood and TV to play the amusingly insecure Elliot Carlin on "The Bob Newhart Show."

Another 2002 honoree was Jeff Baxter, who segued from Armed Forces Radio to a comedy career with future WJR(AM), Detroit radio star J.P. McCarthy to various Ohio radio and TV stints. On WEWS(TV) in Cleveland, he co-hosted "One O'clock Club" with Riley.

Jack Paar, former "Tonight Show" TV host, received a special tribute, although he was unable to attend last year's ceremony because of ill health. Paar paid his dues on WGAR(AM), Cleveland. Also honored were the late Wendy's founder and spokesman Dave Thomas, who lived near Dublin, Ohio. Bob Braun was a Cincinnati legend at WLW(AM) as well as WCPO(TV) and WLWT(TV) in the same city. Gene Carroll's radio days go back to the early 1930s with stints in Cincinnati, Chicago and New York. Jim Muzzy was a noted sportscaster at WHBC(AM), Canton.

From as many as 180 suggestions each year, the board of directors narrows the nominees down to a final dozen.

"Because we basically have no money," said Taylor, "these honorees have to get here on their own nickel, so we have to be really convinced of their commitment."

The Radio Television Broadcasters Hall of fame has had inductees fly in from Florida, North Carolina and other states to be honored before an audience of their peers.

"We also have 12 presenters who are also important people, so we have 24 stars up there on the stage," he said.

Taylor has plans to expand the scope of his organization to include scholarships for young people who wish to join the industry.

"Our long-range goal is to see communications departments in all Ohio high schools, not just colleges," said Taylor. "We also want to buy some property between Cleveland and Canton to build a permanent home."

To find out more about the Radio Television Broadcasters Hall of Fame, visit *www.radiotelevisionbhof.com.*

Ken R. was an Ohio broadcaster from 1972-1975 but asks, "Who cares?"

The Class of 2003

Nick Anthony
Jack Buck
Charlie Day
Connie Dieken
Chuck Dunaway
Eleanor Hayes
Johnny Holliday
Kid Leo
John Manolesco
Tom Meyer
Pete "Mad Daddy" Myers
Paul Orlousky
Dan Patrick
Denny Sanders
Dale Solly
Ray "Franz/Toymaker" Stawriaski
McLean Stevenson
Dick Thompson
Bud Wendell
Hymie Williams

Living Legacy Award:
Tim Taylor

Charlie Day

Charlie Day

Digital Radio

Continued from page 10

Telos' Livewire technology is such a system; it has been reported here previously and was presented with a Radio World "Cool Concept" award at the NAB2003 Show. Church and Dosch emphasized the advantages of using an established, reliable and affordable technology such as Ethernet.

"Studio-grade reliability" can be realized, according to Church.

Building upon the cost-effective theme, a new concept was introduced as the core technology to be found in a new Livewire studio mix engine. Dosch and Church explained that a Pentium processor was a "pretty good DSP chip." A motherboard with a Pentium III chip running Linux serves reliably as a cost-effective mix engine for each control surface. Connected to the system via an Ethernet port, the mix engine was described as flexible, efficient and affordable.

Maciej Szlapka, an engineer with Telos, demonstrated a software control window that simultaneously managed not only an audio router within the Livewire system but existing conventional routers as well. The Livewire system is in a live "radio broadcast test phase" in the United States and Europe.

All considerations concerning HD Radio hinge upon not only acceptance by the listening audience, but an enthusiastic "Yes, this is better!" response.

Listening demonstrations were provided by Ibiquity of the new HDC codec. Stephen L. Wallace, broadcast marketing manager of Ibiquity, demonstrated to a Radio World writer the sound of live on-air Philadelphia AM and FM stations, exciter-driven simulated reception and a demonstration of the HDC codec in the 20 kHz "core" AM mode as well as the 36 kHz standard mode. The original reference audio also was available.

It's better

The new HDC codec performed competently in both AM and FM modes, and, to these ears, will no longer be an issue thwarting HD Radio acceptance. According to Detweiler, the HDC codec "survives very well" the inevitable transcoding to be encountered in the contemporary air chain. Listening to the on-air HD Radio AM signal and comparing it immediately to a conventional monaural AM signal did elicit in a "Yes, I like this!" reaction between this writer's ears.

An important additional aspect of HD Radio is the wireless data that can be broadcast concurrently with the analog and digital audio. Program Associated Data (PAD) and Advanced Application Service (AAS) will not only provide such metadata as current program information but services as "on-demand personal radio," premium navigational systems and real-time traffic updates, according to Detweiler. Joseph F. D'Angelo, director of wireless data for Ibiquity, directs those interested to *www.ibiquity.com* for white papers and further information.

Jeff Johnson is network engineer for Xavier University's WVXU and X-Star Radio Network.

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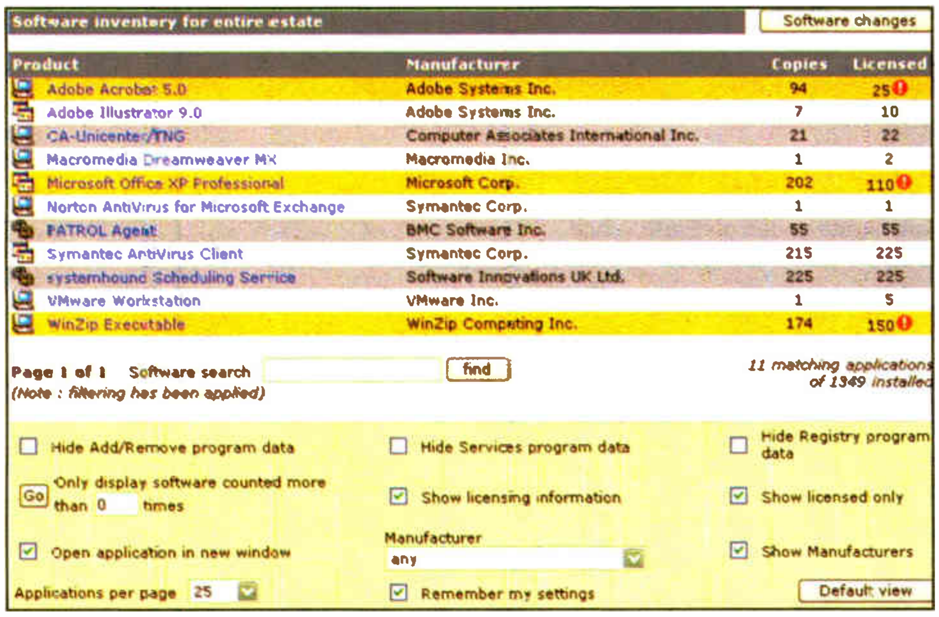
Trading Pies for Passwords

by John Bisset

Maintaining order in your station's computer systems can be as difficult as keeping the PD happy with the audio processing.

Certain tools can make your life easier, however. The first is to obtain or formulate a corporate computer policy. Simply put, this policy, signed by every staff member with a desktop or laptop owned and maintained by the station, prohibits unlicensed software from being installed on station computers.

Some of the larger radio groups have really hammered this policy home, with dismissal for those violating the policy. One need only read stories in the Wall Street Journal about lawsuits over pirated software used in the workplace to understand what is at stake here. The software manufacturers are protecting their property. Just as a sales manager "bumping" an EAS test to run a spot can earn your station an FCC fine, so the station can be sued when employees use unlicensed software on station computers.



Software inventory for entire estate

Product	Manufacturer	Copies	Licensed
Adobe Acrobat 5.0	Adobe Systems Inc.	94	25❗
Adobe Illustrator 9.0	Adobe Systems Inc.	7	10
CA-Unicenter/TNG	Computer Associates International Inc.	21	22
Macromedia Dreamweaver MX	Macromedia Inc.	1	2
Microsoft Office XP Professional	Microsoft Corp.	202	110❗
Norton AntiVirus for Microsoft Exchange	Symantec Corp.	1	1
PATROL Agent	BMC Software Inc.	55	55
Symantec AntiVirus Client	Symantec Corp.	215	225
systemhound Scheduling Service	Software Innovations UK Ltd.	225	225
VMware Workstation	VMware Inc.	1	5
WinZip Executable	WinZip Computing Inc.	174	150❗

Page 1 of 1 Software search

(Note : filtering has been applied)

11 matching applications of 1349 installed

☐ Hide Add/Remove program data

☐ Hide Services program data

☐ Hide Registry program data

Only display software counted more than 0 times

☑ Show licensing information

☑ Show licensed only

☑ Open application in new window

Manufacturer: any

☑ Show Manufacturers

Applications per page: 25

☑ Remember my settings

Fig. 1: Systemhound's Easy Audit keeps watch over your station computers.

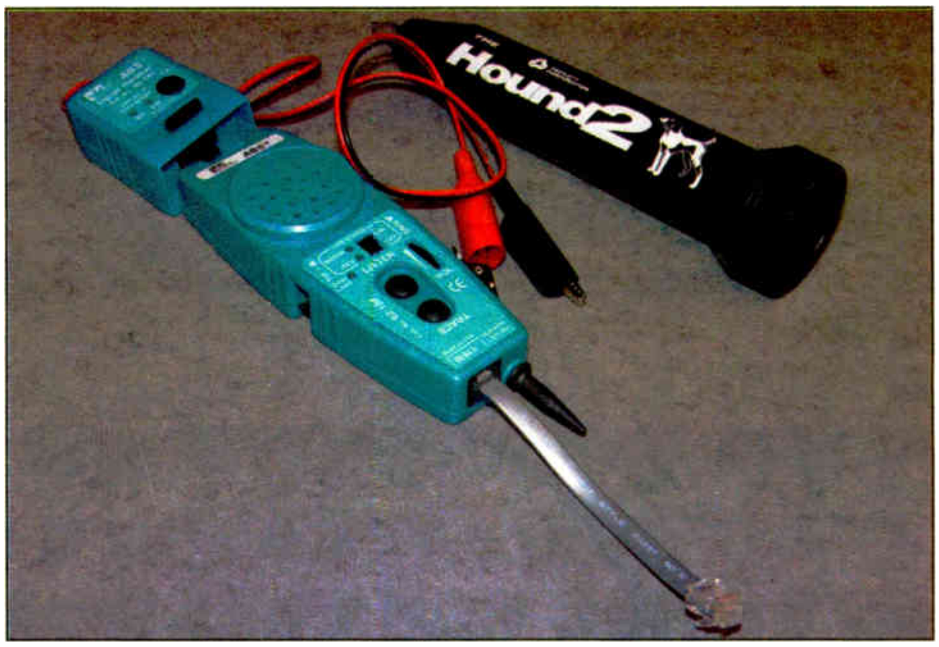


Fig. 2: Throw a signal and sense it with these two workbench necessities.

Keeping tabs on who has installed what could be an impossible task. In cluster operations with large sales staffs, all you'd be doing is auditing computers! Jeff Loughridge, market chief for the Infinity stations in Washington, found a solution to the problem in a software package called Systemhound Easy Audit. A screen is shown in Fig. 1.

Easy Audit permits the scanning of every computer connected to the station network. It maps hard-drive usage, so Jeff can spot the need for an upgrade, and displays the programs on each computer's hard drive.

Should someone connect a computer to the network with unauthorized software, the Easy Audit program will flag the computer. Remember, the computers belong to the station, so you shouldn't have privacy issues. However, check with your legal counsel when implementing this policy and ask about the issues it might raise.

O.K., so it sounds like Big Brother. But before implementing the package, Jeff and his staff were experiencing all kinds of gremlins caused by staff installing and running memory-hog programs. Now only station authorized programs are allowed. The network runs better, and Jeff admits the diagnostics offered by this package simplify his life.

So the engineer/administrator doesn't look like the Grinch, any auditing program has to have the support of the general manager. The GM needs to understand the severity of the penalties associated with bootlegged software, and the potential financial impact on his business.

In talking to a number of engineers, they all recommended that you develop a policy and enforce it. Warnings just don't work.

★ ★ ★

Have you started your holiday shopping? How about making your list?

Fig. 2 shows two slick tools for your workbench that are within reach of most

See WORKBENCH, page 16 ▶

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Workbench

▶ Continued from page 14

shoppers. The Hound 2 is an improvement over the original Fox and Hound, a signal generator and sensor. The Hound 2 will inductively sense tones and amplify them through a built-in speaker — no need for a butt set — to identify cables or punch block wiring continuity.

In the ABS Signal Thrower, the signal generator and sensor clip together so you won't misplace them. Clip leads couple the signal into the wiring under test, and the companion sensor permits the tones to be inductively coupled, or directly coupled using the modular jack and plug assembly.

Like a butt set, the device can be used to check phone-line polarity, off-hook and monitoring conditions. Other features include a volume control for the built-in speaker as well as metal clips on each side for butt-set connection.

Thanks to Engineer Roger DuFault of WHFS(FM) in Washington for sharing these finds with *Workbench* readers.

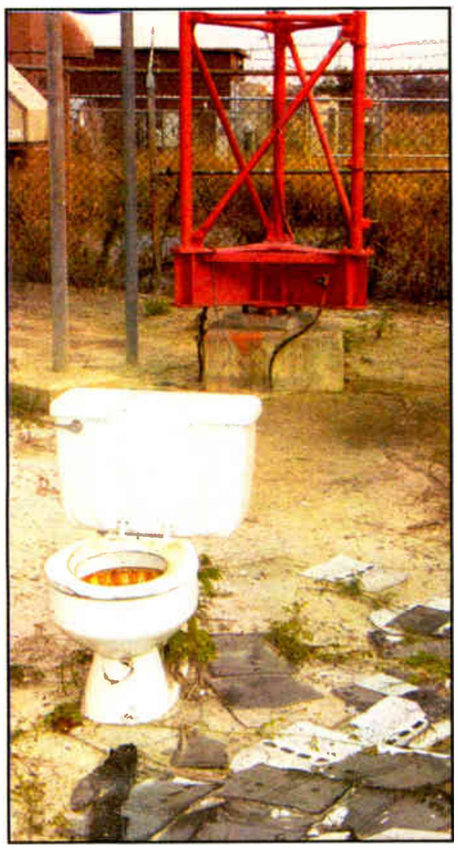

Fig. 3: A new meaning for the term 'RF exposure.'

★ ★ ★

Here's a Web site of interest that a helpful reader passed along to us. SNC Manufacturing makes telecom problem solvers, including noise-protection filters. You'll find interesting products for your phones at *www.sncmfg.com/telecom/noise_protection/rid.html* including RID — "radio interference dampers."

★ ★ ★

With Thanksgiving right around the corner, Fig. 3 comes from the "thankful this isn't my site" file. It gives new meaning to the phrase "open-air toilet."

One might think that this is a picture of the aftermath of an East Coast hurricane, especially with all the shingles on the ground. But no, you won't find Jim Cantore of the Weather Channel hidden somewhere in the picture.

It turns out that, back in the days of manned sites, this transmitter facility was built with running water and a septic system. Fast-forward 35 years, and the septic system no longer met code. The water was turned off and the county inspectors required the toilet to be removed. The toilet had been set outside, to be removed by the refuse folks, when I happened by.

Just so happens a new roof had been installed recently and the old shingles were left by the roofing contractor. I wish I could tell you that a hurricane had struck and only the toilet survived — although that wouldn't say much for the transmitter manufacturers.

★ ★ ★

Enforcement of a computer plan can have its upside for the engineer. At an SBE meeting in the Northeast, I was told about a station group that enforced a "pie" policy.

Here's how it works. The rules dictate that all staff will change their log-in password every 60 days. Every employee is given simple instructions on how to do this. If they forget and they are locked out, the followup memo states, "I will now have to take up my valuable time to enter a new password for you. As the original memo mentioned, this is now going to cost you a pie. Pies have to be either homemade or from a bakery. They cannot be mass-produced pies from a grocery store. Passwords will be changed *after* the pie is in my hands."

Tastykakes don't qualify in this situation, either. "Pies must be at least 15 inches in diameter." The memo continues with an acceptable pie flavor list, as well as flavors that are not acceptable. The engineer who crafted this memo is serious — and a serious pie lover, I might add. His GM approved the memo; after all, the engineer's time *is* worth something, right?

Usually after a second pie, the lesson has been learned. The password-for-a-pie policy also gives us a new appreciation of staff turnover.

John Bisset has worked as a chief engineer and contract engineer for more than 30 years. He is the Northeast regional sales manager for Dielectric Communications. Reach him at (571) 217-9386 or john.bisset@dielectric.spx.com.

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

MARKET WATCH

Omnia Has New Processors for FM, Net

Omnia Audio has rolled out two new processors, one targeted at FM broadcasters, the other for streaming.

It said the Omnia-6EX (shown) has parallel processing paths optimized for FM audio and digital transmission chains, particularly the bit-reduced codecs used with HD Radio/DAB service and satellite systems.

The company said the unit adds enhanced processing and fine-tuning controls to the Omnia-6 platform. Parallel processing routes audio from the mixer section to output stages for conventional FM and DAB.

The FM section receives distortion-controlled final limiting with pre-emphasis, and an upper-frequency response of 15 kHz. The DAB section has a multiband look-ahead final limiter with selectable frequency response to full bandwidth of 20 kHz.

President Frank Foti contends that the unit "substantially advances the management and suppression of processing-induced intermodulation distortion. … And it's nice to finally be able to put back the last bit of high end that FM listeners have been missing for so long."

Features include enhanced processing algorithms; bass management controls with two new Bass Limiter functions, Tight and Girth; bass limiter algorithms that change waveform characteristics based upon frequency; 25 factory presets; Input Failsafe to select a new input source if the primary one fails; and Linux-based software that the company says provides smooth real-time metering of audio processes.

Separately, the company said it is shipping a software audio processor designed for streaming audio. It is aimed at Internet broadcasters and production people for Webcasting, satellite distribution, point-to-point audio streaming and video post.

Omnia A/X works with third-party streaming encoders to add processing to audio workstations. It is a processor for Windows PCs that conditions audio prior to the encoding step. The supplier said it works with most applications that use the Windows WAVEIN/OUT driver interface, including Windows Media, Real and MP3 streaming encoders.

"As speech and music are bitrate-reduced, their audio quality degrades," Foti said. "Omnia A/X provides precision peak control and frequency response to prevent distortion and artifacts in encoded audio." The multi-band processing is entirely in software.

Features include wideband AGC, three-band combined AGC/Limiter, high-frequency EQ and adjustable-bandwidth low-pass filter. A look-ahead final limiter prevents clipping to avoid digital artifacts.

The software runs on Pentium-III 800 MHz or higher PCs with Windows 2000, NT or XP. It retails for $595.

For information contact the company in Ohio at (216) 241-7225 or visit www.omniaaudio.com.

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The Big Picture

Photo: Gary Hayes, BBC

by Skip Pizzi

What PARs Will Mean for Radio

The Concept of Local Storage on a Radio Is New and Could Provide Golden Opportunities

by Skip Pizzi

Last issue, we began a discussion of the personal audio recorder or PAR, an audio/radio equivalent of the personal video recorder, which is most commonly referenced by the brand name TiVo. As most readers are aware, this is a device that integrates a hard-disk-based recorder with a tuner and timer.

Let's conclude our discussion of this concept by considering a few pivotal issues that remain unresolved. How these turn out will largely determine the impact of a PAR in the marketplace, and establish radio's role in that movement.

A common radio EPG

The PAR will not match the complete value of the PVR without a viable electronic program guide, or EPG. Today's PVRs all fill their EPGs with data provided by their respective service providers, but this data almost always comes from one of two TV-channel schedule-data aggregators. There is no such national-plus-local schedule-data aggregator for U.S. *radio* broadcast channels; and the high cost of developing such a process, plus the low value of its market, argue against the early emergence of such a vendor.

Therefore PAR vendors would have to create this data for themselves, a far less advantageous starting position than that of PVR vendors in this respect.

Alternatively, the personal audio recorder could be more of a manual device, with users finding schedule data from other sources and scheduling recordings as one would on a VCR — by setting the start time, stop time and channel.

Transport control

During playback, the fast-forward feature would be welcomed by most users, allowing them to skip ahead through undesired content (including ads, of course). Meanwhile, during real-time radio listening on the personal audio recorder, the live-pause buffer could still be a welcome feature. Once enabled, unwanted content could also be skipped until the buffer time is exhausted.

While the fast-forward feature is considered lethal to the advertising model, this is only because radio advertising has exclusively used a sequential interstitial model. Once significant listening is done via time shifting, this model weakens. This doesn't mean that advertiser-supported broadcasting is terminally threatened; it simply requires another model to be developed and deployed.

Today, some thought leaders in the advertising industry are considering such new models. One of these thinkers, Thomas Morgan of the Digital Media & Advertising Group, offers the concept that "the fast-forward button is the advertiser's biggest threat, but the pause button is the advertiser's biggest opportunity." He infers that while the pause button is engaged, advertisers' messages can still be presented. Also, if sufficiently engaging content were offered offline, the pause button allows a user to explore this content at leisure without fear of missing the rest of the program.

With this model in mind, advertisers are beginning to explore how to present such value-added or niche advertising, using the broadcast program only to alert users of the content's *availability and location*, rather than taking up the scarce broadcast time to present it.

Using the proper platform, audiences can pause the program when such a "pushed" announcement comes along, then seek the advertising via a "pull" request (on the Internet or a broadcaster-provided "walled garden" server, etc.), if a return path is available. If there is no return path, such content can be downloaded in the background to the receiver (via datacasting), then announced to the user when download is completed. If the user is interested, real-time broadcast content can be paused while the downloaded advertising material is played back from storage, after which the user can return to the broadcast where it was stopped.

Alternatively, the user can "bookmark" any such requested content, whereupon the platform can store and assemble all requested content, getting it ready to play sequentially at the end of the broadcast, or whenever the user requests it.

PAR for the car

While this may seem a bit farfetched, it's actually quite close to reality, given the direction in which some manufacturers are heading.

By next year, we will see car audio systems with hard drives. These are initially intended for downloading compressed music files, either by direct connection to a PC (using a removable docking radio), or via removable storage media (CompactFlash, SmartMedia, Memory Stick, etc.).

Another approach adds a WiFi connection to the car device, allowing "garage sync" to the mothership PC via wireless home network when the car is parked. This would allow a user to download a file or set of files from the Internet to the PC each night, and automatically transfer the batch to the car device via WiFi, so they are ready to play for the user's morning commute. Consider how that might affect drive-time audience ratings for radio if it became broadly popular.

On the other hand, if these devices include a radio tuner, and radio stations are producing, promoting and delivering (perhaps even selling) content for such uses, the PAR simply becomes another profit center for the broadcaster.

The "hidden" business model of connected devices like the PVR and PAR is the data mining potential that they offer. These devices can store every command that their users enter, so usage patterns and behavior can be downloaded (daily or less frequently) and observed by the service provider.

This aggregated data then can be marketed and sold under the terms of the company's privacy policy, to which the user agrees up front. (Typically this data is not personalized when sold, so it does not reflect the users' identity to advertisers; it simply reports aggregated behavior trends, in the manner of focus group sampling or surveys.) In the radio case, this would provide a new type of data that would likely be welcomed by advertisers. If this were successful, these data aggregation back-end systems would really become the core of the PAR service providers' business.

The ultimate goal for the PVR/PAR is so-called *targeted* advertising. In this case, advertisements are downloaded selectively to addressable receivers, based on a user's profile, which can be continually updated by the user (based on personal preference), or by the service provider (based on location, demographics, device-operation behavior, etc.). The device stores these ads in its memory until an appropriate time to play back occurs. This opportunity could be when the user requests the playback, or it could be when the device decides to replace a real-time ad with a stored one (based on the real-time ad being identified by the receiver as a "bumpable" type, which had been purchased by an advertiser at a reduced rate).

For PVRs, location is simply a ZIP code field, but in the radio case, user location could be updated dynamically via GPS return data. This would allow advertising delivered to a mobile or portable device to be optimized for the listener's exact location (e.g., by neighborhood) at the moment. Once the listener moved from that location, any stored advertising keyed to the location could be deleted, whether it was played or not.

This approach allows the addition of massive new levels of flexibility in radio advertising sales packages. It also would allow the sale to be contingent on whether the ad was ever played, and by how many users. Of course, if rates were based on such data, a third-party auditing process also would be required.

Such a discussion could continue at length, as it does in many corners of the advertising world right now. The radio industry should engage in this dialog so it gets its fair share of this new business. In any case, the broadcast advertising business model is likely to get a lot more complex, so get ready to tee it up.

Skip Pizzi is contributing editor of Radio World.

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The new "Rack-Able" SS 4.1 III switcher replaces the popular SS 3.1 while adding a forth stereo input channel and front panel control. We've kept the best of the SS 3.1 features and added a few more.

The new Silence Monitor III improves on the features of the original SSM, with front-panel control, removable screw terminals, "Plug & Play" installation, built-in program switcher, restore timing delay, aural alarm and relays for most remote functions. Now rackable!

The new SS 8.1 II switcher replaces the popular 6x1 with the addition of two more stereo input channels and GPI, while keeping the price the same! The SS 8.1 II may be desktop, wall mounted or installed on the new "Rack-Able" mounting shelf.

The new RA-1 (1-RU rack shelf) provides mounting for three tri-rack or two half-rack "Rack-Able" configured products. The RA-1 is pre-drilled for flush and recessed product mounting. The RA-1 is furnished with filler panels and mounting hardware.

Look for additional "Rack-Able" products soon.

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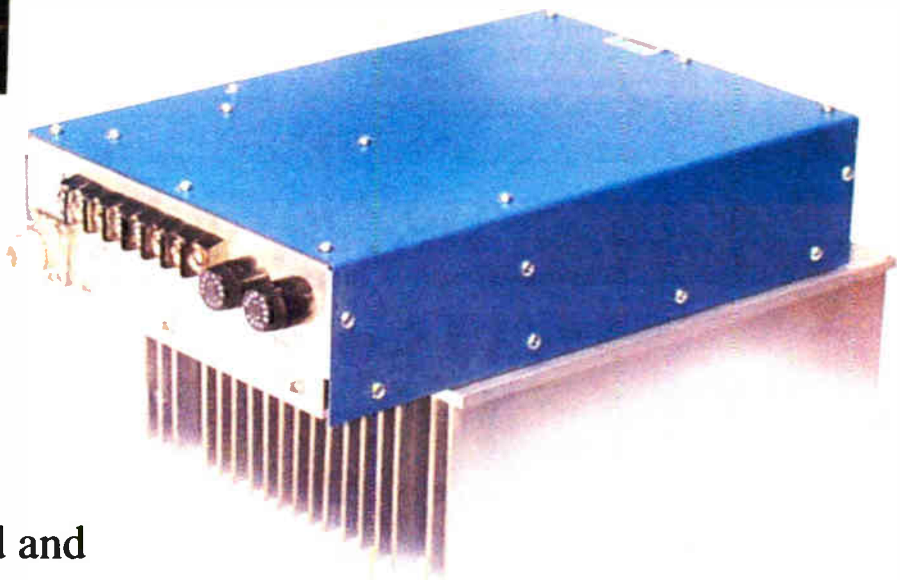

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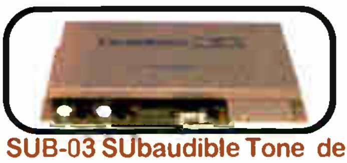

The SUB-03 SUbaudible Tone decoder

The SUb-03 is a single channel subaudible tone *decoder* that can detect 25Hz, 35Hz and combination tones on audio channels. Each tone gives a distinct relay closure. Integrated filters strip each tone from the SUB-03's audio output so no one hears it.

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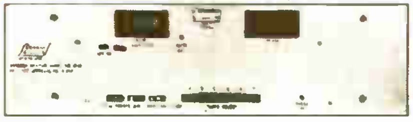

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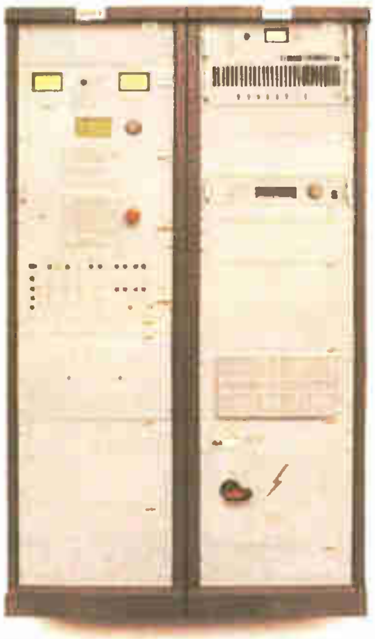

The Bext 35 kW FM transmitter is pictured here. *Not shown:* A catalog of reliable transmitters at all power levels, solid state and tube, plus STLs, translators, antennas, combiners, etc.

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GM Journal

People News
Page 31

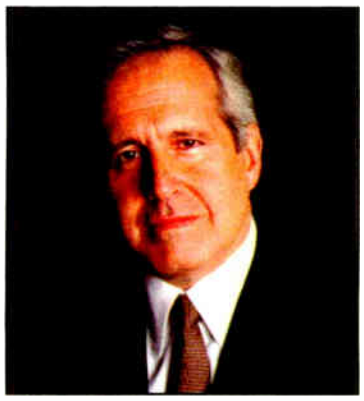
Radio World
Resource for Business, Programming & Sales
November 19, 2003

Batscha Was a Dreamer And Doer

by Ken R.

Robert M. Batscha, president of the Museum of Television & Radio, died of cancer this summer at age 58 in Manhattan.

During his 22-year tenure, he accomplished a great deal. Between the time of his appointment by the chairman and founder of CBS, William Paley, and his death on July 4, Batscha oversaw the expansion of the modest facility into a bicoastal institution. He greatly increased the size and scope of the museum's collection, added international programming and advertisements and instituted public and private seminars.



Robert M. Batscha

Born in Rochester, N.Y., Batscha was a magna cum laude graduate of Queens College and received a master's in international affairs in 1969 and a Ph.D. in political science in 1972, both

See BATSCHA, page 29 ▶

Meeting OSHA, and Beyond

Experts Talk About Common Sense in Protecting Your Safety and Health at Work

by Ken R.

Some accidents are more serious than others.

If your computer crashes, you just call someone to fix it. But if an employee or even a contract engineer falls off your tower or is electrocuted at your station, a long line of unpleasant consequences may ensue, beyond the human suffering. Among them are potential fines, time-consuming and expensive lawsuits and the possibility of further targeted inspections from the Occupational Safety and Health Administration.

Mark Perriello is the director of safety and health for Viacom. It is his job to anticipate dangerous situations.

"If you look at the Bureau of Labor statistics for all industries in 1999, about 6.5 percent of the population at work had some type of injury," Perriello said. "Radio is not as risky as construction sites, but it's probably a 5 on a scale of 10."

One of the big areas of concern at broadcast facilities is electricity. Perriello said people should be trained for the specific voltages with which they will be working.

"We also look at what we call lockout/tagout," he said. "This means that power is shut down and a lock is put onto the breaker or switch so someone can't turn it on accidentally while the engineer is working.

"Many assume that if the power is merely shut off, they are safe. They are wrong, because anyone could walk into that maintenance area and turn it on by accident."

Ron Erickson is a former chief engineer who sells equipment under the name Erickson Broadcast Services. He stressed the need to work with a buddy any time lethal voltages are involved.

Photos courtesy Mark Perriello

After electrical power to antennas is shut down and locked out, an employee verifies that power is neutralized.

"I never open a transmitter without someone right there with me," he said. "It's very important, even at 3 a.m. The industry is doing itself a great disservice by stretching staffs too far, making it difficult to maintain this rule."

Erickson described the trusty tool that some refer to as the "Jesus stick."

"That's a grounding rod," he said. "The stick is kept inside the door of the transmitter. One end goes through a grounded cable and the other end has a metal tip. It de-energizes the capacitors, which can still have a lot of voltage even when the power is off."

Perriello emphasized that there is more to be concerned with than just coming into direct contact with power.

"Even as low as 480 volts, you can get arcing," he said. "An arc can create a tremendous flashburn reaching thousands of degrees. This can happen primarily at the tower or at the transmitter."

All those familiar places

Perriello of Viacom studies areas not designed for human occupancy. This can include wiring trenches, equipment closets or spaces under floorboards and between walls.

"In those cases, OSHA has a 'confined space' standard," he said. "Before someone goes into that area, he/she must test the air, ventilate the area and, again,

See OSHA, page 22 ▶

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OSHA

▶ Continued from page 21

make sure no power can be turned on in that space while someone is in there."

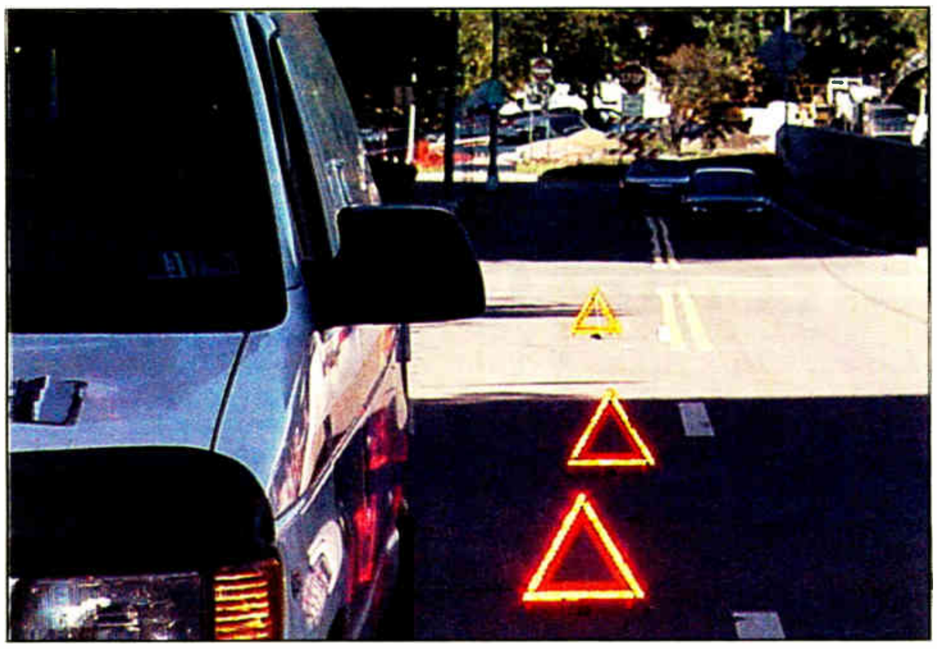
While it is impossible to anticipate every contingency, OSHA has developed preparedness procedures for most weather, fire and medical situations. These rules do not have to be part of the station public inspection file, but employees need to be familiar with them.

"What do you do in these cases?" said Perriello. "Who is in control? Which critical employees will stay on the air at the station and which will vacate, and how do you keep the remaining people safe and out of the way of emergency workers?"

Perriello said about 80 percent of the safety rules that apply to radio stations could apply to any business. But the other 20 percent are important to understand, too.

"At a radio station, one might encounter lead solder, isopropyl alcohol or paint," Perriello said. "There could be flammable materials such as acetone near where a spark of static could start a fire. People also need to know the possible reproductive dangers of inhaling any chemicals."

Most states have a "right to know" law, which requires that employees be told how hazardous or reactive materials are. It is up to the employer to collect the names of these substances, identify them, receive from suppliers a material safety data sheet and make this information available to personnel. If someone has to make an emergency trip to the hospital, it is helpful to know what he or she was exposed to.



A media vehicle stopped at the side of the road and interfering with traffic requires work-zone warning triangles to protect the operator, technician and talent.

"People buy things like lubricants or paint, use a portion and store the rest," Perriello said. "This can not only be a hazard, but a disposal problem as well. Those Styrofoam signs from a remote broadcast will release soot and carbon monoxide when burned, for example."

Fire suppression is a big item in any facility, as is the danger of people falling from ladders, towers or other structures.

Look ouuuuuut!

"If you're asking someone to climb higher than six feet, even if he/she is not one of your employees, that person must follow OSHA guidelines, because if it occurs on station property, the owner could be held accountable," said Perriello.

> A guy will say, 'I've been working on towers for 10 years and I haven't fallen yet.' How dumb is that?
>
> — Mark Perriello, Viacom

"Last year in North Carolina, six or eight people died falling from towers, and now the state is working on a standard that could be adopted throughout the country for tower work."

Station remote vehicles with telescoping antennas always are in danger of touching power lines. Perriello said that there are safety procedures involving first-aid training and equipment.

"OSHA sets minimum standards, but we usually go beyond that," Perriello said. "An example would be that, here within our company, we require people working on a roadway to use orange safety vests and plastic cones around the vehicle."

He said safety problems come down to human nature. People always think accidents will happen to someone else.

"A guy will say, 'I've been working on towers for 10 years and I haven't fallen yet,'" said Perriello. "How dumb is that?"

Another factor that stations need to be aware of is the way OSHA looks at consolidation within the radio industry.

"Let's say your company has stations in multiple markets and a workplace accident occurs in one city," Perriello said. "If another accident happens in another city, OSHA could look at it as a 'repeat' incident for your company.

"Even if the manager in the second city is unaware of the first incident, he could be liable for repeat inspections and larger fines."

And having at least one employee at each station know CPR is good common sense, as well as a part of OSHA guidelines.

"If someone's heart stops, you have about four minutes before irreversible brain damage can occur from lack of oxygen," said Perriello. "Be prepared for any medical emergency."

Resources

A useful resource is the ninth edition of the "NAB Engineering Handbook," available through *www.nab.org*. It has sections devoted to electrical shock, tower safety, OSHA rules and disaster management. NAB also offers several "lockout/tagout" safety signs for purchase.

The site *www.osha.gov* offers timely information on anthrax and disaster plans.

SBE suggests several links including *www.engsafety.com* for articles by Mark Bell and *www.lightningsafety.com*, run by the National Lightning Safety Institute.

The Internet home of the National Fire Protection Association is *www.nfpa.org*, and *www.natehome.com* is where to go for information from the National Association of Tower Erectors.

Ken R. is a former broadcaster whose only on-the-job disaster occurred when he played a record on the air that the owner's wife hated.

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Name: Jim Hawkins
Role: RW photo series on broadcast technology
Experience: Technical writer and scientific software developer; 3D modeler and animator; photographer. Developed Jim Hawkins' Broadcast and Radio Technology Web Site in 1994, presenting images of transmitting facilities.
Interests: Radio amateur (WA2WHV) for 43 years. Enjoys learning difficult concepts and explaining them. Vacuum-tube collector.
Mentors and heroes: "Emil Rudat (W8MCY), electrical engineer at RCA Tube Division, Harrison, N.J.; Carl D'Esposito, EE; Philo T. Farnsworth; and Clive Knowles, my first manager in software development."
Favorite stations growing up: AMs WNEW, WABC, WPAT, WQXR for a wide mix of formats. "Rock to Bach."

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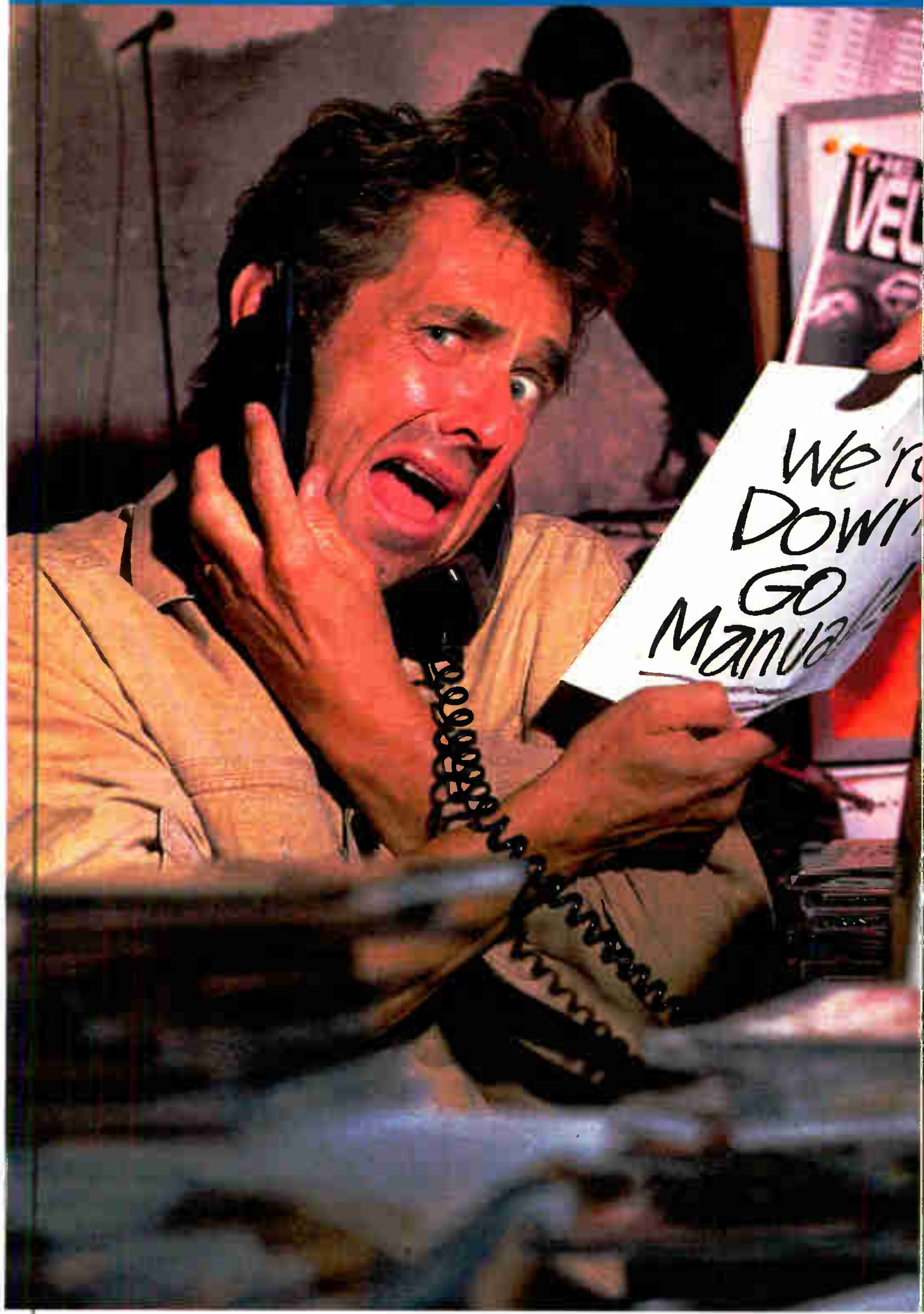
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How to Be a Trend Spotter

by Mark Lapidus

Promo Power

by Mark Lapidus

"We're not doing that. Our listeners will never come to an appearance at a gas station. We know for a fact that our listeners are environmentally conscious; and aligning ourselves like that with an oil company will be perceived as selling out."

Perhaps you won't be surprised to know that this statement was made by a program director at a promotion meeting I attended a few years back. It might have been funny — except it meant we were going to pass on a $15,000 buy that included an appearance at a gas station where the radio station was supposed to give away free gas.

He went on to explain: "Nobody will want free gas, and we'll look like chumps."

Do you think he was out of touch with reality? I know I did. Unfortunately, this PD was so sure he knew everything his audience thought and felt that he eventually tanked the entire station. He thought he had a unique gift. Time proved that he did not.

Listen before you leap

How can PDs and marketing directors avoid jumping to unwarranted conclusions about a radio station's audience?

Even big stations these days often don't have money for annual perceptual studies that can help them understand many things about an audience. While there is no real substitute for a full-blown perceptual, there are ways in which you can spot trends about your audience.

The most obvious way to uncover trends about your audience is to be a student of the culture. With an open mind, you can spot trends by perusing the most popular magazines, books, Web sites and movies specific to your demo. Keep your eyes open for shared perspectives.

> **'Nobody will want free gas, and we'll look like chumps.'**

A great resource for trend spotting involves listener e-mails and your own Web site message boards. Because it's easier than ever for listeners to communicate with you, all you have to do is open the floodgates.

Post a "feedback link" on lots of places throughout your site and mention that same e-mail address once in awhile on the air. You'll be amazed at the mail you receive. Message boards are a tremendous source of eavesdropping in your audience.

A word of caution though: message boards are not for the squeamish. You inevitably will get a few loudmouths who will pummel your DJs and tell you how much you suck. Many DJs are soft-skinned and can't stand anything negative being said about them, so you have to be prepared with some soothing words.

Your first instinct will be to rush to remove bad comments and ban the users who made them from the boards. This is the wrong response. If you wait long enough, your station fans will emerge and blast them for you. Log on to the boards once a week, soak up the threads and see if anything connects for you.

As I've said in previous articles, listener panels are a tremendous source of feedback for any radio station. No, it doesn't take big money to do panels. These days, it doesn't even take airtime.

Go ahead, ask

Simply run a statement on your Web site seeking listeners who have opinions about your radio station. Use of the word "opinion" is key; it solicits the same kind of people who want to give their opinion to Arbitron about your radio station.

Invite 15 to 20 listeners who respond to your station after work. Feed them free pizza. A free beer or two won't hurt either. Let them speak openly about your product.

Break the ice with a general question like, "Has our station gotten better or worse the past six months?" Try hard not to ask leading questions or interrupt. Never interject your own opinion about anything.

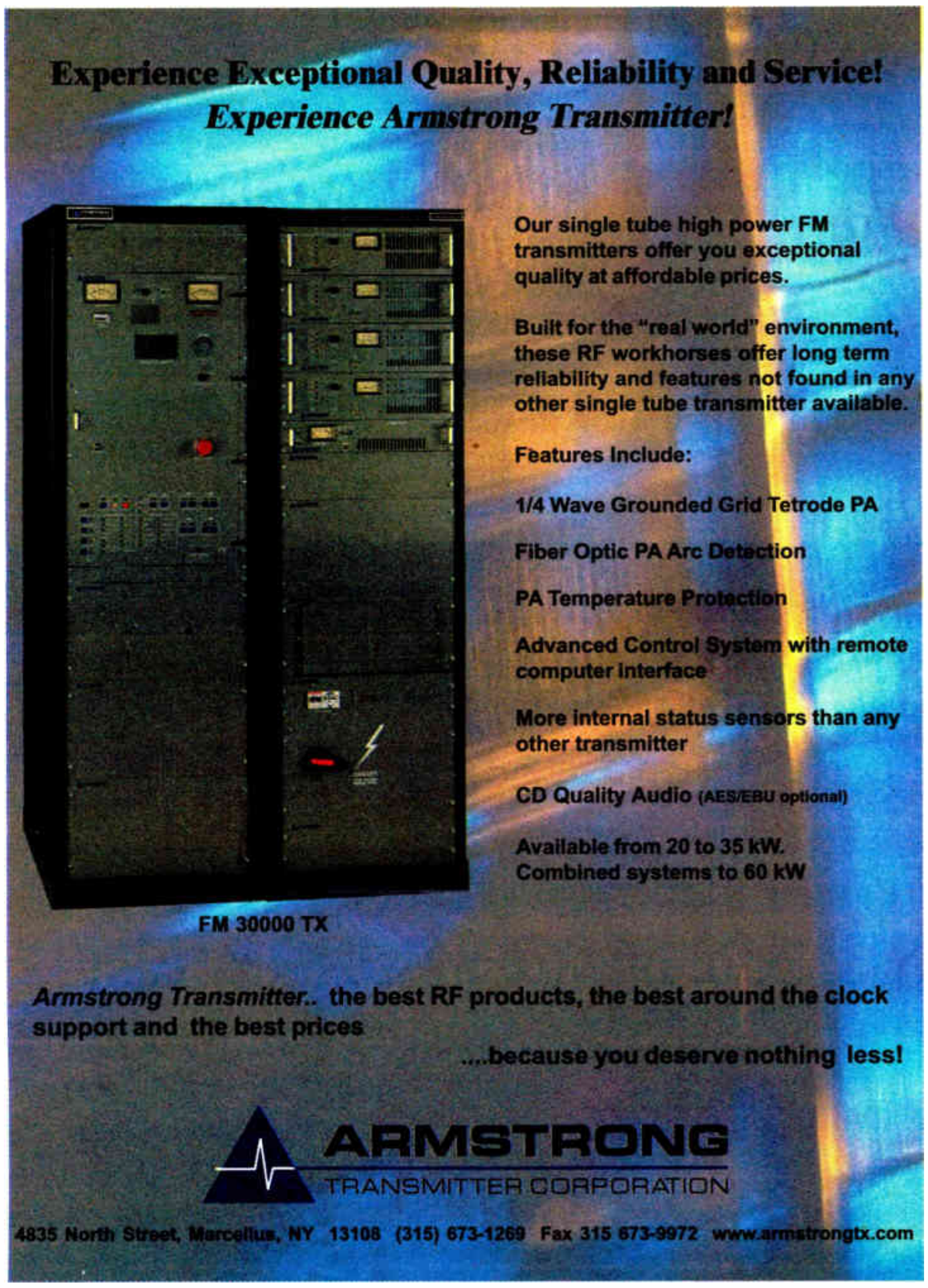
Do not ask them to predict the future; listeners are bad about doing that correctly. It's kind of like asking you what you'd do if you found a million dollars in the street. In truth, you wouldn't really know until it happened.

Be sure one of your staff members takes notes. Do not jump to conclusions based on any one panel discussion. It's only when you start to hear the same thing from four or five panels that you should be concerned about that topic.

Don't take too long between panels — never more than a few weeks — so responses will be relatively fresh in your mind and listeners' perspectives will be from a similar time frame.

A final thought: Making assumptions without evidence is guess work. Making assumptions with evidence is at least educated guess work.

The author is president of Lapidus Media. Contact him via e-mail to marklapidus@yahoo.com. ●



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COLE'S LAW

FCC Lessons in the Public File

Who Says the Federal Communications Commission Doesn't Have a Sense of Humor?

by Harry Cole

Only a few months ago, the FCC was getting lambasted by just about everybody — citizens, members of Congress, pundits, you name it — for abandoning the concept of "localism" in connection with its multiple ownership rules.

So what does the commission do? In October it whacks a couple dozen radio renewal applicants with fines for public-file violations in an in-your-face move that effectively snarls, "Yeah, we've got your localism, we've got it right here."

How did we get to this point? What should licensees do in light of the FCC's new interest in "localism"? What does it all mean?

To understand the recent fines, we have to go back to the 1980s, when the commission adopted the "post-card renewal." Before then, a triennial renewal process involved a long-form application that required the compilation and submission of boatloads of detailed information about each station's operations.

In a hail of deregulatory rhetoric, the commission abandoned that "long-form" approach in favor of a simple postcard with a limited number of "yes/no" questions. It all seemed so easy.

But, as some observers warned years ago (including Team Cole's Law, in these very pages in 1995), the seemingly easy "yes/no" questions set up a trap.

Time and place

For example, one question on the renewal form asks the renewal applicant to certify that "the documentation required (by the commission's public-file rules) has been placed in the station's public inspection file at the appropriate times." Of course, the desirable answer to that question is "yes," meaning that the applicant can certify that it has fully complied with the public-file rule.

But wait a minute. The public-file rule requires that the licensee prepare and place in its public file a significant number of different items at different times over the course of the eight-year license term. There are quarterly programs/issues reports, biennial ownership reports, EEO reports, correspondence from the audience, etc., etc.

So in order to be sure that your "yes" answer is, in fact, accurate, you would have to know for sure that *all* of those materials were in fact placed in the file *at the correct times*. That means that, even if your file does happen to contain 32 separate program/issues reports, you would have to be sure that each one was placed in the file by the applicable deadline, and the applicable deadlines would stretch back over eight years.

Can you really be sure that they were put in on time?

And what happens if, being the diligent type, you look through your public file before answering the question on the form, and lo and behold, you find that maybe one or two of the quarterly program/issues reports have gone missing, even if you're pretty sure that they were placed in the file way back when, when they were supposed to be?

As tempting as it may be simply to answer "yes" to the public file question on the form, that "yes" answer carries with it an awful lot of baggage that should be tied down before you commit to it.

And let's just say that you do make the effort and learn that, oops, you are missing one or two quarterly reports. What do you do? Again, the proper approach would appear to be to answer "no" on the renewal form, providing along with that answer an explanatory exhibit describing the nature of the omission and the steps taken to correct it. That would be the honest approach.

And that's what at least 28 renewal applicants did last spring. And what did the commission do? It fined them each $3,000 for admitted public-file violations. The commission did not seem to care that some of those stations admitted to relatively extensive omissions, while others lacked only one or two reports.

Ominously, the commission explained that the $3,000 fines reflected a $1,000 "downward adjustment" from the standard fine for public-file violations, an adjustment based on the "voluntary disclosures of the violations." This suggests that if a licensee was not as honest and failed to mention one or another omission from its public file, and if the FCC were to find out about both that omission *and* the licensee's failure to mention it, the fine could be subject to an *upward* adjustment. A worse scenario would be if the FCC were to uncover public file omissions and then determine that the licensee affirmatively chose not to tell the FCC about those omissions. Such misconduct could be viewed as misrepresentation or lack of candor, the penalties for which can be significantly greater than a $3,000 or $4,000 fine.

What, then, should you do when your renewal application comes due?

Prep

First and most obvious, you should be sure to gather as much factual information as possible. If there isn't any violation,

See FCC, page 28 ▶

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FCC

▶ Continued from page 27

you should have nothing to worry about; but you should review your files carefully enough to be certain that you are not, in fact, in violation.

If, on the other hand, you do uncover some information that makes a "yes" answer to the public-file certification question uncertain, you should consult with your communications counsel, providing him or her with all available information and working with counsel to develop an appropriate response.

It may be that you will end up 'fessing up, like the 28 folks who got fined did. In that case you would likely be fined, but probably no more than $3,000. It may be that you can legitimately answer "yes" to the certification, but still include an explanatory narrative exhibit that lays out what you know, so that the FCC can't accuse you later of withholding inculpatory information. It is unclear how the FCC might handle such an approach.

Presumably in an effort to demonstrate how dedicated to 'localism' it is, the FCC apparently will enforce the public-file rule with a vengeance.

One thing you definitely should do, no matter what you have done in the past, is to get a firm handle on what the local public-file rule requires. If you do not have a detailed list of the materials that must be in the file and the deadlines by which they should be placed in the file, your communications counsel should be able to provide you one quickly.

Get that list, double-check it against what you already have in the file and develop internal procedures and tickler mechanisms to assure that you do not overlook future deadlines for placing additional materials in the file.

It would also be handy to maintain a public-file log in which you record what you place in the file and when. That way, the next time your renewal rolls around, certification of compliance with the rules should be a breeze.

Localism

But that raises another question: Will there be a "next time"? Recall, while the "yes/no" question was on the renewal forms in the mid-1990s round of renewals, the commission did not spank everybody with fines, as it is doing now.

Why, then, is the commission cracking down now? According to Media Bureau Chief W. Kenneth Ferree, the crackdown is "consistent with FCC Chairman Michael K. Powell's initiative to promote and protect localism in broadcasting." Sound familiar?

Since the first of the year, when the drumbeat over the new ownership rules became deafening, the commission has attempted to justify those rules on the basis of a concern for localism. To many, that approach has bordered on Orwellian Newspeak.

So now, presumably in an effort to demonstrate how really, really dedicated to "localism" the current FCC is, it has singled out the public-file rule as a crucial element in a station's service to the public. And it's going to enforce that rule with a vengeance.

Of course, analysis of the relationship between the public-file rule and the public indicates to some that that rule has virtually nothing to do with the station's programming service to the public. And we suspect that a survey of all broadcast stations would reveal that members of the public have inspected the public files at only a very, very small percentage of those stations.

And as far as the concept of "localism" goes, we should bear in mind that the public file must be maintained at each station's main studio — but under the rules, any station's main studio can be as much as 25 miles from the community of license, and in some circumstances the studio can be twice or even three times farther away.

So you could make a decent argument that the public-file rule is not at all related to "localism" in any meaningful sense.

But the commission apparently needs to make some symbolic gesture to demonstrate to the disbelieving public that it wants to protect "localism,"and it's convenient to label the public-file rule a linchpin to "localism" and vow strict enforcement in the name of that supposedly sacred concept.

How long will this go on? Certainly for as long as this commission wishes to paint itself as a stalwart defender of "localism." That desire is in turn likely to last as long as the commission is taking heat for its new ownership rules. Should that particular fracas die down, it is entirely possible that enthusiasm for aggressive enforcement of the public-file rule will cool.

Until then, though, you should assume that public-file violations will be subject to forfeitures, and you should act accordingly.

If you have any questions about the public-file rule or the renewal process, you should contact your communications counsel.

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VOA Looks Back, Perseveres

An exhibit titled "Voice of America: Yesterday, Today and Tomorrow" recently opened at George Washington University's Media and Public Affairs Building in downtown Washington. The Radio History Society and VOA presented the exhibit, which runs through the end of the year.

After the bombing of Pearl Harbor, President Franklin Roosevelt sought to respond to the occupation and use of European radio by Nazi Germany for the broadcasting of propaganda. He decided the United States needed an international broadcasting service — as the exhibit states — "to tell the truth about what's going on in the world."

The Voice of America was born. Today, the organization boasts an audience of 100 million worldwide and has a mission statement that reads, "To promote and sustain freedom and democracy by broadcasting accurate and objective information about the United States and the world to audiences overseas."

Young refugees in Tanzania pose with Lifeline Radios, distributed by the Voice of America as part of its 'How About the Future?' program.

The minimalist exhibit features radios used in secret by those living under oppressive regimes or during times of national occupation, such as Germany's occupation of France. Among the interesting pieces in the exhibit was a radio with a small hole drilled into the dial. The plaque beneath explained that the Germans in France confiscated radios or rewired them to pick up only stations airing Nazi propaganda.

Fighting VOA another way, the Soviet government used powerful jamming transmitters on the frequencies used by the service.

For information on the exhibit, contact the Media and Public Affairs Building at George Washington University at (202) 994-7129.

— *Kelly Brooks*

Batscha

▶ Continued from page 21

from Columbia University.

From 1972 to 1975 he was a senior consultant at the Organization of Economic Cooperation and Development in Paris. Before joining The Museum of Television & Radio, Batscha served for four years as president of the Population Resource Center Inc.

No replacement had been named to the museum presidency as of late September.

"Bob was pretty much everything here," said David Bushman, curator of the museum. "Through difficult economic times he managed to raise the funds for a stunning new location for us in Los Angeles. On the East Coast he moved us from our old cramped and out-of-date building in New York to the new building on 52nd Street."

Bushman said that under Batscha's guidance, the number of radio and television programs in the museum's collection grew from 5,000 to more than 100,000.

"He ran a very active and vibrant program where we brought media and government leaders, and creative people from the television and radio industries in for public seminars in Los Angeles and New York," said Bushman. "Dr. Batscha also inaugurated satellite seminars, which we feed to universities all over the country."

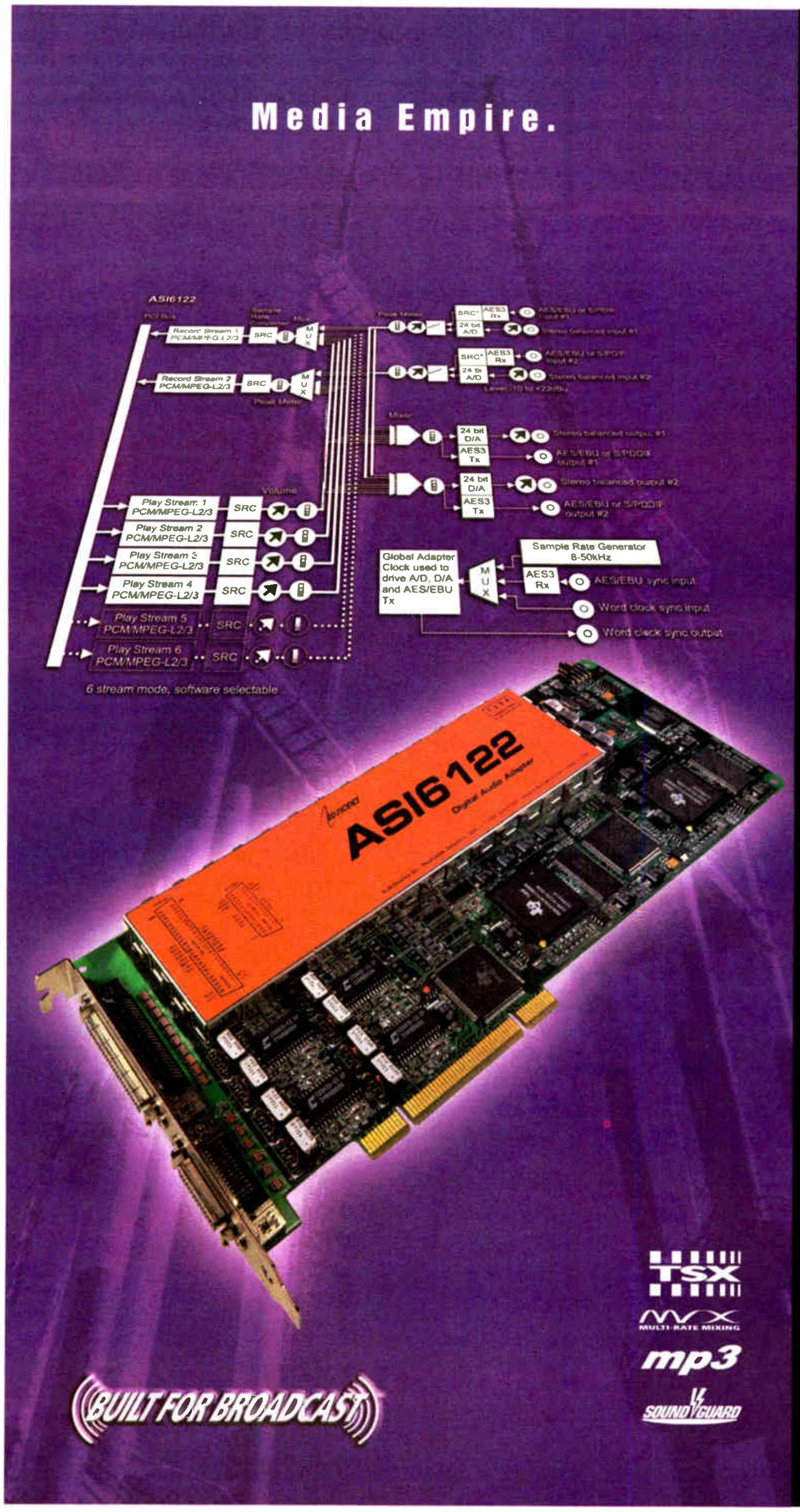
Many think of a museum as a cold, austere place where silence and decorum prevail. That's not necessarily true at the Museum of Television & Radio. The collection includes material as diverse as performing arts, sports, drama, comedy and variety shows to news, documentaries, advertising and children's programming.

"This is an invigorating place. We have an intellectually curious set of programs where we examine the issues of the day in electronic media," he said. "We get involved with the most provocative programming possible."

The rabbi who presided at Batscha's funeral repeated a story from the Old Testament involving the Israelis. When surrounded by their enemies, they sent 12 warriors to check out the area and report back. Ten returned bemoaning the fact that they were outnumbered and that they were going to have to retreat. Two men returned, excited about all the great opportunities for success.

"Robert Batscha was always one of those two," said Bushman.

Batscha is survived by his son Eric and former wife, Francine Sommer.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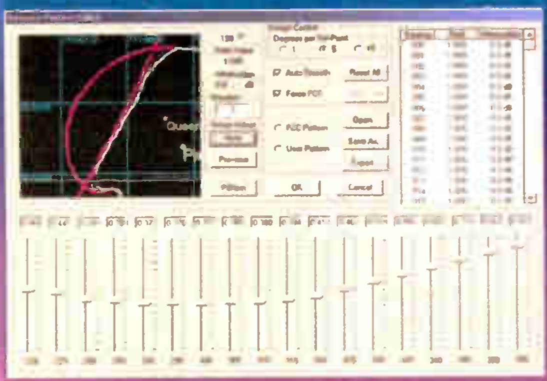

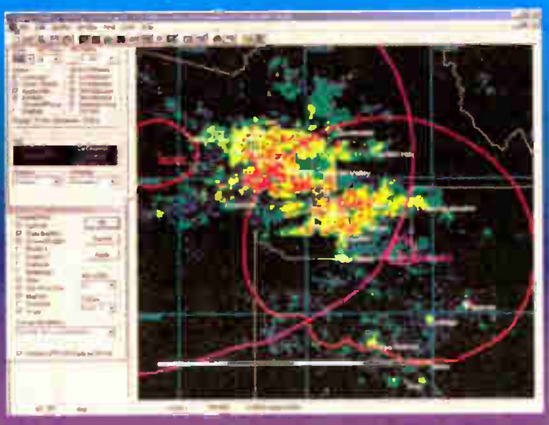

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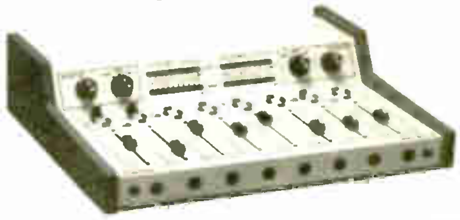

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People News

Tell us about your job change or new hire. We're particularly interested in hearing news about radio engineers and managers. Send news and photos via e-mail to radioworld@imaspub.com.

NPR hired broadcast journalist **Cynthia (Cinny) Kennard** as manager for NPR West, the Culver City, Calif., production studio established by NPR last year. She was executive project director and an assistant professor of journalism at the USC Annenberg School in Los Angeles.

John Bisset joined **Dielectric** as Northeast regional sales manager. He was Middle Atlantic district sales manager for Harris for five years. He remains Radio World *Workbench* columnist.

Walt Lowery joined **RF Specialties of Washington** in Seattle. He was regional sales manager in the Northwest for Harris Corp. and also is known from stints at Symetrix and Gentner. He will sell Nautel, Crown and Continental transmitters in Alaska, Washington, Oregon, Idaho and Montana.

Harold Hermann joined **OMT** as director of business development.

APT appointed two. **Kevin Campbell** joined APT as customer support manager. **Dr. Trevor Scott, Ph.D.**, acts as licensing support manager.

Burk Technology appointed two department managers. **Kevin Frappier** was promoted to operations manager, where he oversees day-to-day manufacturing operations. Burk also added **Robyn Cloutier** and **James Murphy** to the customer support team.

Amos Smith, former account executive for The Tape Company, now serves as a midwestern sales representative/engineer for **Intellix**.

Omnimount appointed **Steve Singleton** as national training manager.

Dr. J.C. Huang

Deborah Potter

D. Scott Karnedy was named senior VP of sales and marketing for **XM Satellite Radio**. He had served as senior VP and director of national sales for Infinity Broadcasting.

The NAB Education Foundation appointed **Ann Orr** as executive director. Orr came to NABEF from the National Trust for the Humanities, where she held the same title. Prior, she served as chief of staff for the National Endowment for the Humanities.

J.C. Huang, Ph.D. joined **Andrew Corp.** as chief technology and strategy officer. He is former managing director and general partner of Ericsson Venture Partners and director of wireless ventures at Lucent's New Ventures Group.

Mark Cooper was named VP and market manager for **Clear Channel**'s Dalton, Ga., cluster. The company's Tucson, Ariz., cluster welcomed **Debra Wagner** back to the market as VP and market manager. Former Detroit GM **Earl Jones** was named VP and market manager for the Louisville, Ky., market. **Katrina Twomey** was promoted to VP and GM of the Ogallala, Neb., radio cluster. She has been the business manager of the cluster since 1988.

Moseley named **Bill Gould** as broadcast sales engineer. Gould was Harris Corp. product manager for Intraplex products.

Karen L. Mateo was named director of communication for **Infinity Broadcasting**. Mateo formerly served as director of communications for CBS 2 New York, where she was responsible for the development and implementation of the station's media relations efforts and on-air talent relations.

Ken Moultrie

John Bisset

Harris Corp.'s Broadcast Communications Division named former VP of business development for Channel Master **Debra Buck Huttenburg** as VP of sales and marketing. It hired **Chris Pannell** as district sales manager for its U.S. radio sales team, responsible for the territory of Alaska, Washington, Oregon, Idaho and Montana. Harris

Harris promoted Broadcast Center Inside Sales Representative **Scott Berger** to district sales manager for Ohio, Michigan, Indiana and Kentucky. And it added two district sales managers: **James Thomason** and **Chuck Johnston**. Thomason rejoined Harris from ERI. He now serves as that district's sales manager for radio and a digital product specialist. Johnston moved from a position as district sales manager for television and is now the district sales manager for Delaware, Maryland North Carolina, Virginia and West Virginia.

ENCO Systems hired **Martin Burns** as sales director for the Southeast United States. He is based in Nashville. He worked at 360 Systems as eastern regional sales manager, and has worked at Harrison Systems, Siemens Audio and Fostex R&D.

Intelix transferred **Justin Ferg** from its application engineering department to its U.S. sales force. He serves as primary sales representative for Indiana, Southern Illinois, Metro St. Louis and most of Kentucky.

Jeff Baumann, who has headed **NAB** Legal and Regulatory Affairs for two decades, will retire from the trade association in February. Baumann joined NAB in 1984 as senior VP and general counsel, and was promoted to executive VP in 1987. Prior, he was deputy chief of the FCC Mass Media Bureau, and served as chief of the FCC Renewal Branch and chief of the Policy and Rules Division.

Deborah Potter was named executive director of the **Radio and Television News Directors Foundation**. She replaced Rosalind Stark, who retired. Potter came from NewsLab, a nonprofit organization where she served as executive director.

SADiE named **Ed Thompson** U.S. director of sales.

Called the "Architect of the DVD," **Warren Lieberfarb** joined **Sirius**' board of directors. Separately, **Steve Blatter**, former VP for Big City Radio, joined **Sirius** as VP of music programming. Blatter has produced live radio coverage of the Grammy Awards, CMA Awards and MTV Video Music Awards.

Janice Ockershausen was honored by the **Walt Disney Co.** for 25 years of service as senior account executive at News Talk 630 WMAL(AM).

Premiere Radio Networks promoted **Julie Talbott** to executive VP of affiliate marketing solutions.

Alexandra McCarty joined the National Affairs Division of **NPR** as manager of government relations.

Amy Bragg Carey, director of development for Minnehaha Academy in Minneapolis since 1999, was named VP for advancement at **Northwestern College and Radio**.

Arbitron named two Radio Advisory Council members. **Palmer Pyle**, president of Northstar Broadcasting and the runner-up from last year's council election, replaced Jon Cullen as representative for AOR stations in non-continuously measured markets. **McHenry "Mac" T. Tichenor Jr.**, chief executive officer and president of Hispanic Broadcasting, was appointed as the representative for Spanish format radio stations to complete the remaining term of Ali Shepard.

Cinny Kennard

Amos Smith

The **Orban/CRL**-produced network radio show, "Home Improvement USA," added **Danny Lipford** as a weekly co-host. Lipford stars on the weekly syndicated television program, "Today's Homeowner," and is featured daily in one-minute home improvement segments on The Weather Channel.

Interep appointed **Jeff Dashev**, former president of Interep West, to president of the Interep sales division.

Liz Laud now heads up **Jones Radio Network**'s Program Services Department as senior director of affiliate sales, working primarily with BDSRadio.com and Radio Voodoo. **Pat Crocker** now serves as JRN-Denver's senior director of affiliate sales for 24-hour formats. **Ken Moultrie** expanded his role of director of programming and consulting to include marketing responsibilities. His new title is senior director of programming and marketing for JRN-Seattle.

Jones Media Networks promoted **John Alexander**, former music marketing manager, to director of music marketing.

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Chapter One

Once upon a time, a radio engineer and talk show host named Steve grew frustrated with the awful sound of his telephone system. So, he read lots of books about Digital Signal Processing and invented the Telos 10. After that, Steve's phones sounded great, and he was happy. Lots of other radio stations that used it were happy, too, and Steve's company grew large and hired more smart engineers. They partnered with the MPEG folks and introduced MP3 to the world with Zephyr. And Zephyr sounded so good, it made *lots* of people *very* happy.

About the same time, another radio engineer named Frank was figuring out how to make audio sound both loud and clean. Frank began building processors for lots of important big-market radio stations. Soon, Frank teamed his audio chops with Telos' DSP gurus, and built the first digital audio processor that gave stations the loud, clean, punchy sound they wanted without the digital "grunge" – which made lots of Program Directors and engineers at even more radio stations happy. And Frank's processors became the choice of top stations like , , , RTL, and many more.

Now, Steve and Frank's companies have the biggest R&D team in the industry, with respected broadcast engineers like Jeff Keith, scientists like Greg Shay, and studio-audio experts like Mike "The Catfish" Dosch. These guys think up lots of innovative gear together; cool stuff like the Zephyr Xstream ISDN Transceivers with leading-edge MPEG AAC, and Omnia-6, the broadcast audio processor preferred by major radio stations around the world, and the world's first broadcast phone system, TWOx12, that takes advantage of the digital clarity of ISDN, and the truly amazing little Zephyr Xport POTS+ISDN codec which features aacPlus®, and is winning lots of awards.

...and that's just the *beginning* of the story!

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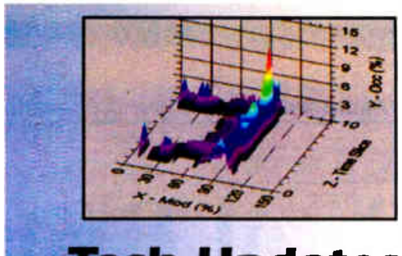
Buyer's Guide



Tech Updates Inside

Radio World Signal Monitoring, Remote Control & Test **November 19, 2003**

USER REPORT

WNRN Uses FT-1A As Receiver

Station Selects Fanfare FM Monitor for Mountain-Range Reception

by Michael Friend
General Manager
WNRN(FM)

CHARLOTTESVILLE, Va. WNRN-(FM) is an independent non-commercial "community station" in Charlottesville with a triple-A/modern rock format. We put our first translator on the air in 1998, on a mountaintop about 20 miles west of town, to serve areas in the central Shenandoah Valley.

We purchased a model from a popular manufacturer to use as a receiver. With the main transmitter in sight and a long yagi, this unit performed satisfactorily. We especially liked the diagnostic metering and ease of switching for the associated transmitter provided by the open-collector terminal for carrier loss.

The next year, we needed another receiver to repeat us into Lynchburg, Va. We purchased another from the same supplier, but it soon became clear that this unit was not for us. Unlike the relay site for the Shenandoah Valley, we could not see our main transmitter, and it was three times more distant, across the mountains. We tried a few other tuners, with only a Kenwood from the late 1970s coming close to being able to receive us at the relay point.

The repeating signal has since been down-powered and moved to a high mountaintop a short distance away. But at the time, the transmitter for the "output" was located near the receive site, and it gave the old Kenwood fits, especially given the temperature drift common to old analog tuners.

Power of suggestion

Enter the **Fanfare** FT-1A, which was recommended to me by another engineer. I logged on to the company's Web site and took a look. I thought, "If this thing can deliver those specs, it should do the job."

We ordered it and received it about a week later, complete with cables and loose-leaf binder with the manual, specs and schematics.

Before transporting it to Lynchburg, I connected it to a rotating yagi on our STL tower, to test it under familiar conditions. It didn't take long to determine that this was a first-class tuner. It is an

See FANFARE, page 34 ▶

USER REPORT

Navigator 100 Takes to the Street

by David Whitehead
Broadcast Engineer
Farmworkers Educational
Radio Network

FRESNO, Calif. Our Spanish-speaking network plays a mix of informative local, regional, national and international news, as well as Latino music, which is aimed at each specific market with live assist at each of our local stations.

With a Spanish-speaking Latino music format equating to about 30 percent of the FM broadcast stations here around Fresno, we are in a competitive market. Not only are there familiar music formats, such as American rock, pop, classic rock, oldies and country, but the Latino community appreciates salsa, regional banda, Spanish rock, modern Spanish rock, reggae, bachata and many others.

KBHH(FM), our Kerman station that also spreads into Fresno, has had a coverage problem since it was put into operation. We suspected that the antenna was not performing as well as it should after everything else checked out fine. However, with our small budget, we felt that we couldn't justify the purchase of a recording mobile FM field intensity meter.

On the road

At one point, I sat down at my computer, pulled up one of my map programs and made a chart, giving the geographical coordinates of measurement points at various distances on designated radials from the transmitting antenna, and left space to write down the readings I would take. I used a power inverter in my truck to provide 117 VAC to our big, rack mount, modulation monitor, which provides a relative signal strength meter indication along with its other measurements.

I then drove to each of the points using my GPS receiver and took the best measurements I could. I realized that this setup, with a quarter-wave magnetic-mount vertical antenna on the roof of my truck, would give me only a general relative representation of the RF signal levels at the various measurement points. Nevertheless, it bothered me that the readings I was taking were still inaccurate as far as "real" dBμV/m RF levels were concerned

Our antenna consultant mentioned an FM field strength monitor with which a person could drive around, that automatically records the actual RF field levels in dBμV/m — along with the latitude/longitude coordinates, date and time. He also mentioned that the recorded data could be downloaded into a computer and then be used to generate a map showing the RF levels on the map as "different colored dots." He could only remember the name Audemat.

Fortunately, that was enough. I got on the Internet and found the company's site, *www.audemat-aztec.com.* I came across the **Audemat-Aztec** Navigator 100.

It seemed to be able to do everything that I needed, as far as recording accurate RF field strength measurements, GPS location and date/time of measurement. It is also programmable, so you can enter up to 50 frequencies to scan. You can compare your station coverage with any other stations in the area. It can also double as a portable FM modulation monitor, an excellent feature when you are taking care of eight FM stations.

intel
FLASH
FM NAVIGATOR
RDS
GPS
DARC
CONTROL
STATUS
Audemat-Aztec

Audemat-Aztec's field strength meter records RF field strength measurements, GPS location and date/time of measurement.

The unit comes with an AC power supply with plenty of cord on each end, a coiled cigarette lighter power cord, a tuned Kathrein magnetic-mount antenna and a data storage card with enough capacity to allow almost two days of continuous recording time. Also included is an RS-232 serial cable to enable connection to a laptop, PC or Mac for real-time monitoring of all necessary signals, such as the full FM spectrum, the composite signal components (audio, stereo, RDS and DARC), the RF level and the MPX power.

In a pinch, all necessary data that would be displayed on the screen for the real-time data can be read out on its LED readout. The software to interface the unit with your computer for screen display of its functions, and download stored data from your field strength surveys, is included.

The FM Explorer software enables the user to import the recorded field strength survey data into Microsoft's MapPoint program for a good graphical representation. It has an algorithm that compensates the stored RF level data for the frequency received when used with its included Kathrein antenna. When you have done this, you need only locate the cursor on top of the colored dot and right-click to display the frequency, date and time, latitude/longitude information, RF level and distance from the start point.

The Navigator 100 enabled us to gather accurate field strength data, and allowed us to work with our antenna consultant to determine what is wrong with our antenna. Additionally, we were able to do a minimal baseline of all our stations to monitor how the antenna is performing under severe weather conditions, or a perceived change in our coverage.

Missing in action

We had had the unit for about one month when someone broke into our company van and stole the Navigator 100, along with a couple of laptops, my pocket PC, the GPS receiver and other equipment. (My truck was in the shop, and the company loaned me one of their vans, which didn't have an alarm.) My tool bags and boxes were never touched, but the burglar must have needed a shave; he took my cordless razor from the passenger seat.

However, he failed to take the charger from the back floor, so he only got about five shaves before it died.

Having discovered some of the other benefits and uses of the Navigator 100, and having not yet completed my RF field strength survey, we contacted the insurance company and made arrangements to expedite the purchase of a replacement unit, which we received within a few days. We are still working with our antenna consultant and the final results are pending.

Without the Navigator 100, we would not have been able to provide him with our data, nor would the gathered data have been nearly as accurate. The measurement campaign is done, for now, but I keep it with me to do spot checks on our other stations for modulation as well as field strength — without having to go up to each mountain top every time.

The Navigator 100 offers much more than I have space to list here, and I would suggest that the reader go to the company's Web site to see its list of specifications and capabilities. With a cost roughly equivalent to that of a good FM modulation monitor, this little unit is the best thing since sliced bread.

For more information, including pricing, contact Audemat-Aztec in Miami at (305) 692-7555 or visit www.audemat-aztec.com.

USER REPORT

Total Broadcast Goes to Plan B

**by Andy Linton
Technical Director
Total Broadcast
Consultants Ltd.**

The author demonstrates the Plan B's CD player.

WATERFORD, Ireland I'm not sure when **Danagger Audio Works**' Plan B Silence Eliminator lodged itself in my memory. Perhaps from an e-mail list, perhaps from an advertisement; I don't know. It was one of those little pieces of information that you collect without noticing.

But when my company, Total Broadcast Consultants Ltd., won the contract to build Beat 102-103 — Ireland's first independent regional station — and we started thinking about the best equipment to use, the memory resurfaced.

We were planning nine studios and seven transmitter sites, and we wanted to make the network as reliable as possible. I contacted Rob Robson at Danagger Audio Works about his product, which I thought might work as a silence detector/audio replacement device for the microwave-fed transmitter sites. Rob sent us a unit for evaluation, and I found that it was far better than I had hoped.

The Plan B sits in line with the program audio, in our case at the transmitter sites, between the microwave STL receivers and the stereo coders. Its analog and AES/EBU digital inputs make it versatile and ensure that it will interface with most equipment. If the audio fails, the Plan B waits a preset amount of time (5 seconds to 10 minutes), then replaces the lost audio with content from a built-in CD player, linear or MP3. It also sounds an audible alarm to alert any personnel that might be close by.

The really clever thing is that it makes a call on a connected telephone line to up to three numbers. When answered, a female voice tells the respondent that the Plan B has activated. Options are given to listen to the program audio, bypass the unit, switch back to main audio or activate external contact closures, via DTMF key presses. At any time, an engineer can place a call to the Plan B and, once a password is entered, listen to the audio, force it on air or carry out a number of other useful manuevers.

> **The Plan B's analog and AES/EBU digital inputs make it versatile and ensure that it will interface with most equipment.**

I was really impressed by the Plan B's actions once the main audio returns. It fades the backup audio and fades in the main audio, making the on-air transition as smooth as possible. Also, if the backup CD has more than one track, each time the Plan B is activated, it will play the next track.

During normal working, the Plan B passes the input audio straight to its outputs via relays with gold-passivated contacts. It's fail-safe, and if for any reason the Plan B loses power, your audio is still passed.

There were a few small things that I felt could be improved in the Plan B: For example, there was no way of knowing, in a system with several Plan Bs in use, which one was calling. Also, the delay between pressing a telephone key and the response being sent was too quick to get the phone back to your ear to hear it.

But after a couple of e-mails to Rob, he agreed that these and a few other suggestions for improvement were good ideas and would be included in a firmware update. Now there's an option to designate an ID number to each unit, and that delay has been increased slightly.

Some of Beat 102-103's transmitter sites have either an ISDN codec or an off-air receiver as backup. I thought it would be a good idea for the Plan B to handle a "secondary" audio source, and be able to switch to that if available before running its internal CD. I mentioned this idea to Danagger, and within a few months the Plan B Plus was born, with a second set of audio inputs and switching to interface with an ISDN codec. Also, to my delight, my initials are screen-printed onto the Plus's daughter PCB.

All in all

The Plan B looks great in its 2U case with brushed aluminium retro design. It has clearly-labeled buttons for critical functions needing a two-button sequence to operate. The front features the CD tray with function buttons, illuminated status indicators and a headphone jack with level control, which also controls the internal loudspeaker when headphones are not used. The rear panel has analog and digital inputs and outputs (XLRs), a screw-terminal barrier strip for contact closure ins and outs and a RJ-11 telco connector.

The unit uses an external power supply (not a wall-wart type), with a DIN connector into the rear panel. The DC cable is thick and heavy; a couple of times during our installations that cable got nudged and the connector actually came out. We had to be careful about securing the cable to prevent this happening. I'm told this issue will be addressed shortly with either a latching connector or a cable clamp.

I think the Plan B could be used at studio facilities, along with transmitter sites, to replace audio from the overnight automation system that fails at 3 a.m. It is one of the most impressive and well-designed problem-solving pieces of equipment I've come across. It will be a huge benefit to radio stations everywhere that want to stay on-air.

For more information, including pricing, contact Danagger in British Columbia at (250) 76-AUDIO or visit www.danagger.com.

Fanfare

▶ Continued from page 33

analog, varactor-tuned device, tunable in 50-kHz steps. What with the directional antenna, the superior adjacent rejection and the "stoppable" tuner, it outperformed even the old Kenwood 8300.

But how would it do in the high RF environment, which was the Kenwood's downfall? I could not tell it was a high RF environment any longer. The reception with the FT-1A from the Lynchburg relay site is now almost as quiet as the main studio monitor with its relative "cheapie" receiver. We later purchased another Fanfare to use as a back-up on the other side of the cable STL system, in a less favorable receive location. It receives a solid mono signal, where the original unit received next to nothing.

Another station in our main transmitter building, WVTF(FM), recently was looking for a reliable off-air back-up for its complex STL path from distant Roanoke, which has experienced difficulties in the past. Various receivers had been employed for this purpose with little success. Given our experience with the Fanfare, I recommended it to their engineer, who purchased one.

The job for this unit is to receive Class C 89.1 from over 100 miles away, with adjacent B-1 89.3 about 20 miles west, and adjacent B-2 88.9 60 miles southeast, putting a nearly 70 dBu signal into this location. Did I mention the four other FMs (one mounted in the same rack with the Fanfare), two TVs and the multitude of two-ways, cell phones and pagers within a few hundred meters?

Versatility

The FT-1A also can be used as an off-air monitor or translator. Maus Productions in Chicago selected the FT-1A for use as a monitor after hearing it play a chamber piece from WFMT(FM) on a simple ribbon antenna, on the 13th floor of the Hancock Building on Michigan Ave. D. Peter Maus, the chief engineer for the company, notes that Michigan Ave. is "the FM multipath and mix product equivalent to the Little Big Horn, with a dozen of the city's most powerful stations sitting atop the Hancock."

fanfare
96.30
FT-1A

The FT-1A is suitable for off-air monitoring, translators and other tuner/receiver applications.

John Pavlica, electrical engineer for Innovative Controls, has noted the FT-1A's combination of non-existent background noise while maintaining a high FM sensitivity. He says the tuner maintained distortion-free AM stereo during single-channel bass-heavy audio mixes, and has a gradual AM stereo blend to mono.

As for WNRN, the Fanfare, with a yagi about 60 feet up the tower, a phase box and some impressive cavities, has provided a stable back-up, usually receiving "borderline" stereo reception, though it's only wired in for mono. While I am happy with the FT-1A's performance, I call out to all engineers annoyed at the lack of attention given to FM front-ends on after-market automobile receivers. Please join me in lobbying the folks at Fanfare to come up with an in-dash version.

For more information, including pricing, contact Fanfare in New York at (716) 683-5451 or visit www.fanfare.com.

USER REPORT

Ward-Beck PODs Invade Matchframe

by Derek Evanson
Vice President of Engineering
Matchframe

BURBANK, CALIF. Matchframe is a post-production company that has been in business for more than 18 years. Our facilities provide a full range of high-definition and standard-definition services including telecine, offline editing, linear and nonlinear online editing, visual effects, graphics, audio, duplication, format conversion and digital media delivery.

We needed an AES audio metering solution that provided a buffered output that could be passed on to other equipment, and had an internal digital-to-analog converter for monitoring.

Matchframe's clients using our portable nonlinear edit systems wanted to be able to use the AES capabilities in the equipment, while we needed to support the large number of analog audio mixers we have in service. It also was essential that we be able to monitor the AES signal directly.

We also wanted to meter the feeds from our AES router independently in our new audio mix rooms, while passing these signals into distribution amplifiers. In addition, we required an analog signal that could be fed into the control room monitor selection portion of the consoles.

Single box

The desired applications could be met by various "black boxes," but only after a discussion with the people at **Ward-Beck** did we realize our hopes of finding a single-box solution. After describing to the company that the ideal product should have a buffered AES output, engineers there responded, "No problem."

> **We needed an AES audio metering solution that provided a buffered output that could be passed on to other equipment, and had an internal DAC for monitoring.**

The new product is called a POD22; two of them fit into a 1 RU package. The POD22 has LED meters and indicators for sample rate, errors and phase. In addition to functioning as a digital-to-analog converter, the POD22 has analog inputs and analog-to-digital conversion capability.

Both metering and conversion have been handled conveniently by the POD22. Metering in the monitor bridge shows the operator the presence and level of the active AES audio.

Our rental customers easily can see the AES audio levels on the POD22's LED meters and the analog monitoring output makes listening to the signal convenient. The box couldn't be simpler to use; the only front-panel control selects metering parameters. There's nothing that an untrained operator can misadjust.

In our QC station, an engineer can listen to the analog conversion from the POD22 and confirm the integrity of the signal. Routing the device's ins and outs to patchbays allow operators and engineers to use the device as a troubleshooting tool for signals and equipment in all parts of the AES path.

The Ward-Beck POD22 really simplifies audio monitoring at Matchframe.

Derek Evanson is the vice president of engineering for Matchframe. The opinions expressed are the author's alone.

For more information, contact Ward-Beck Systems at (416) 335-5999 or visit www.ward-beck.com.

Radio World

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Buyer's Guide

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TECH UPDATE

Inovonics Remodels With 531

Inovonics debuted its off-air FM modulation monitor, Model 530, in 1995. Model 531 began shipping earlier this year, with several improvements.

The original was DC-tuned with a series of multiturn trimpots that could be accessed with a screwdriver through holes in the front panel, a tuning method that ensured minimum phase noise from the receiver's local oscillator. An aggressive AFC kept the 530 locked onto the desired frequency most of the time. The updated 531 features digitally synthesized tuning; its components and techniques hold local oscillator phase noise at a negligible value, the company says.

A highlight of the 531 is its double-conversion design. The first IF is at the usual 10.7 MHz; a second mixer brings this down to 700 kHz. Instead of the conventional quadrature detector used in the earlier monitor, Model 531 contains a linear, push-pull "pulse-counting" FM discriminator. An AGC loop maintains IF stage gain in the linear operating range, enabling off-air monitoring of the incidental AM noise component of the FM carrier.

The Model 531 improves upon the earlier 530, with digitally synthesized tuning and a double-conversion design.

Although it's difficult to make an absolute AM noise measurement from an off-air signal, Inovonics says, listening to the noise with headphones allows the engineer to correlate transmitter adjustments with the audible "synchronous" characteristics of the monitored AM noise.

Stereo decoder circuitry has been redesigned and takes a discrete-component approach. With a composite stereo signal fed directly into the rear-panel MPX IN connector, separation exceeds 60 dB. Off-air performance depends largely on signal quality but is quoted as typically better than 50 dB.

Bright bargraph readouts show percent-modulation with 1-percent resolution. A "floating dot" peak-hold feature makes maximum-deviation readings unambiguous. Demodulated stereo program audio is metered over a 70-dB range, and balanced audio is available at rear-panel XLR connectors. Incoming signal quality is verified with independent signal strength and multipath readouts.

Model 531 features selective display of RDS and SCA subcarrier injection levels. Popular subcarrier frequencies are accommodated, and a software update can extend coverage to anything within the 100-kHz FM baseband range.

For more information, including pricing, contact Inovonics in California at (831) 458-0552 or visit www.inovon.com.

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TECH UPDATES

Burk Shows Web Interface

Burk Technology debuted its Web Interface for IP-based transmitter remote control at the recent NAB Radio Show in Philadelphia.

The Web Interface enables users of GSC3000 and VRC2500 transmitter remote control systems to monitor and control remote sites using a standard Web browser and a connection to the Internet or a company intranet. Users can create customized drill-down displays that are accessible on the Web. Alarm notifications can be sent by e-mail or SMS to PCs, pagers, cell phones and other mobile devices.

The Web Interface utilizes an embedded Web server and eliminates the need to install software at every control point when operations are managed from multiple locations. A distinction of the interface is the ability to install the unit at the studio or transmitter site. Users can make use of an Internet connection at the studio location when the network does not extend to the transmitter.

Where multiple transmitter locations are in use, the user can maintain a Web-based interface to all sites, whether or not each location has direct network access.

In addition to access from a Web browser, the interface supports connections from Lynx 4 software. Users can run Lynx from an Internet-connected computer and simultaneously manage all their Web Interface sites.

The Web Interface is SNMP-enabled and integrates with existing LAN/WANs. It may be customized using any HTML editor.

For more information, including pricing, contact Burk Technology in Massachusetts at (800) 255-8090 or visit www.burk.com.

NTI Links Handheld Meters to PCs

MiniLink is **NTI's** USB interface for handheld audio analyzers, part of the company's Minstruments series. MiniLink connects Minilyzer or Digilyzer instruments to the user's PC, allowing documentation and data acquisition of ML1/DL1 functions together with the MiniLink PC application.

ML1/DL1 measurement results can be stored in the internal Flash memory of the analyzer as screenshots or text files. This enables measurement tables to be available as formatted text files and facilitates data collection and response sweeps, allowing import and processing into spreadsheet software. MiniLink supports cut and paste of graphs for integrating results into reports.

Each ML1/DL1 analyzer function can be controlled by way of the PC mouse, adding remote control PC functionality for handheld analyzers. A large-screen mode makes the tool useful for educational purposes and presentations.

MiniLink can be retrofitted into Minilyzers and Digilyzers by connecting the small USB interface. As soon as the USB cable is connected to the instrument, the power supply switches over and supports the instrument via the USB cable. This enables data logging directly onto the PC's hard disk.

Firmware updates are available by way of the Web. The MiniLink software provides download to the instruments. Registered users may personalize the start-up screen with 100x32 graphics, which can identify the owner of the instruments.

The company has expanded its distribution with the creation of NTI Americas, which handles distribution in North America, as well as Central and South America.

For more information, including pricing, contact NTI-Americas in Oregon at (503) 639-3737 or visit www.nt-instruments.com.

Videoquip AM-4 Monitors, Alerts

The AM-4 from **Videoquip** is a DSP-based digital audio signal monitoring unit, with facilities for monitoring two stereo analog, two AES3 stereo digital and two SDI-embedded stereo signal sources. The four (two stereo channel) audio level meters display VU and PPM values simultaneously, with dBu and dBFS scales. AES3 digital and SDI-embedded digital audio interfaces are optional plug-in boards.

Two stereo audio signals (analog, AES3 digital, SDI embedded digital) may be monitored at a time using the level meters. Only one of the two selected stereo sources can be monitored via the built-in speakers, or with headphones. The AM-4 supports four monitoring modes: stereo, left channel only, right channel only, and left and right summed mono.

A volume control is provided for use with speaker and headphone monitoring.

The analog inputs support **XLR** or 1/4-inch TRS connections. Analog input sensitivity is adjustable for individual inputs to +4 dBm or -10 dBV nominal levels, by using internal jumpers on each analog input. AES3 digital inputs are XLR-3F balanced, and the SDI input is a BNC connection. Two analog outputs, two digital stereo line outputs and a parallel GPI remote connection are provided.

The Out-of-Phase LED will illuminate when phase reversal occurs on one of the stereo channels. This can be activated not only by accidental phase errors, but also during segments where signal processing has been applied for sound imaging purposes. A feature to test for an out-of-phase condition is provided. Pressing and holding down A or B pushbutton will reverse the phase of the right channel of the signal while it is being listened to — useful in determining whether a stereo signal source is out of phase.

The Silence LED will illuminate when the signal level falls below the set threshold level and stays below the threshold for more than either 5 or 10 seconds in any of the four channels being monitored. The duration of silence and threshold level are set by DIP switches.

In the SDI-embedded digital audio signal, the carrier is divided into four groups, and each group can contain up to two stereo digital audio signals. The AM-4 enables the selection of one specific audio group, and retrieval of one or both of the embedded stereo digital audio signals in that group.

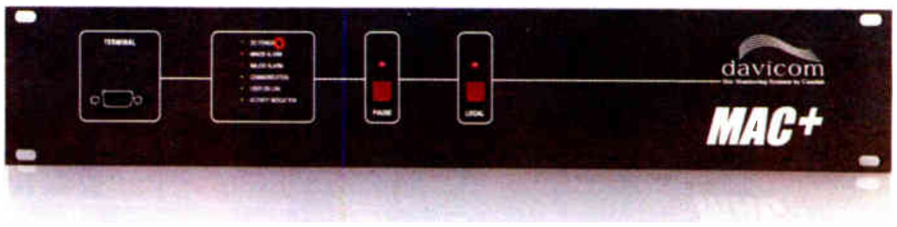
For more information, contact Videoquip in Toronto at (416) 293-1042 or visit www.videoquip.com.

Comlab MAC+ Offers Multiple Alarm-Forwarding

MAC+ is an acronym for the monitoring, alarm and remote control products produced by **Comlab**.

The Davicom MAC+ system is suitable for use where transmitters, studios and other broadcast installations are away from the engineers and technicians who maintain them. It is equipped with 128-bit encryption IP capability. The company touts this IP communication feature for versatile and secure communication via the Internet.

Additionally, the MAC+ system is suited for installation in studio rack rooms, allowing engineers to monitor and control unattended studios by way of a local-area network or the Internet.

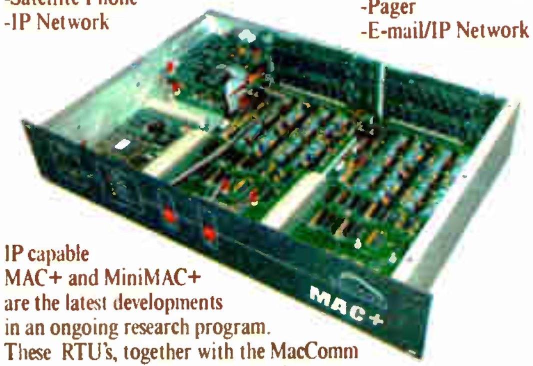


Another feature useful for radio stations is multiple alarm-forwarding, which includes e-mail, fax, SMS, numerical pager, alphanumerical pager, voice pager, voice, SNMP traps and MacNet.

MacComm, the MAC+ communication interface, offers programming flexibility.

For more information, contact Comlab in Quebec at (418) 682-3380 or visit www.comlab.com.

Products & Services SHOWCASE



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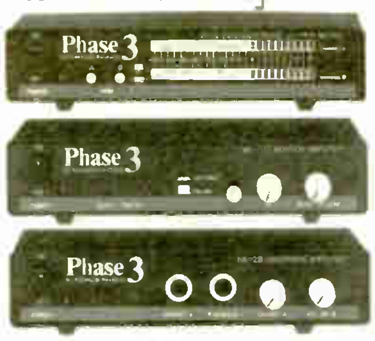

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TECH UPDATES

ModSci Debuts ModMinder Software

Modulation Sciences developed a software package for use with its FM ModMinder digital modulation monitor. The software runs on Windows PCs and connects the FM ModMinder unit serially by way of a COM port, either locally using a null modem cable or remotely via modem.

The ModMinder Software Package includes ModAnalysis Version 2.0 and enables the user to monitor, capture and analyze modulation data in real time or off-line. The monitor utility can be used in one of two modes: "Basic" or "Advanced Monitoring."

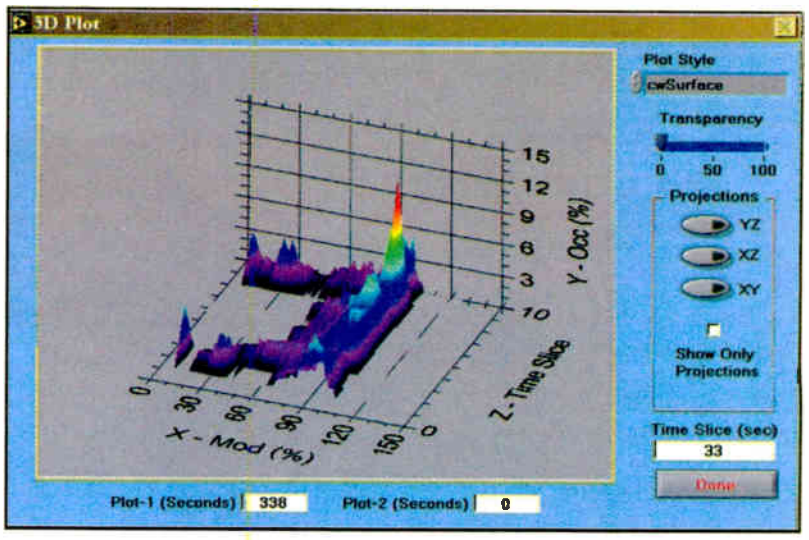
The "Basic Monitoring" mode offers real-time displays of peak modulation, overmodulation status alarms and a one-minute rolling count of overmodulation occurrences. This mode is suitable for standard studio monitoring.

"Advanced Monitoring" mode offers a continuous bar graph display of average, peak and minimum modulation, and a cumulative histogram display that shows peak modulation or all values of modulation on an X-Y graph. A time chart shows peak modulation over real time, and the data can be logged into a time-stamped file for off-line review and analysis, using built-in statistical analysis tools.

Traditional histograms, or 3-D "waterfall" plots, can be created to visualize modulation trends or spot disturbances. Additionally, the threshold settings for the FM ModMinder can be changed remotely.

Minimum system requirements are Pentium 200 MHz, 64 MB RAM, 15 MB hard-disk space; an RS-232C serial port; Windows 9X or 2000; and a display resolution of 800x600.

For further information, contact Modulation Science in New Jersey at (732) 302-3090 or visit www.modsci.com.


3D Plot

Plot Style: cwSurface

Transparency

Projections: YZ XZ XY

☐ Show Only Projections

Time Slice (sec): 33

Plot-1 (Seconds): 338

Plot-2 (Seconds): 0

The ModMinder Software Package features 3-D 'waterfall' plots for the visualization of modulation trends or disturbances.

Belar's Wizard Utilizes Windows OS

Belar Electronics is offering a new version of its Wizard for Windows Software. The software takes advantage of the Windows operating system, and enables Belar's modulation monitors and CSA-1 spectrum analyzer to be accessed over conventional RS-232 and phone line connections, as well as Ethernet and Internet connections.

The software consists of a server program that interfaces to the monitors, and a Java applet or Windows program display module.

The server program establishes connections with the monitors and collects data. The software supports eight Wizard systems or CSA-1s for multiple station monitoring. Data collected can be logged to the host computer, providing running logs or archived storage of modulation data. Each connection can be assigned an IP address and accessed by multiple users from different locations at the same time.

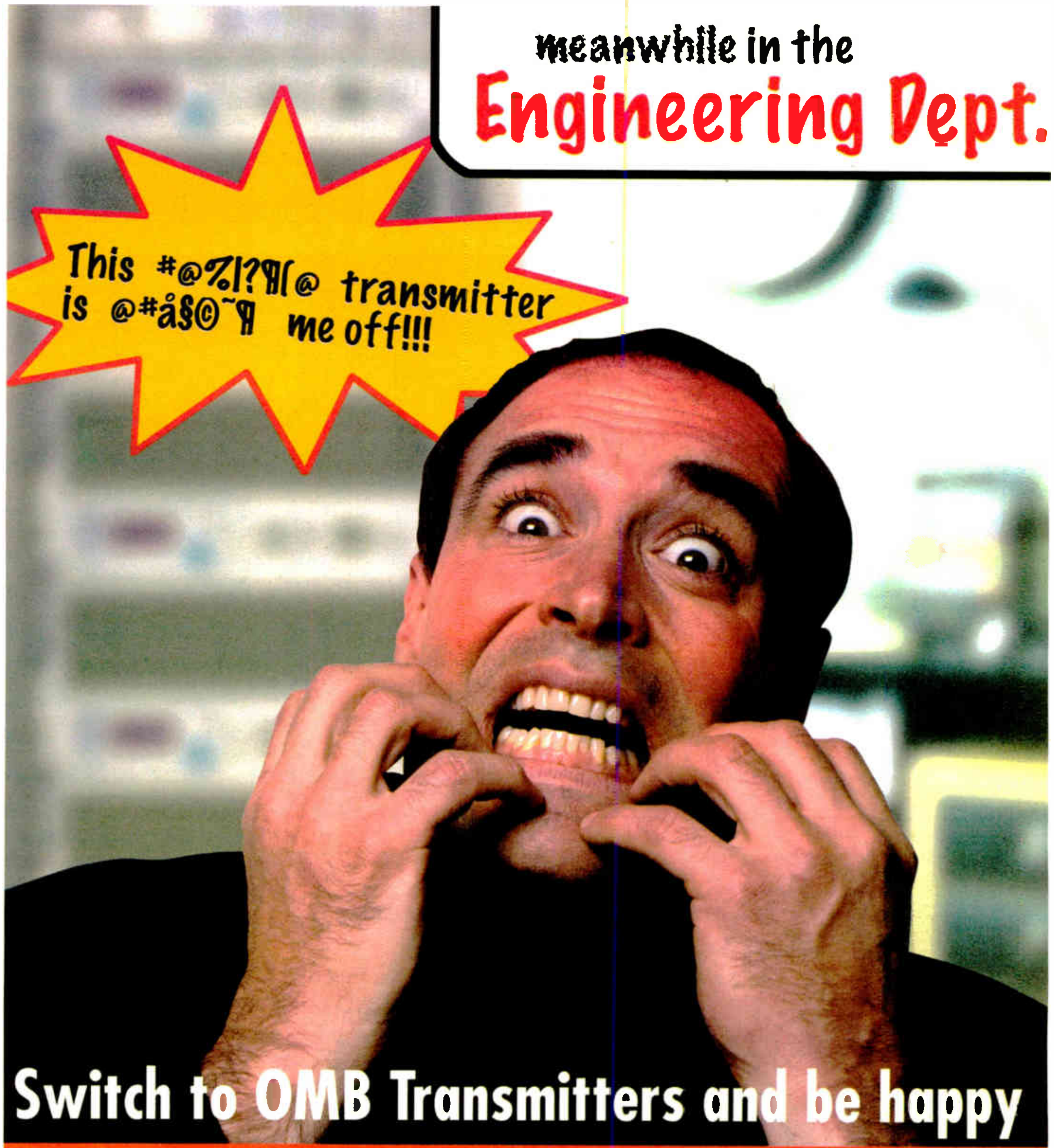
The display module is a Java applet that can be viewed in any Java-enabled Web browser. This approach provides an interface that is independent of the remote computer's operating system or hardware. Virtual front panels of the units can be accessed for control of their functions. Various data collected by the monitors may be displayed in bargraph, histogram or peak-vs.-time displays.

For more information, including pricing, contact Belar Electronics in Pennsylvania at (610) 687-5550 or visit www.belar.com.

Letters

Radio World welcomes letters to the editor. Send via e-mail to *radioworld@imaspub.com.*

Letters should be 100 to 300 words. Shorter letters are more likely to be published promptly. Include your full name, company, title and address.



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TECH UPDATE

Logitek Monitors With Super-VU

The Super-VU line of audio meters are part of a family of level-monitoring equipment from Logitek Electronic Systems, using DSP technology and providing several audio monitoring options.

Its meter displays VU and peak levels simultaneously on the same bargraph using tri-color LEDs. VU is indicated in green; peak is in red. A switchable hold feature supplies a momentary or continuous hold of the highest peak reading, ensuring that operators will know if maximum levels are exceeded. The zero VU point is user-adjustable, allowing optimum use of the meter's 70-dB range; a lighted zero reference marker gives a reading of critical levels from across the room.

The dual bargraphs in the Super-VU handle two channels per display. Logitek offers Super-VU models with one, two and three stereo pairs in a 19-inch rack space. Displays also are available in desktop mounts or can be vertically oriented with six or eight graphs to accommodate surround sound metering. The company also features a version that monitors all aspects of a stereo pair: level, mono sum and stereo image/phase. With this display, the location and width of the stereo image is visible and problems with phase reversals or off-center mono content are seen immediately.

Analog input versions have bridging inputs that accept balanced or unbalanced signals, while the gain trim controls enable calibration to a reference level.

Digital input versions accept professional and consumer format serial data. A bridging, pass-through mode allows the unit to monitor digital lines without the need for a distribution amplifier.

For more information, including pricing, contact the company in Texas at (713) 664-4470 or visit www.logitekaudio.com.

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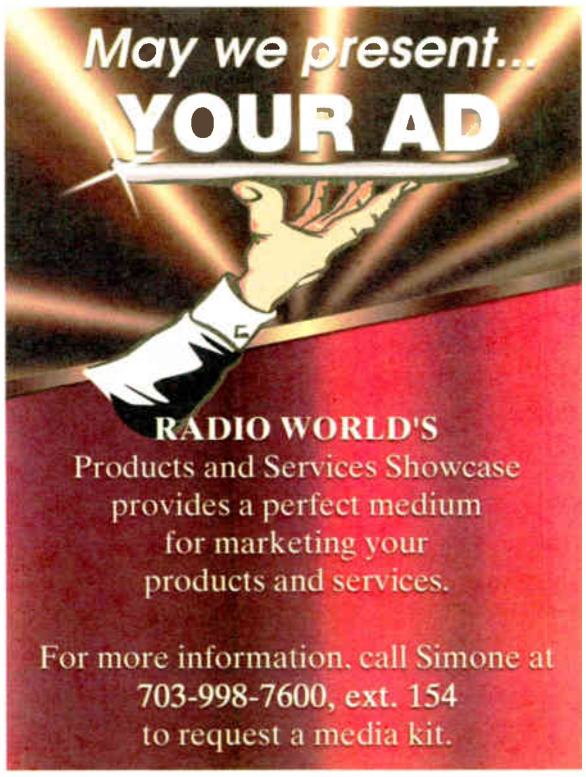

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USER REPORT

Santa Barbara Gets Aphex Makeover

by Jeff Williams
Program Director
Clear Channel Santa Barbara

This article was to appear in an earlier edition of Buyer's Guide, dealing with audio processing.

SANTA BARBARA, Calif. The beauty of being a program director for multiple formats is that I get to tailor each element of the stations from the ground up.

For me, the on-air processing requires an artistic touch. When it came to rethinking the sound of our stations in Santa Barbara, my operations manager and I decided to pinpoint the qualities we desired first. We wanted to be open-minded by giving different processors an on-air trial.

Great expectations

While we respect the opinions of others in the industry, we felt there were too many conflicting opinions to be of real value. Using our own experiences with other markets and formats, we created a list of expectations. We wanted our sound to be musical and open, with natural bass and a smooth, clean high end, competitively loud and with no composite clipping. We ruled out "in your face audio," "anti-female" shrillness and annoying "pumping."

Over a month, we were able to have three trial processors in our racks. We ran double-blind tests with different sets of critical ears comparing each processor to the other and to our competition.

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MkIII

The Aphex 2020 MKIII analog audio processor.

Here in Santa Barbara, our FM formats range from CHR and regional Mexican to light AC and classic rock. Even though each format requires its own sound, we felt that each sound had to be a variation of our quality expectations. And if our *own* standards are not high enough, our listeners will let us know if we do not meet their standards. Santa Barbara is a special market — a wealthy demographic, filled with music lovers who buy expensive audio gear. They are not shy about calling a station when it is not sounding right.

We found that the digital boxes had their own "footprints" that could not be tuned out, especially when trying to meet our overall quality expectations and getting the loudness we wanted. With the digital boxes, we also discovered that some were better for one format than another. The latency running through the digital boxes did not make our talent happy, and having to use a separate processor for headphones didn't impress us much, either.

Natural selection

In the end, the **Aphex** 2020 was our choice. We were immediately impressed with its clean, open and musical quality. We got loud, but without being "squashed." We put the first online three years ago, and all four of our FMs soon had Aphex 2020s.

We've since upgraded the units through the MkII, and they are now MkIIIs. Each upgrade was an audible improvement and the latest version, in my opinion, nails the "radio sound" perfectly. It has smooth, deep, natural bass, a present, open mid-range and a crisp, clear, high end.

All of our Aphex 2020MkIIIs have turned out to be flexible across many formats. A great starting point is using one of their eight factory presets. Once you find the preset that initially fits your expectation, start working from there. To be more creative, install the Aphex remote software into a Windows-based computer, and you can see every angle of your audio on the computer screen. If you have any difficulty using the unit, call the factory and talk to the helpful technical support staff.

Even though the Aphex 2020 is an analog audio processor with digital control, it accepts a digital input and has a digital output for stations that are all-digital and want the warm, friendly sound of the 2020. Another nice feature of the 2020MkIII is the insert loop between the leveler and the multiband. For those who want an all-digital chain, this is a great way to insert your EAS equipment without an expensive digital insert.

We continue to sample other processors, but have yet to find anything that sounds consistently musical and natural like the Aphex 2020MkIII. Both the engineering and sales staff agree wholeheartedly with the outcome of our work. Life is good.

For more information, including pricing, contact Aphex Systems in California at (818) 767-2929 or visit www.aphex.com.

TECH UPDATES

Audemat-Aztec Touts Test

Audemat-Aztec offers a range of test, monitoring and remote control equipment.

AM-FIELDSTAR
AM RF FIELD STRENGTH MEASURER
POWER SUPPLY
PC COMPUTER
AM ANTENNA
STATUS
Audemat Aztec

AM- Fieldstar RF Field Strength Meter

The FM_TEL3 is a frequency agile receiver for off-air monitoring that enables broadcasters to monitor 32 frequencies. The system is built on a digital architecture with monitoring functions that include a display of the FM spectrum, and readings of the RF modulation, RBDS SCA and audio levels. It can be used for remote control and offers six metering inputs, five digital inputs, two metering outputs and four relay outputs.

The FM_TEL3 is DTMF-compliant and includes a PSTN modem for remote connection and alarm sending.

The frequency-agile Navigator 1000 is a rack-mounted FM signal analysis meter. Unlike the Navigator 100, the meter does not include a GPS receiver, but it can be connected to the company's IP2port for signal analysis from remote locations. Features include measurements for RF level, FM multiplex signal power and overshoots, stereo, RDS and DARC decoding and ASCII (RS-232) data access. There are relay alarms for lack of RF, audio, stereo pilot, RDS and DARC.

Audemat-Aztec touts its AM-Fieldstar, winner of Radio World's "Cool Stuff" Award 2002, as an automatic and mobile AM field-strength meter; it carries out a network coverage survey of the local AM band. The calibrated loop antenna can be set up on the roof of the user's vehicle for the monitoring of stations while en route. RF and AF levels, geographical positioning, external temperature, hour/date, direction and speed can be accessed via its GPS receiver.

Features include Microsoft Windows compatibility and automatic positioning of measured places, monitoring points and transmission sites on MapPoint cartographic software. Band scanning in one or all directions will be available soon.

The company's FM multi-receiver system Goldeneagle, winner of Radio World's "Cool Stuff" Award in 2001, is for permanent monitoring. The system monitors, in real time, the quality and continuity of 40 FM programs and notifies the appropriate person of any problem by alarm.

For more information, including pricing, contact Audemat-Aztec in Miami at (305) 692-7555 or visit www.audemat-aztec.com.

ESE Plugs in With Time Servers

ESE's line of Network Time Protocol Time Servers enables a user to put accurate time information onto a network.

NTP Time Servers enable the sharing of time information on a network.

NTP is a method of sharing time information on a network, such as LAN, WAN or Internet. Each of the company's four NTP Time Servers offer synchronized time by plugging the Time Server into the network, configuring the Time Server and allowing any client on the network to request time.

The ES-104 employs an internal GPS Receiver as its time reference for Stratum 1 accuracy and features an Ethernet 10Base-T output (RJ-45), status LEDs, lock status output and ESE (TC90) Time Code output (BNC). ES-289, ES-299 and ES-911/NTP are essentially time code translators, each receiving time code and "outputting" NTP, and receiving their time reference from external sources of time code.

The ES-289 accepts either SMPTE/EBU time code or ESE Time Code, while the ES-299 references either IRIG (A, B or E), NASA 36, XR3 or 2137 time code (AM or TTL). ES-911/NTP is designed to accept ASCII time code in any of the following formats: NENA (Format "0", "1" or "2"), ESE (Format "A") or NMEA 0183.

For more information, including pricing, contact ESE in California at (310) 322-2136 or visit www.ese-web.com.

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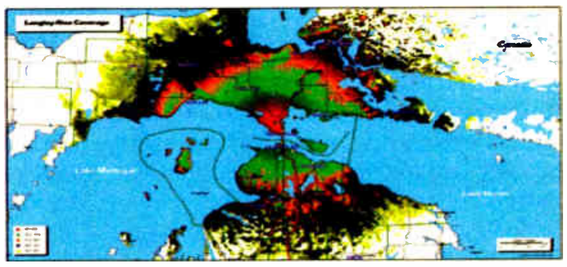

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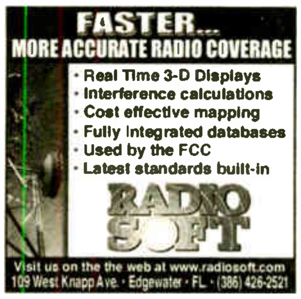
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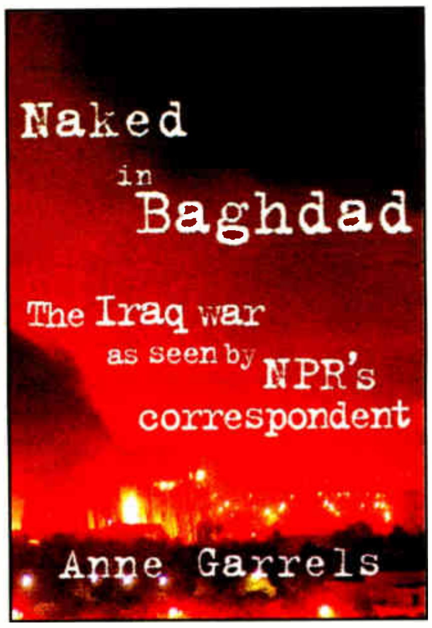
◆ READER'S FORUM ◆

Solace in Wartime

I've just finished reading Anne Garrels' new book "Naked in Baghdad," thanks to Paul McLane's review in Radio World's Sept. 24 issue. I, like many others, spent my morning coffee time last March and April listening to NPR's war coverage.

Anne's reports were the highlight. I felt I could better trust her non-embedded war view, particularly during the reports of civilian casualties in Baghdad.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correspondent
Anne Garrels

It never ceases to amaze me how today's reporters can sound like they are sitting next to you, even though my company makes the equipment to do this. As Anne's tour of duty lengthened, you could hear the bone-weary tiredness in her voice. She is a remarkable woman.

Thank you for bringing her book to my attention.

Lynn Distler
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Six Sigma Suggestions

Alan Peterson misses two important points in his article on Six Sigma (Sept. 10).

First, Six Sigma is not only a way to measure a process, but a method to achieve the ultimate goal: customer satisfaction. One of the keys to the success of the Six Sigma process is gathering the voice of the customers and provide for continuous improvement. By publishing this letter, it provides you with a data point for your Green Belt Project. (You're welcome!)

Second, GE does not make toaster ovens anymore. We sold that division to Thomson Electronics in France in the 1980s. When you think GE, think medical devices, power plants, plastics and NBC. And, of course, aircraft engines, where Six Sigma is a lower spec limit.

Todd J. Ciske
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Adverse Possession?

While I appreciate that HD AM occupies spectrum that analog AM does not, it does not occupy any spectrum to which these stations are not currently entitled.

In his letter ("Disaster in the Works," Sept. 24), Edgar Reihl likens it to throwing one's trash over the fence into a neighbor's yard. I would modify that statement and say that it is like throwing one's trash over the fence onto the yard of a neighbor who shares your property.

It is no secret that many stations, both AM and FM, enjoy coverage well beyond their protected contours. As long as there is no interfering signal in those areas, the coverage is there for them to use. Are they entitled to that coverage? Absolutely not.

The conflict comes when an adjacent-channel station begins using spectrum it is entitled to, but has not been using until now. Some may attempt to make the case of "adverse possession," wherein their station has been enjoying unprotected coverage in a particular area for years. I doubt that will hold water with the FCC.

In the specific case cited by Mr. Reihl, WLKM(AM) operates with secondary nighttime service at 8 watts. The secondary status of the nighttime authorization implies that the station is not entitled to any interference protection, and must accept any interference it receives. The adjacent-channel station producing interference, WSAI(AM) in Cincinnati, produces a night limit of 8.46 mV/m at the WLKM site.

In the absence of other interference, the WSAI analog-only signal would normally limit the interference-free nighttime service radius to less than a mile. Throw in the co-channel interference from co-channel WKWH(AM) in Shelbyville, Ind., and that radius is less than three-quarters of a mile.

If Mr. Reihl has been listening to WLKM in the transition hours and at night without interference in the past, it is because WLKM has been enjoying nighttime service area to which it is not, under the current or past FCC rules, entitled.

If, as Mr. Reihl seems to indicate, we should forego the conversion to HD Radio on the AM band for the sake of this coverage beyond the protected contour, perhaps we should petition the FCC to revisit the entire issue of the protected contour.

Cris Alexander
Director of Engineering
Crawford Broadcasting Co.
Denver

Let's Honor More of the Nation's Stations

Radio too often ignores its rich and fascinating history. We have lamented this tendency.

So allow us to express our pleasure at the news that local officials in Mason, Ohio, near Cincinnati, recently unveiled a historical marker, a plaque commemorating WLW's Blaw-Knox AM antenna.

Former and current employees, local engineers and personalities joined Mason Historical Society members and town residents for the event, hosted by Mayor John McCurley. Also in attendance were representatives of the Ohio Bicentennial Commission and Ohio Historical Society.

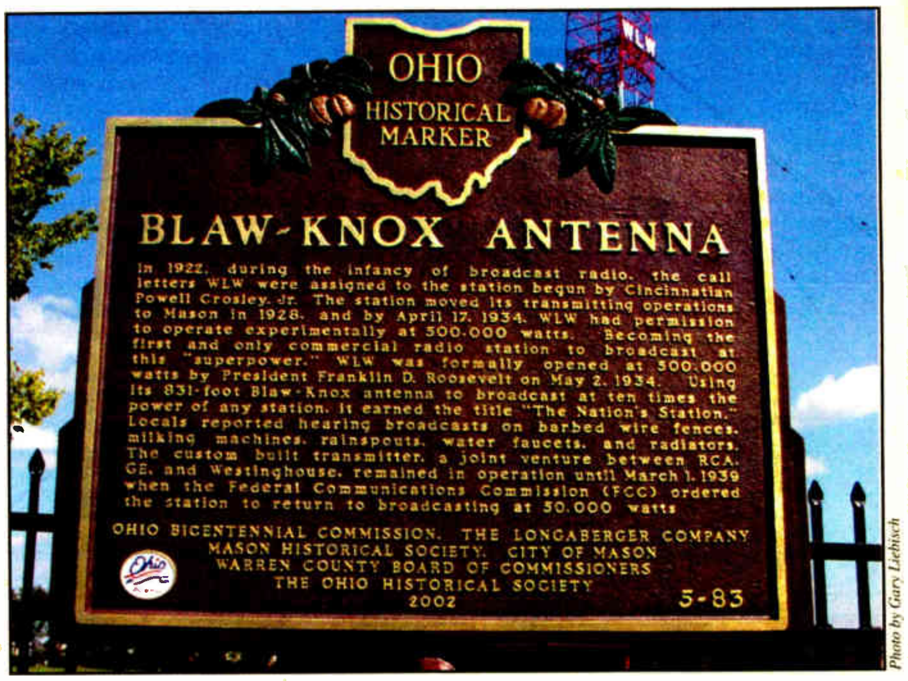
The plaque is at the entrance to the transmitter site along Tylersville Road and gives a brief history of the station, including its one-time experimental license to operate at 500,000 watts. A park bench and landscaping complement the marker.

Michael O'Bryant, Mason Historical Society member and resident, gets kudos for his efforts on behalf of the plaque. Jack Blosser of the Ohio Historical Society said that while all states have similar programs, Ohio's is the only one in which placement and content of the historical markers are suggested by residents.

It's wonderful to see an important part of radio history honored in this simple, long-lasting way. Many radio managers would do well to ask themselves if they are not guilty of keeping their own history at arms' length rather than embracing it.

We've reported on the history of WLW in these pages. Numerous sites on the Web describe the station and the structure, including that of Radio World contributor Jim Hawkins at *http://hawkins.pair.com/wlw.shtml*. For more, type "WLW" and "history" into an Internet search engine.

— RW


OHIO
HISTORICAL
MARKER
BLAW-KNOX ANTENNA
In 1922, during the infancy of broadcast radio, the call letters WLW were assigned to the station begun by Cincinnatian Powell Crosley, Jr. The station moved its transmitting operations to Mason in 1928, and by April 17, 1934, WLW had permission to operate experimentally at 500,000 watts. Becoming the first and only commercial radio station to broadcast at this "superpower," WLW was formally opened at 500,000 watts by President Franklin D. Roosevelt on May 2, 1934. Using its 831-foot Blaw-Knox antenna to broadcast at ten times the power of any station, it earned the title "The Nation's Station." Locals reported hearing broadcasts on barbed wire fences, milking machines, rainspouts, water faucets, and radiators. The custom built transmitter, a joint venture between RCA, GE, and Westinghouse, remained in operation until March 1, 1939 when the Federal Communications Commission (FCC) ordered the station to return to broadcasting at 50,000 watts
OHIO BICENTENNIAL COMMISSION, THE LONGABERGER COMPANY
MASON HISTORICAL SOCIETY, CITY OF MASON
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THE OHIO HISTORICAL SOCIETY
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