HOW ARBITRON DESCRIBES YOUR DIGITAL STATIONS. Page 6

Quincy Bound?

Nautel plans a sales and support office in a city rich in RF history.

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Studio Time Machine

A former engineer collects cart machines and anything with a Gates label on it.

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Radio World

$2.50 | The Newspaper for Radio Managers and Engineers | October 8, 2008

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Podcasting is nice and all; but Mathew Lasar says Internet-based services that require more than the usual flick of a switch have yet to offer serious competition to legacy media.

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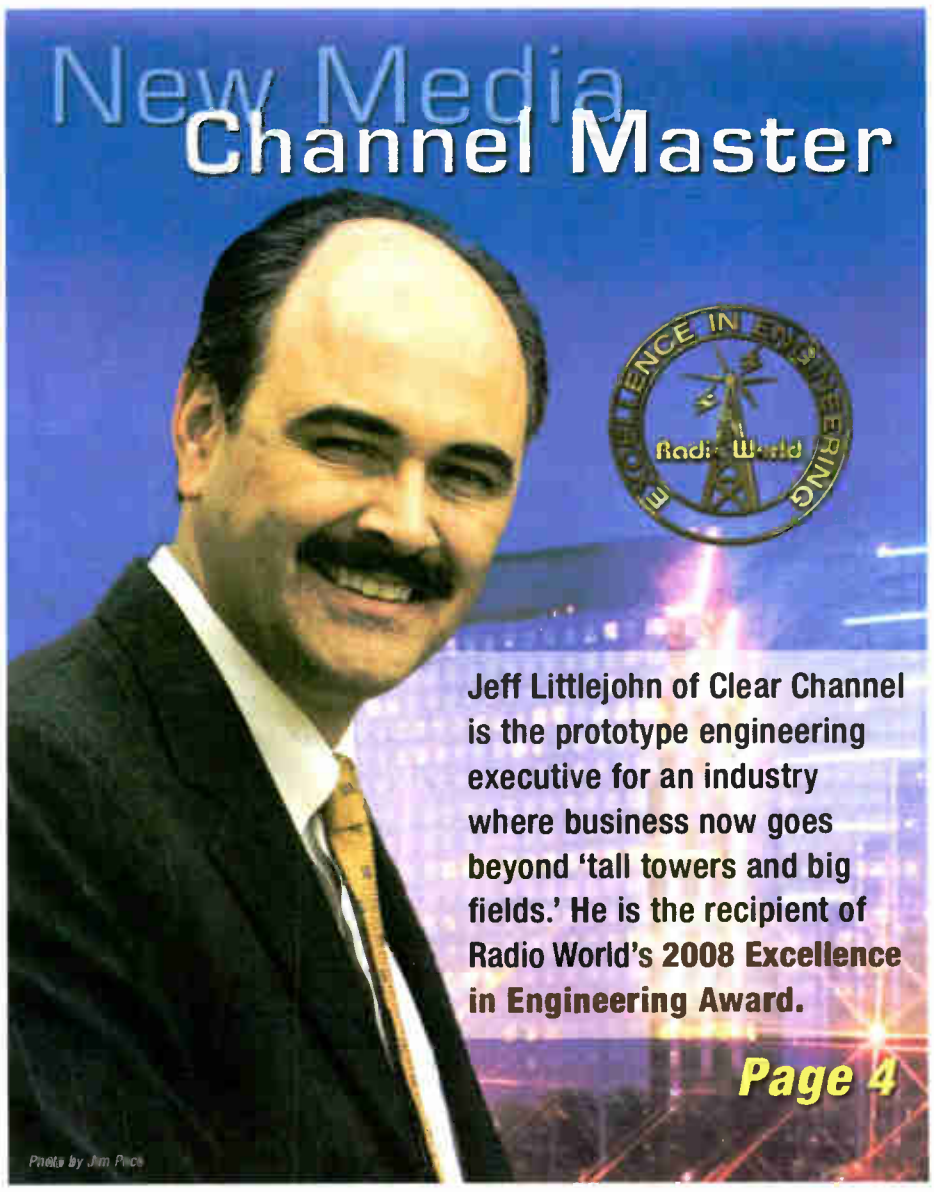

Jeff Littlejohn of Clear Channel is the prototype engineering executive for an industry where business now goes beyond 'tall towers and big fields.' He is the recipient of Radio World's 2008 Excellence in Engineering Award.

Page 4

Photo by Jim Peck

FEMA Says 'Yes' To CAP 1.1

But Manufacturers, Broadcasters Say Next-Gen EAS Implementation, Funding Are 'Murky'

by Randy J. Stine

WASHINGTON Supporters of a common alerting protocol for disseminating emergency alerts say the Federal Emergency Management Agency's decision to eventually adopt the format for exchanging emergency messages is welcome but that the timetable it has spelled out raises questions about equipment readiness and the agency's handling of the process.

Meanwhile, some supporters wonder if the outcome of the November elections might derail FEMA's implementation for next-gen EAS depending on who wins the White House, because of possible leadership changes within the Department of Homeland Security and FEMA.

As part of an announcement of intent in July to integrate Common Alerting Protocol 1.1 as the standard for the Integrated Public

See FEMA, page 5 ▶

NEWSWATCH

NEW CODEC: Fraunhofer IIS and VoiceAge Corp. said their proposal for a new MPEG audio codec, expected to be completed in 2010, has been selected to provide the basis for ongoing standardization work. They say the technology will support high-quality compression of both speech and audio at very low bit rates. The working title of this codec is the MPEG Unified Speech and Audio Codec. Expected uses include digital broadcasting, mobile TV and multimedia downloaded applications via wireless networks.

UNDO SIRIUS XM: Saul Levine, owner of Mt. Wilson FM Broadcasters, has asked the Federal Communications Commission to "undo" the satellite radio merger. In a Petition for Reconsideration of the Sirius-XM merger, Levine, owner of KKGO(FM), Los Angeles and KGIL(AM), Beverly Hills, Calif., said conditions imposed in exchange for approval of the deal are "inadequate." The conditions, Levine states, should have said explicitly that Sirius and XM can't use unauthorized frequencies to air indecent programming, referring to past unauthorized satellite radio transmissions affecting terrestrial broadcasters from over-powered satellite radio tuners containing wireless FM modulated transmitters.

HD3 PROGRAMS: Emmis Communications and WorldBand Media are partnering on HD Radio multicast programming targeting South Asian communities in New York, Los Angeles and Chicago. According to the U.S. Census and Statistics Canada, the companies said, North America has 3.8 million reported South Asians, including those of Indian, Pakistani, Bangladeshi and Sri Lankan descent. WorldBand Media's South Asian programming will be broadcast on the HD3 channel of Emmis FM stations WQHT-HD3, New York, KPWR-HD3 Los Angeles and WLUP-HD3, Chicago in mid-October. WorldBand calls itself "North America's first ethnic digital radio network."

DAB+ IN MALTA: A Terrestrial Digital Audio Broadcasting Network will broadcast WRN programming on DAB+ to Malta. DAB+ is a variant of the Digital Audio Broadcasting standard; proponents say it allows more stations to be delivered at better audio quality. WRN is working with Digi B Network Ltd., the company licensed by the Malta Communications Authority to operate the T-DAB network. The networks are made up of content aggregated from international public service broadcasters and program providers including National Public Radio, UN Radio and Voice of Russia.

SLIPSTREAM: A new company run by Internet Radio promoter Kurt Hanson is aimed at helping broadcast radio stations make money online. Hanson is CEO of Chicago-based Slipstream. Slipstream runs the infrastructure behind various Internet radio sites. Hanson said the goal is to help broadcasters stay relevant as consumers listen more to their iPods, satellite radio and Internet radio. Slipstream seeks to help stations offer a product designed for Internet delivery, "a multichannel, personalizable version of their local radio station brand." It will be available for a monthly cash fee plus bandwidth and royalty costs, or for barter.

HD RADIO AWARENESS: A poll by an audience research firm shows that 67 percent of 18-to-64 year olds have heard of HD Radio. That's up from a similar study in 2006, also done by Mark Kassof & Co., when only 38 percent had heard of HD Radio. Consumers' understanding of HD Radio has also grown, according to results from 688 telephone interviews conducted in September. Now, 21 percent indicate HD Radio delivers higher-

See NEWSWATCH, page 8 ▶

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Nautel Plans U.S. Expansion

Manufacturer Targets Quincy Office As Next Step in Development

by Randy J. Stine

QUINCY, Ill. Broadcast transmitter manufacturer Nautel has recently advertised in the daily newspaper in this southern Illinois city hoping to recruit sales and support staff in advance of opening an office here.

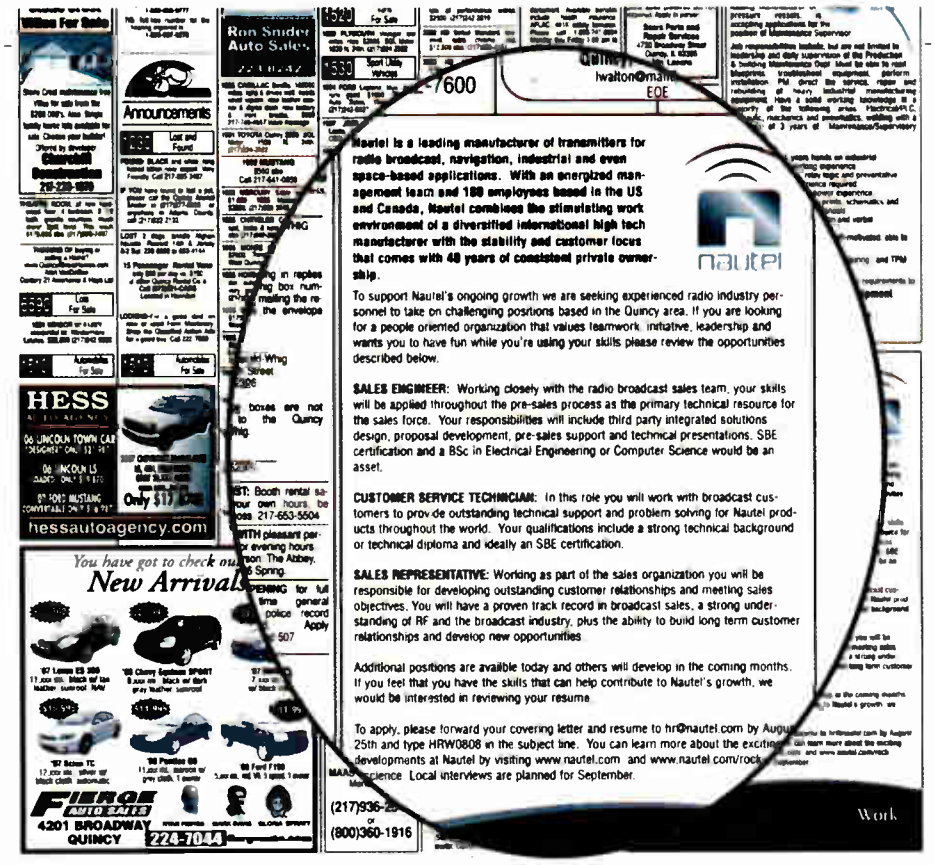
Quincy is a historic center of radio broadcast manufacturing and is currently home to two major broadcast transmitter manufacturers. Both Harris Broadcast Communications and Broadcast Electronics Inc. have research and manufacturing facilities here, an area long considered to be rich with RF industry talent.

Nautel is a Canadian company that also maintains an office and production facility in Bangor, Maine.

"We are planning to open a sales and support office in the Quincy area, but it is premature to put a date on the opening of an office," said Nautel Marketing Manager John Whyte.

"There are only a couple of centers of expertise for RF skill sets anywhere and arguably the largest is Quincy. We want to tap into the talent pool. We are looking for support staff and sales engineers," said Whyte.

Whyte said Nautel is not currently considering locating a manufacturing plant in Quincy.



Nautel got the attention of the local tech community with an ad in the Quincy newspaper.

Nautel, which manufactures transmitters for AM and FM broadcast, navigation, industrial and space-based applications, is scouting potential office locations in Quincy and expected to interview job applicants in late September, Whyte said.

"We are investing in engineers, which we hope translates into more innovations, more award-winning products and more support for our customers."

Nautel officials said the company has stepped up efforts to grab a larger share of the broadcast transmitter market since the 2006 appointment of Peter Conlon as president and chief executive officer.

"This is all part of our efforts to grow our transmitter business. We have made major investments the past two years, from tripling our sales staff to substantially increasing the numbers on our engineering staff. While others have been pulling back because of softness in the market, we actually have taken the contrarian view, which has resulted in a significant up tick in sales volume for us," Whyte said.

Nautel, a privately owned company, does not release sales figures or earning statements.

The recruitment ad, which ran on successive August weekends in the Quincy Herald Whig, specifically asks for candidates for sales engineer, customer service technician and sales representative, to be based in the Quincy area.

"We are looking for people to keep in Quincy. Honestly, given technology today, where people are located physically is less important than the talent they bring," Whyte said.

In recent years Nautel has pursued industry executives more aggressively and hired some notable RF industry talent, including Gary Liebisch, former product manager at Harris, and Chuck Kelly, former head of international sales for Broadcast Electronics. In April it named Gerardo Vargas to lead the Latin America sales office. He is a former sales executive with AEQ.

Nautel is headquartered in Hackett's Cove, Nova Scotia, where it has its manufacturing center. The company's Maine facility also has production capability and houses customer support and sales operations for the United States.

"We have become a truly North American company. We consider both the United States and Canada to be domestic markets for us. We sell to over 168 countries worldwide," Whyte said.

"We are certainly not doing this to impact those companies in a negative way. The reality is that Quincy is the center of RF excellence. The talent we are looking for is in Quincy," Whyte said.

The broadcast manufacturing industry has a long history in Quincy, a city of approximately 40,000 residents that rests along the eastern banks of the Mississippi River. In the 1920s the Gates family established the Gates Radio Company. Harris Intertype Corp eventually acquired the company in the 1950s. Harris continues to operate its RF transmission manufacturing business here along with sales and administrative support.

Former Gates executive Larry Cervon moved Broadcast Electronics in 1977 from Maryland to Quincy, expanding the city's eminence as an RF center. Broadcast Electronics employs more than 100 people at its Quincy headquarters, which includes manufacturing and research and development at its 88,000 square-foot building. BE last year noted the 30th anniversary of its own move to Quincy.

Quincy also was the site of a Motorola manufacturing facility, which closed in the mid-1970s.

Harris and Broadcast Electronics declined to comment on Nautel's expansion plans.

Engineer of the Year: Jeff Littlejohn

He's Finding New Ways for Clear Channel To Distribute Its Valuable Content

Jeff Littlejohn is the recipient of Radio World's 2008 Excellence in Engineering Award.

Recipients represent the highest ideals of the U.S. radio broadcast engineering profession and reflect those ideals through contributions to the industry.

Jeff is the executive vice president of distribution development and is responsible for the oversight of technical aspects of the radio division at Clear Channel.

Answering to Radio President/CEO John Hogan, he oversees radio engineering matters including 400 or so engineers, capital management and radio's interface with IT. His team handles intellectual property issues, online technology and the hundreds of computer servers and distribution networks that handle Clear Channel content.

But as his title suggests, a key task is to find and build new ways to distribute that content. Beyond Clear Channel's main analog AM and FM outlets, that means platforms like HD Radio, RDS, cellular technologies, Internet streaming and podcasting.

Platforms

Littlejohn — who has an associate's degree in electronics and a bachelor's in automated manufacturing from ITT Technical Institute in Indiana — started his career in Ft. Wayne, Ind., as an assistant engineer with WAJI and built much of their studio facility.

He pulled wire through ceilings, put wires on punch blocks and learned from the ground up; among his teachers was Jack Didier, who is now DOE for Federated Media. Later he worked for Didier and Jeff Goode at Broadcast Circuit Systems, a contract engineering company serving Ohio and Indiana. He then worked for WBYR(FM) when that station moved into Ft. Wayne, and for Beasley in Chicago.

Littlejohn went to work in 1992 for American Media, which owned about 15 radio stations, and he hasn't left a job since, though the employer name on the business cards certainly has evolved — from American Media to Chancellor Broadcasting to AMFM Inc. to Clear Channel.

His company has 983 AM/FM stations, more than 1,000 Web sites and 105 million listeners in four countries. I asked Jeff how many channels this all works out to; he figures at least 1,500 unique channels, including 350 HD2s and a few HD3s.

"Clearly AM and FM analog are our primary means of distribution right now; HD Radio is probably the most [notable] upcoming means. But we're also making fantastic progress on streaming in multiple formats in various types of devices. Cellular distribution with Sprint, US Cellular, Metro PCS; things like the iPhone."

Clear Channel, he says, decided early to concentrate on finding out what content listeners wanted. "It should not matter to us whether they want to receive that over the air or online. Radio should not lose sight of the listener. The challenge we have to expand on is: Who is that listener? Do they only count if they're listening on AM or FM? Of course not. As long as they're listening to our content, aren't they still a listener?

"John Hogan has been quoted as saying we're no longer a company of just tall towers and big fields. We need to get beyond the unique channel we have for distribution; we need to make sure we follow our listeners."

Jeff's team also is responsible for distributing content from other companies; for instance, most of the network that Microsoft uses to distribute content over MSN Direct is on Clear Channel signals.

One of his priorities is working with manufacturers to get HD Radios into cars, preferably as standard equipment. While HD Radio hasn't taken off as quickly as he'd hoped, he sees momentum coming.

"That's going to be a game changer for radio, having an additional content channel inside the vehicle. That'll be one of those things that we'll look back on 10 or 15 years from now and say we changed broadcasting."

But with broadband coming to the auto environment, isn't all this going to be moot? "It's possible; but that's why we need to move quickly. We waited too long to begin with, and satellite got a jump ahead of us; we need HD Radio to be standard in every vehicle.

"The thing radio will have is that it's free to the consumer. It's almost a right, to be able to receive that sort of free content. WiMax is interesting; I know there are some automakers looking at it, but there is no nationwide WiMax infrastructure in place today, probably won't be for a few years; and there are no receivers being installed in cars today and probably won't be for a few years.

"Beyond that, we shouldn't see wireless broadband as a problem but an opportunity. We should be looking at ways to make our content available into the vehicle."

To that end, in 2004 Littlejohn headed the team that established Clear Channel

We need to get beyond the unique channel we have for distribution; we need to make sure we follow our listeners.

— Jeff Littlejohn

Buy this

Looking to make radio more interactive, Littlejohn is excited about tagging — not only via Apple iTunes tagging of digital signals, as previously announced, but with analog RDS.

In September, Clear Channel joined with eight other groups to announce they will support RDS song tagging using tech-

See LITTLEJOHN, page 5 ▶

From the Editor

Paul J. McLane

Radio's Total Traffic Network; it collects info from traffic cameras, speed sensors, police scanners and mobile reporters and then delivers the data to consumers.

This is the first RDS Traffic Message Channel traffic service in North America. It has contracted to 30 clients; it recently surpassed a half-million paid subscribers and reaches 125 markets in four countries.

Among companies using its data in automobile systems are BMW, Mini USA and Volvo, which offer it as a standard service, no subscription. Portable nav systems using the data include ASUS, Garmin, TomTom, Navigon, Mio Technology, Delphi, Kenwood, Clarion, Harmon Kardon, Panasonic, Siemens and Cobra Electronics.

FEMA

▶ Continued from page 1

Alert and Warning System, FEMA reiterated that all participants in the next generation of the Emergency Alert System would need to be in compliance with CAP 1.1 within 180 days of CAP's adoption.

That adoption — which hasn't happened yet but is expected during the first quarter of 2009 — has some observers concerned about potential EAS equipment shortages.

With CAP, warning messages can be disseminated simultaneously over interoperable warning systems developed by state and local emergency managers. In addition to audio, multimedia such as video, digital photos and text could be used. Some states use CAP for emergency warning now.

Some within the emergency management arena, while pleased with FEMA's decision, question whether manufacturers of equipment will be able to withstand a crushing demand for new decoder boxes and meet the 180 day compliance mandate if every EAS participant is indeed required to have a CAP-capable decoder.

FEMA says that arriving at standards and protocols that work for everyone is a complex process that includes partners across government and the private sector.

"We are working closely with others to develop a profile that is in line with CAP 1.1," said Martha Rainville, assistant administrator of FEMA's National Continuity Programs Directorate.

A CAP Advisory Council — consisting of representatives from the National Association of Broadcasters, the Society of Broadcast Engineers, equipment manufacturers and others — formed this summer. It has begun work to help FEMA through the CAP adoption process.

Backward compatibility

The group's Manufacturing Working Group is expected to finish its work soon, defining how CAP should be implemented with EAS, according to a person familiar with the council. FEMA could use the group's work as the basis for a so-called "OASIS" standard; the Organization for the Advancement of Structured Information Standards is a not-for-profit consortium that works to advance standards for the global information society.

The phrase 'in line with CAP 1.1' has no particular meaning.

— Art Botterell

In fact, the Manufacturing Working Group held a conference call with FEMA this summer specifying a set of guidelines for ensuring backward compatibility with the current EAS Specific Area Message Encoder protocol.

The 180-day deadline for broadcasters and emergency managers to become CAP-compliant raises concern for some EAS equipment manufacturers about the availability of equipment capable of receiving CAP 1.1 messages, said Darryl Parker, senior vice president of TFT Inc.

"Right now we are under the gun to have enough equipment available by the third quarter of 2009. You must consider the magnitude of the situation," Parker said.

There are about 35,000 EAS participants who may be required to have CAP-to-EAS decoders, Parker said. What's not clear is whether all 35,000 will be required to have a new decoder; FEMA has not addressed the issue definitively.

"There are only five to six companies capable of producing this equipment. That means each manufacturer might have to produce 6,000 to 7,000 units within six months," Parker said.

Equipment manufacturers have been reluctant to ramp up production of new units until FEMA releases its CAP 1.1 specs and completes the formal adoption process early next year.

"It complicates matters that FEMA has yet to disclose exactly what we will need to build to meet requirements," he said.

Further, Parker said, FEMA could set specifications during the spring of 2009, but not necessarily publish a procedure for ensuring a unit complies with specs at the same time.

"I don't believe we would market a unit that had not passed a conformance review," Parker added.

Several equipment manufacturers already offer CAP-capable equipment for sale, including TFT Inc. and Sage Alerting Systems.

Specifications

The exact wording of FEMA's July announcement has Art Botterell, one of the architects of CAP 1.1, skeptical about the government agency's intent.

FEMA said in its press release it would "adopt during the first quarter of calendar year 2009, an alerting protocol in line with Common Alerting Protocol 1.1" as the standard for the Integrated Public alert and Warning Systems.

"Specifically, the phrase 'in line with CAP 1.1' has no particular meaning. Still to be seen is if FEMA's staff or its contractors will put their own spin on the standard at the expense of interoperability with other services," said Botterell, manager of a community warning system for the Sheriff's Department of Contra Costa County in California.

Others who have examined FEMA's announcement say its wording regarding CAP 1.1 is "ambiguous" and makes it difficult to draw many conclusions.

"There is some gray area in the announcement," said a person familiar with FEMA's handling of the situation. "I do believe FEMA is committed to making an announcement about their specifications for CAP 1.1 during the first quarter of 2009. We are just not sure what those specifications will be."

Botterell also speculates that any decisions made by FEMA could be "up for grabs" again when a new administration takes over in Washington, with possible leadership changes at the DHS and FEMA at the beginning of the year.

FEMA's July announcement did not address the issue of the funding and training that likely will be needed for emergency mangers to originate CAP messages for next-gen EAS properly.

Littlejohn

▶ Continued from page 4

nology from Jump2Go; further, Microsoft Zune portable media players, including those in the field, now will allow users to tag and immediately retrieve songs broadcast from those stations.

A song tag is an encrypted digital code embedded in the FM broadcast. When a listener tags a tune, the code is stored on their MP3 player. Zune's FM tuner and wireless connectivity let the player retrieve the song from an online Zune site as long as the user is in a WiFi hotspot.

"Clear Channel had the ability to do this tagging, but we wanted to work with Jump2Go because we knew other broadcasters were going to need to implement this as well," Jeff said.

"We needed more than Clear Channel and Apple supporting tagging; we need to have more than HD Radio supporting tagging. My hope is that we're able to be really impactful in making radio interactive and bringing it into the avant-garde. More than half of music that's discovered is discovered on AM/FM radio; and more purchases are happening online."

The RDS/Zune announcement combines those trends in a way that strengthens radio's involvement in music discovery. With an installed base of Zunes that can be upgraded retroactively, Littlejohn hopes the impact could be felt as soon as this Christmas season.

Meanwhile, on the digital side, all of Clear Channel's HD Radio and HD2 stations are iTunes Tagging compatible. If tagging's proponents are right, more announcements will follow and tagging will become a sought-after feature regardless of whether a station is digital.

Though much of his time is spent on new tech projects, the traditional engineering infrastructure must be maintained.

Steve Davis carries the bulk of that oversight, but Littlejohn made sure I knew about Clear Channel's evolving disaster readiness program, which developed partly in reaction to all of the hurricanes of recent years.

The company now keeps emergency broadcast equipment stored around the country; it has an inventory of vehicles and generators on call and a Ku band satellite network ready that can deliver audio from anyplace to anyplace on short notice to help restore service from a studio to a transmitter site on an ad hoc basis.

Jeff is 42. He and his wife Tina have been married since 1989; their son Jacob is three. Tina and Jacob probably wish they could see more of him; Jeff just hit the million mile mark on his frequent flyer account.

But with all those new channels and ventures to worry about — Total Traffic, HD Radio rollouts, data services, tagging, car receivers, mobile content — it's no wonder he's on the road a lot. He also is a notable contributor to the National Radio Systems Committee and several groups within the National Association of Broadcasters; and he sits on the board of iBiquity Digital Corp.

We honor Jeff Littlejohn for his excellence in traditional engineering as well as his leadership in how our medium develops its new channels, data tools and operating models.

Will PPM Rollout Continue as Planned?

Controversy Sparks Subpoena, FCC Petition; Meanwhile, Meaning of 'Digital Radio' Evolves

by Leslie Stimson

COLUMBIA, Md. On Oct. 8 the Arbitron Portable People Meter is set to become the way listeners are measured in eight more markets.

However, a coalition of advertising, lobbying and ownership groups representing owners of black and Hispanic-formatted radio stations has asked the Federal Communications Commission to conduct an inquiry into the methodology Arbitron uses for the new measurement technology — and possibly delay the rollout.

In New York, the state attorney general has begun an investigation of the PPM; the New York City Council was expected to ask the FCC to do the same. Subsequently, New Jersey's attorney general also subpoenaed information from Arbitron.

The Association of Hispanic Advertising Agencies, the Spanish Radio Association, the National Association of Black Owned Broadcasters, the Minority Media and Telecommunications Council and several broadcasters — Entravision, Spanish Broadcasting Systems, Univision, ICBC Broadcast Holdings and Border Media — filed an emergency petition under Section 403 of the Communications Act asking the commission to open an inquiry into the methodology Arbitron uses for the new measurement technology.

"The PPM," the companies stated, "grossly undercounts and misrepresents the number and loyalty of minority radio listeners." The FCC sought comments on the petition to MB Docket 08-187 until Sept. 24, and replies until Oct. 6, although late comments may still be filed.

In response to a question from Radio World, FCC Chairman Kevin Martin said the agency turned around the petition quickly "due to the seriousness of the situation. We typically take comments and then decide what to do."

The companies have had talks with Arbitron for nearly two years seeking PPM improvement, they say. The PPM is used in Philadelphia and Houston. On Oct. 8, it's scheduled to "go live" in more markets, including the top four: New York, Los Angeles, Chicago and San Francisco-San Jose, as well as Riverside-San Bernadino, Calif. The New York Metro includes embedded markets Nassau-Suffolk and Middlesex-Somerset-Union.

"Most advertisers are likely to accept Arbitron's assertion that the PPM results are more accurate than the diary results, and in light of Arbitron's undisputed monopoly position will have no alternative but to rely on Arbitron's flawed data," the companies wrote.

"This will lead to drastically lower advertising revenues for urban and Hispanic formatted stations" after the Oct. 8 switchover.

Arbitron said in a statement that the PPM is a reliable survey tool and that it has increased its PPM sample sizes for urban and Hispanic markets.

"Arbitron maintains that the FCC does not have jurisdiction over the company or its operations and assets and consequently lacks the authority to commence a Section 403 investigation.

"Nevertheless, we remain committed to continue our voluntary meetings with the FCC. Our voluntary cooperation to explain how PPM works and to offer to work with our critics to find solutions should not be interpreted as our submitting to the FCC's authority."

In the first findings about 'digital radio' listening as measured in 11 markets by PPM, the top-performing channels were all online streams.

New York Attorney General Andrew Cuomo said in a Sept. 9 letter to Arbitron Chairman/President/CEO Steve Morris that he's concerned the PPM "may have a dramatically negative impact on minority broadcasting in New York." In a subpoena that week, Cuomo's office requested PPM documents dating to 2003. The paperwork was due Sept. 19.

Responding to the subpoena, Arbitron reiterated that the PPM is more accurate than the diary. "The company maintains that its Portable People Meter radio ratings service is fair, reliable and fully represents the diversity of New York radio markets. The media industry has demanded a more precise and credible measurement tool for radio just as they have for other media."

Legal experts predicted the FCC would be loath to get in the middle of contract disputes between FCC licensees and third parties.

Some observers noted that while Arbitron is on firm ground with its PPM methodology, politically it might help the company if it didn't enjoy a virtual monopoly in the field of radio audience research.

Slowing the PPM rollout again would hurt Arbitron financially. It is operating both the diary and PPM ratings services in several markets with only one — the diary — bringing in revenue.

'Digital radio' is online

Separately, Arbitron recently briefed program consultants about its first "digital radio" results for PPM.

The company's definition of "digital radio" includes the Web streams of encoded stations, as well as the encoded air signals of HD Radio stations, both main and multicast.

In the first findings about "digital radio" listening as measured in 11 markets by PPM, the top-performing channels were all online streams. Four Internet streams from commercial stations had PPM numbers large enough to make their local Arbitron Radio Market Reports for July: WBEB(FM) Philadelphia, WPLJ (FM), New York; WLTW(FM), New York; and KDAY(FM), Redondo Beach,

See PPM, page 8 ▶

What Is a Radio Station?

Arbitron now defines a "radio station" as:

- A government-licensed AM or FM station (as it always has)
- An HD Radio® (primary or multicast) station
- An Internet stream of a government-licensed station
- Potentially, satellite radio channels from XM® or SIRIUS®
- Potentially, stations that are not government-licensed

How Digital Stations Are Identified in Arbitron's Systems and Reports

Band ID	Station	Example
AM	Analog AM station	WAAA-AM
FM	Analog FM station	WBBB-FM
HA	Digital AM station	WAAA-HA
HF	Digital FM station	WBBB-HF
IA	Internet stream of an AM station	WAAA-IA
IF	Internet stream of an FM station	WBBB-IF
F2, F3...F9	HD-multicast station	WBBB-F2, WBBB-F3
G2, G3...G9	The Internet stream of an HD-multicast station	WBBB-G2, WBBB-G3

ARBITRON

Crediting Reporting Digital Radio in Arbitron's Syndicated Services

The table below summarizes Arbitron's crediting and reporting policy for digital radio stations in both the diary and PPM services.

Station Type	Definition	+2 Band ID	DIARY: Included in PUR?	DIARY: Station Estimates Reported?	PPM: Included in PUMM?	PPM: Station Estimates Reported?
HD-primary station	HD1 "The digital version of an analog station"	WAAA-HF WAAA-HA	YES	YES. Credit is assigned to the station and is included in the estimates published for the analog station.	YES	YES
HD-multicast stations	HD2, HD3, HD4 "The stations between the stations"	WAAA-F2 WAAA-F3 WAAA-F4	YES	NO. Credit is assigned to the individual station, but estimates for the station are not reported.	YES	YES
Internet stream of an AM station	Internet AM	WAAA-IA	YES	YES, if the AM station and Internet stream requested TLR. If the stations did not request TLR, then estimates are not reported for the Internet station.	YES	YES. Station will be reported separately if TLR is not requested.
Internet Stream of an FM station	Internet FM	WAAA-IF	YES	YES, if the FM station and Internet stream requested TLR. If the stations did not request TLR, then estimates are not reported for the Internet station.	YES	YES. Station will be reported separately if TLR is not requested.
Internet stream of an HD-multicast station	Internet multicast	WAAA-G2 WAAA-G3	YES	NO. Credit is assigned to the Internet station, but estimates for the station are not reported.	YES	YES. Station will be reported separately if TLR is not requested.
Internet-only radio	Streamed audio that is not broadcast in any form Ex: Pandora.com	N/A	NO	NO	NO	NO
Satellite radio	A channel broadcast by either XM or SIRIUS	CAAA-SA	YES	NO. Credit is assigned to the satellite channel, but estimates for the station are not reported.	NO*	NO*
Internet stream of a satellite radio channel	Satellite radio delivered via Internet	CAAA-IS	YES	NO	NO*	NO*
Non-licensed radio	Pirate radio stations, shortwave radio, subcarriers	N/A	NO	NO	NO	NO

Effective for the Summer 2008 Diary survey and the July 2008 PPM report period.

*At the time of this writing, neither satellite radio service has elected to encode its channels.

Arbitron has developed new labels to identify the different types of stations in its systems and reports based on PPM data.

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DIGITAL RADIO

FMeXtra Gives Talpa a Lift

Station Is First in the Netherlands to Use The Digital Radio Express System

by Marc Maes

HILVERSUM, Netherlands The Talpa Radio group is using FMeXtra technology from California-based Digital Radio Express to digitize the FM subcarriers of Radio 538, a popular FM station targeting younger audiences.

Talpa is using the additional capacity of its signal at 102 FM MHz to multicast content of oldies-formatted Radio 10 Gold and hip-hop station Juize FM.

This is the first broadcaster in the Netherlands to use FMeXtra technology.

"The extra digital signal stream is part of Talpa Radio's desire to improve and expand its broadcast capacity. And digital broadcasts within the existing FM license could provide the answer to the current shortage in FM frequencies," said Jan-Willem Brüggenwirth, director of Talpa Radio.

Extra capacity

"We want to make optimal use of the frequencies we have," said Brüggenwirth. "By digitizing our in-house infrastructure and offering all of our signals centralized in a Media Gateway, allowing us to monitor exactly who is taking what content, we now offer our audience three stations in perfect quality," he said.

The key to the FMeXtra system is the unused capacity available on an analog FM signal. This capacity allows the offering of options like RDS, TMC and extra stations.

"What we do is add an extra data channel alongside these options, and stream it as an AAC+ protocol," said Alexander Josiassen, head of the Talpa Radio technical department.

"Basically," said Josiassen, "we use the same capacity as the traffic information but supply an audio signal over the available 56 kbps." The extra capacity carries the Radio 10 Gold and Juize FM content alongside Radio 538.

Listeners must have a receiver capable of decoding the multicast if they wish to hear the extra stations. Standard receivers still receive the analog signal and listeners will hear no degradation, but they cannot hear the FMeXtra signals.

Netherlands-based Terneuzen equipped the Talpa FM transmitters with the FMeXtra carriers. The company is also offering FMeXtra receivers to consumers.

Jan-Willem Brüggenwirth

According to Josiassen, the big advantage of FMeXtra is that the signal uses a station's existing infrastructure. "As for our studio environment," he said, "the only thing that had to be done is to include separate protocols for FMeXtra. For instance, you cannot add additional processing to improve sound quality," he said.

Clear statement

"FMeXtra is a supplemental way of broadcasting. The future will tell whether it will become an alternative for DAB," said Josiassen.

Unlike the Eureka-147 system, where more transmitters are necessary to cover the territory, the FMeXtra system uses a station's existing analog transmitter network to get optimal coverage, according to Josiassen.

With an auction for DAB frequencies planned for later this year, the commercial radio market is now eyeing possible alternatives.

In a next step, Talpa Radio wants to set up a distribution deal to supply the necessary receivers to the public. "The AAC radios are available in the Benelux," said Josiassen, referring to the economic union in Western Europe that includes neighboring monarchies Belgium, the Netherlands and Luxembourg.

"But we want to team up with a number of manufacturers like Terratec to distribute our own brand of FMeXtra receivers. Our plans are to get them in the shops this fall."

Talpa wants to play a role in the distribution of the AAC radios in shops, supermarkets and entertainment stores, both in the Netherlands and abroad, backed by a campaign to promote its brand of receivers.

Marc Maes is a media and music industry journalist based in Antwerp, Belgium.

PPM

▶ Continued from page 6

Calif., part of the Los Angeles market.

In the August report released in September, that number rose to 11 streams, probably because there are fewer holidays in August to dampen listening, executives said.

PPM digital listening is a "workplace phenomenon and is concentrated among college-educated listeners," said Arbitron Senior Vice President of Marketing Bill Rose. Online listening is divided almost exactly 50/50 between men and women, and skewed 25–54.

Of some 16,000 PPM panelists, some 1,200 listened to online radio in July. Such listening accounted for 7 percent of the total tune-in from encoded stations for the month.

In September, 395 eligible entities had encoded and were ready to report in the first 13 PPM markets. The 395 includes 260 HD Radio/Internet stations, 93 HD2 stations, 24 combo HD2/Web stations, 13 HD3 stations and five combo HD Radio/Web streams.

Internet-only stations and podcasts are not measured by PPM.

In response to a query by Radio World, Arbitron said online radio is still in its early evolution. Many stations are not matching their exact on-air broadcast schedule or not streaming at all because of the performance royalty situation. Rose said its results are consistent with Arbitron's streaming media measurement partner, Comscore.

HD-R listening

While the PPM detected "small quantities of tuning" to HD Radio stations — main channel or multicasts — that listening is "not significant" at this moment, Rose said.

HD Radio stations, like others, must meet Arbitron's minimum reporting standard, a .495 Cume Rating, or about half of 1 percent of the market population.

Three of the four Internet streams that made their local PPM July books were Internet streams of stations that are broadcasting both analog and HD Radio signals. However HD Radio broadcasts, the main or multicast IBOC channels of stations mentioned above, did not make the July PPM market reports for their markets.

Program consultants just shook their heads "no" when asked by Radio World if they thought HD Radio main or multicast stations would have enough listening to soon make the PPM market reports. They cited unevenness across the country in the quality of programming on multicast channels, thwarting consumer awareness of the HD2 stations, they felt.

Clearly reported digital station listening is included in Persons Using Radio estimates (for a market) for PPM and diary reports.

Of the four stations whose Web streams made the July market report for PPM, three, WBEB in Philly and WLTW and WPLJ in New York, are transmitting both in analog and in HD Radio and have at least one multicast channel apiece. The fourth station, L.A.'s KDAY, doesn't appear to be transmitting in IBOC and is in the midst of an FM tower build.

Beyond 'AM & FM'

One thing Arbitron said it heard repeatedly from customers as it was developing a reporting policy for digital radio was the need to identify uniquely and unambiguously so that both stations and advertisers can identify and trend performance of a broadcaster's analog broadcast station, its analog Internet stream and its HD Radio and multicast signals.

Arbitron has developed new labels to identify the different types of stations in its systems and reports based on PPM data.

For example, in addition to "AM" and "FM" for analog designations after a station's calls, digital designations are "HA" for an AM digital station and "HF" for an FM digital station. When digital stations meet the minimum reporting requirements, they'll be listed as unique stations, but for now, they'd be listed along with all of a station's other channels in the station information profile in the market report or e-book.

Thus an FM IBOC main FM would appear as "WBBB-HF" in the PPM report. Internet stations are "IA" for AM and "IF" for FM.

Multicast stations are now "F2" or "F3" and so on. The Internet stream of an HD Radio multicast station is designated by a "G2" or "G3" and so on after the calls, such as WAAA-G2.

PPM and socks

And finally, some techie PPM tidbits.

The PPM meter can detect home and out-of-home listening. But whether the meter exposure is in-car, at the mall or at work is a level of granularity not provided at the moment.

Arbitron can tell if the meter was in motion, whether it was set down, the battery failed or the unit was re-charged. If the meter does not move for 20 minutes, it goes into sleep mode silently, with no beep. The PPM is still recording listening in that mode, according to the audience research firm.

And what of people who listen to the radio as they fall asleep? That listening is credited for one hour.

One of the consultants at the Arbitron event in August asked about the meter: "The fashion police have been telling guys to get their cell phones off their belt. So where else can a guy wear it?"

The answer: On a lanyard, or a badge from work, in pockets or even clipped to the inside of their socks — as some construction workers do. Many women carry the meter in their purse.

Arbitron said the PPM is calibrated to hear sounds that the human ear can detect, so it can still detect encoded signals through fabrics.

Newswatch

▶ Continued from page 2

quality sound, vs. 17 percent in 2006. Significantly, 8 percent now volunteer that HD Radio delivers more stations or choices, vs. only 1 percent two years ago. On the downside, the research also finds continued misconceptions about HD Radio. Now, 7 percent indicate that HD radio is satellite radio, up from 3 percent in 2006. And 3 percent think they receive HD Radio even though they have not purchased an HD-capable receiver.

NETIA ACQUIRED: Netia has been acquired by GlobeCast.

The buyer is a subsidiary of France Telecom and is a provider of content management and transmission services for broadcasters. It runs a satellite and fibre network for content delivery to direct-to-home satellite platforms; cable, IPTV, mobile and broadband headends; and corporate and digital signage networks. It has SNG vehicles to support video coverage of events.

Netia is a provider of software for television and radio content. Its product line includes Radio-Assist, OpenNet and Media Logging.

INDY WORKSHOP: The Indiana Broadcasters Association's Annual Engineer Workshop is set for Oct. 20 and 21 in Indianapolis.

The event, open to broadcast engineers throughout the Midwest, will feature sessions on the broadcast engineering practices, HD Radio, facility maintenance, FCC compliance and DTV.

Sponsors include Harris Broadcast, Nautel, Rohde & Schwarz, Tektronix, Broadcast Electronics, Dielectric, Belden, Mainesource, Microwave Radio Communications and Broadcasters General Store. It will be held at the Sheraton Indianapolis Hotel and Suites.

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AUDIO | NETWORKS

Workbench

Radio World, October 8, 2008

Past columns are archived at *radioworld.com*

Home-Brew Projects Demonstrate Ingenuity

by John Bisset

"Home-brew" devices seem to catch an engineer's eye. I don't know if it's the ingenuity aspect, the construction time involved or the thrill of doing it yourself.

Younger engineers missed out on the Heathkit era, when a thick catalog from that company offered a variety of electronic kits you could build (check out *www.heathkit-museum.com*).

John Schneider, formerly BE sales manager for the Latin Americas, sent in Fig. 1. It's a picture of a home-brew 1 kW AM transmitter that Luis Silva sent to him from Quito, Ecuador. Obviously the "designer" had seen a Fritz Bauer transmitter!

Bauer metered everything, and manufactured one of the easiest tube transmitters to troubleshoot because of all that metering. The rigs were easiest to repair, too, since all the parts were everyday components you could pick up at any electronics supplier.

According to John, this transmitter is still on the air! John is now manager of broadcast business development for Latin America at iBiquity Digital. He can be reached at *jschneid93@gmail.com*.

Oh, to have the time to build something like this.

Over the years, one of the most amazing things to me is how forgiving electronic circuits are. Poor solder joints, under-rated parts, inadequate cooling — and the circuit still works.

Sometimes, home-brew can be used in modern settings, as we'll see. Meantime,

See HOME BREW, page 11 ▶

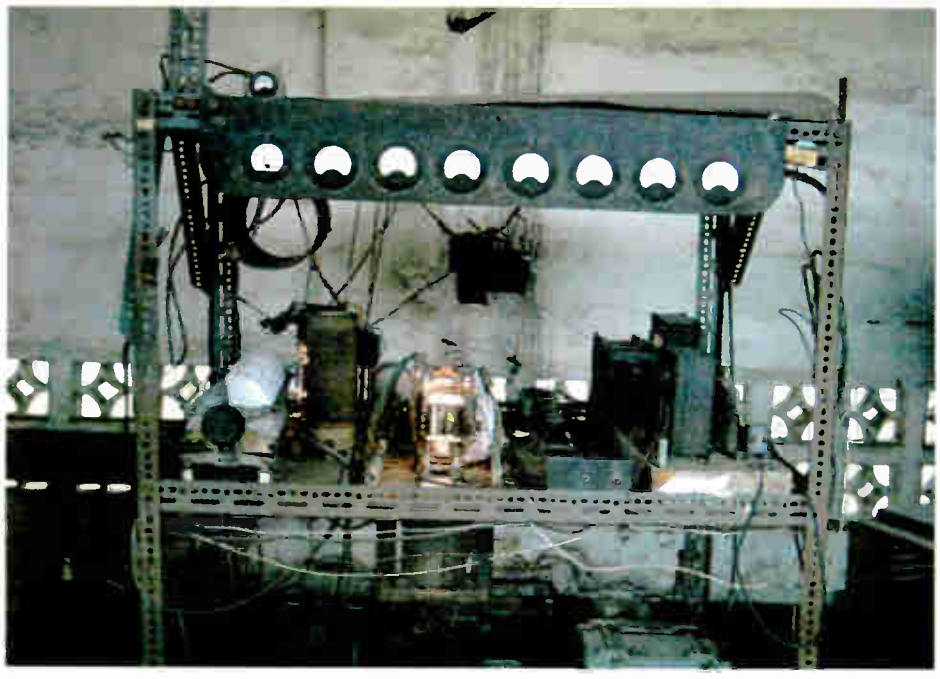


Fig. 1: A home-brew broadcast transmitter in Ecuador.

Fig. 2: A few bulbs, wood and wire make up this home-brew dummy load, used to load-test uninterruptible power suppliers.

Fig. 3: The completed UPS load tester, with UPS and Fluke meter.

Home Brew

▶ Continued from page 10

thank you John for this reminder of our collective humble beginnings.

I'm sure every reader remembers something he or she designed and built. For me, it was an overload indicator panel for an RCA transmitter. Pretty colored incandescent lamps were arranged on a rack panel to indicate specific overload conditions.

I had the fortune to be at the station when the old rig was decommissioned and was given the panel as a souvenir. One look at the solder job I'd done 20 years earlier, and I whisked it away to my car's trunk. I couldn't believe how sloppy. But it worked, and the chief engineer at the time installed it, despite my feeble attempts at soldering.

We all have to start learning somewhere.

★ ★ ★

Home-brew circuits don't have to be fancy, either. Sometimes the simpler the design, the more useful they are.

Sunbury Broadcasting's Harry Bingaman uses the small- and medium-sized Tripp Lite UPS units, like the Internet 500U (a 300 watt unit) for his critical studio and rack equipment. They are small, relatively inexpensive workhorses. For his servers, Harry uses two Tripp Lite Smart Pro 500 rack-mount UPS systems. These handle things well until the emergency gen set comes online.

Current Tripp Lite units can be found at *www.tripplite.com*. Type INTERNET550U, SMART500RT1U or SMART1000RM1U into the Search field.

The smaller units are used in offices. The larger models are rack mount, and can be purchased with a NIC card that comes with free software. This feature permits control and monitoring of the UPS, and on some models, an e-mail warning if problems develop.

As a part of any good backup power system, the UPS batteries need periodic replacement. Harry came up with a home-brew UPS dummy load, which he uses to test each UPS under load. His design scheme is one that will make you smile; it's shown in Fig. 2.

Harry took a piece of lumber and mounted 110 VAC light sockets on it, connecting them in parallel. The sockets are spread far enough apart that the higher wattage 250 W "flood" light bulbs can be screwed into two of the sockets; 100 W bulbs go in the last two sockets.

In his first iteration of this test load, Harry used plain old AC lamp sockets. He improved on the design by choosing the sockets that had an on/off pull chain. This way, he could add "load" by simply pulling the necessary chains to switch the bulbs into the circuit, rather than screwing and unscrewing bulbs — which get pretty hot during use!

As seen in Fig. 3, in addition to the sockets, Harry added an ammeter and some binding posts to connect his Fluke VOM and frequency meters. Harry also added a switch box that will remove AC power without having to pull the plug on the UPS. This makes for simple "power failure" simulations and rounds out the UPS testing before putting the units back on line.

Harry writes that he also made a "Big Bertha" model, using two 650 W tower bulbs with the Mogul bases. He hasn't had the opportunity to test that one yet! As for batteries, Harry's got a local electronic distributor that provides new batteries and recycles the old. For more information, head to *www.moyerelectronics.com*.

Harry also suggests you pick up a package of Quill color coding dots, 3/4 inch in diameter. He uses these to mark the date of battery replacement and purchase invoice number. Stick the dot on the unit, and now you have a visual indication of when the UPS was serviced. It also makes the information handy if you need warranty details for the battery.

Harry Bingaman can be reached at *kc3qhmb@aol.com*.

★ ★ ★

If you're doing UPS maintenance, one more thing to keep in mind, and it only takes a few minutes.

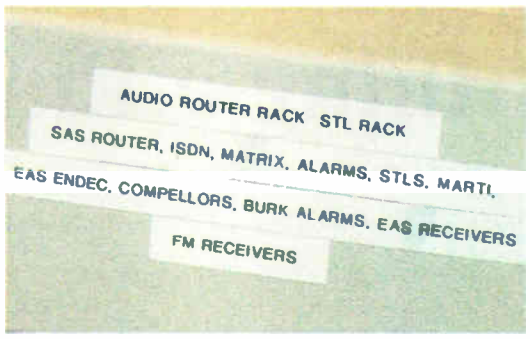


Fig. 4: Easy and smart: Identify the equipment served by your UPS.

Follow the example of the engineers at New Hampshire Public Radio and label the UPS with the equipment it backs up. Seen in Fig. 4, this information can be critical in evaluating the equipment that is fed by a particular UPS.

Labeling even the smaller units can make troubleshooting easier in the panic that can ensue when these devices fail. Michael Saffell is the engineering manager at New Hampshire Public Radio. He can be reached at *msaffell@nhpr.org*.

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

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

TECH TIPS

Give Lightning a Place to Go

Final Steps in Creating Your Facility's Effective Lightning Protection Scheme

by W.C. Alexander

This is the last in a three-part series, archived under Tech Tips at radioworld.com.

The heart of any effective lightning protection scheme is a central ground system.

Such a system is shown in the diagram. Some call this a "star" grounding scheme because of the way all the ground conductors return to a central point or reference ground.

If the transmitter building is located very near the tower, this ground can be the same as that for the tower itself. In many cases, however, there will be some distance between the tower and transmitter building, and in those instances, another array of ground rods should be provided.

All conductors operating at ground potential that enter or leave the transmitter building, including transmission lines, control cable shields and conduits, should be bonded to this ground array.

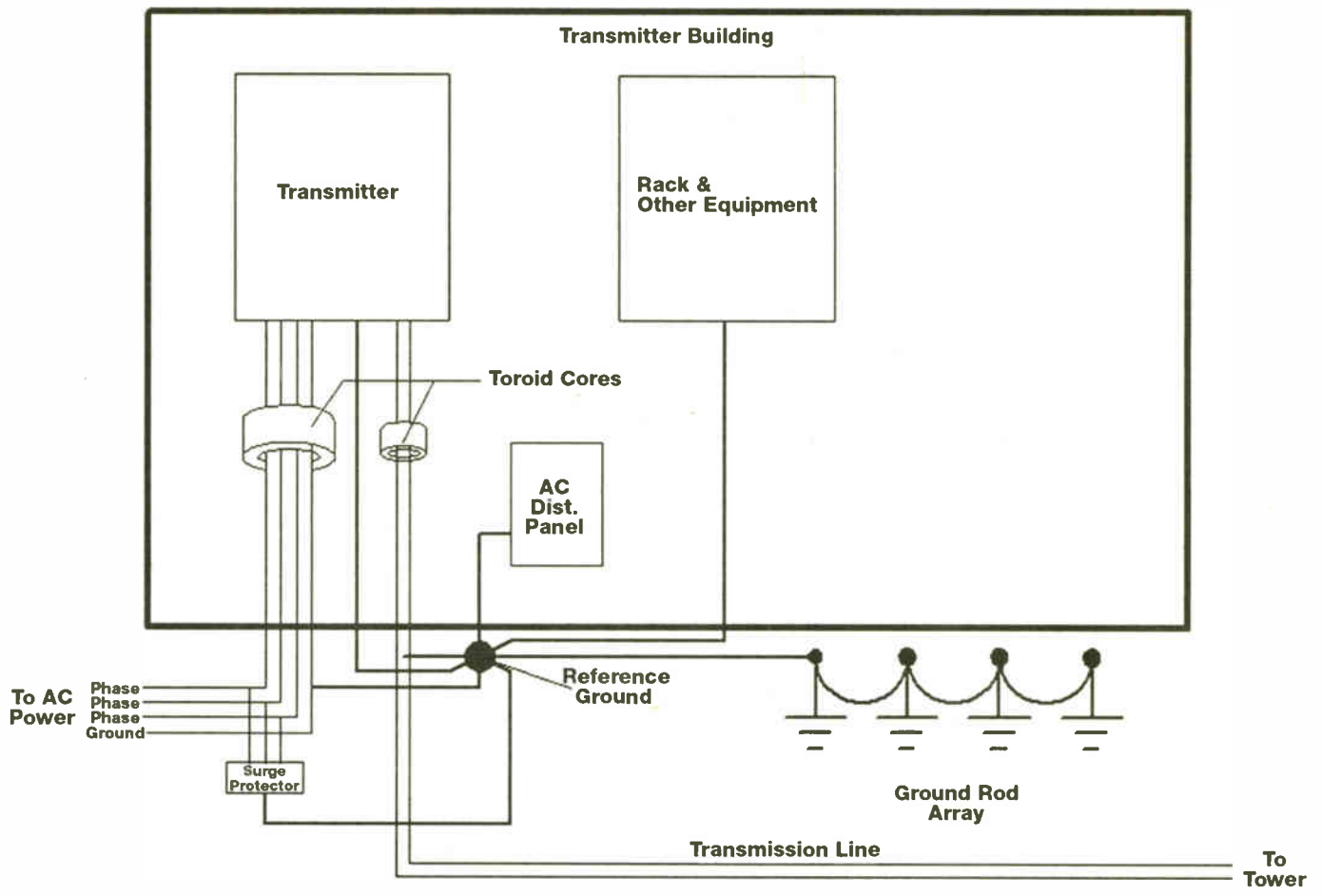
A single conductor from the ground rod array should be brought into the transmitter building via the shortest and straightest route possible. The point where it enters the building becomes the center of the "star," or the point to which everything in the building is grounded. This is called the "station reference ground."

All grounds in the building, including the safety ground of the electrical system (service entrance ground) and the ground conductors from all the equipment and outlets, then connect to this point. The diagram shows a properly designed station grounding scheme.

Protect and defend

Beware of having a separate ground rod connected to the electrical service entrance. Such separate rods are standard practice, but having a separate rod connected can spell trouble as a huge potential can develop between the station reference ground and a separate rod outside the system.

We (unknowingly) made this mistake at one of our FM sites in Michigan a number of years ago. Lightning hit the tower and the lightning current flowed down the rigid transmission line to the main transmitter, then through the transmitter chassis seeking the power company ground.



Proper grounding within a broadcast transmitter installation.

The Continental transmitter had two rows of fuses on the front panel of the power supply cabinet, and every one of those fuse holders was vaporized, leaving only the charred wire ends.

The investigation revealed a defective tower base electrode connection and no connection between the electrical service entrance ground and the station reference ground. Those items were corrected and we have since sustained numerous hits without further significant damage.

If you have a ground strap or terminus of an AM radial ground system coming into the transmitter building from the tower(s), be sure to connect it to the station reference ground.

If there is no such strap coming from the tower(s), you do not specifically need one, but an advantageous location for a transmitter building is often at the end of the ground system at the end of the transverse ground strap. If this is the case, that strap may have been extended to connect inside the building.

When connecting transmitters, racks and other equipment to the reference ground, it is important to do so in such a way that lightning currents will not flow through the equipment cabinets en route to ground.

On a transmitter, for example, make the ground connection as close to the RF output connection as possible. In that way, residual lightning currents coming in on the transmission line outer conductor can flow through the short copper path to the ground conductor and not through the metal of the cabinet.

Remember that such currents create a strong magnetic field that will induce currents into nearby unshielded conductors. By keeping surge currents out of the cabinet steel, this keeps them out of the transmitter's wiring harness as well.

If the site has three-phase power, when it comes to lightning protection, a "wye" secondary on the utility power feed is preferable. This type of connection has several advantages, the most important of which are that every leg is referenced to ground (balanced with respect to ground) and the lower voltage (208) is easier to clamp in surge conditions.

Unless you specify a 208 volt wye, the utility company will probably provide a delta. Worse, they will probably save themselves a transformer and provide an *open* delta, which is terrible from a lightning protection standpoint. Note, 480 volt users will already have a wye con-

See LIGHTNING, page 14 ▶

Omnia 6EXi is:

AND EVERYTHING IN BETWEEN

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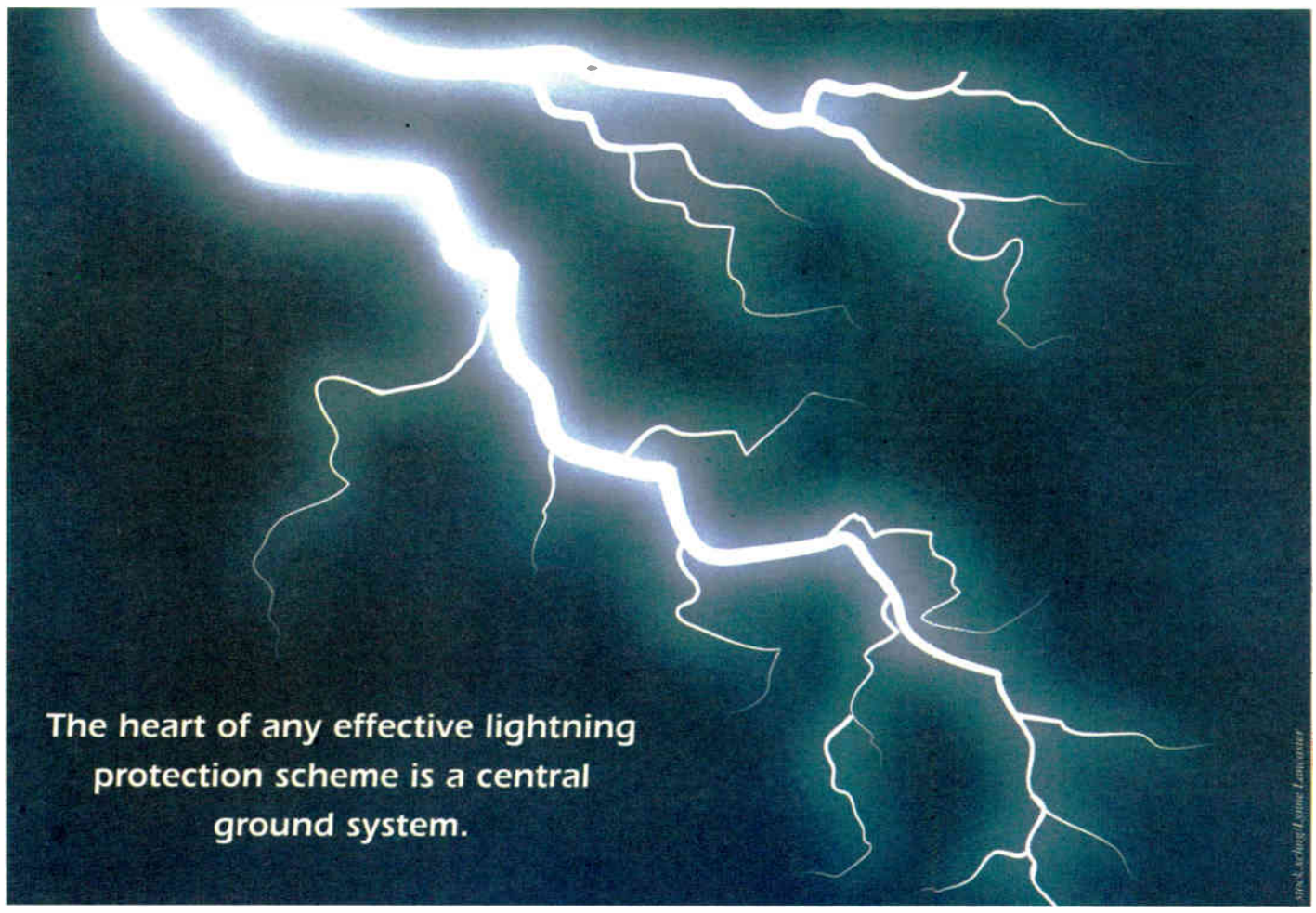
Lightning

▶ Continued from page 12

figuration, so the above won't be a factor.

Most all broadcast transmitters (with the exception of 50 kW AM rigs) will operate just fine on anything over 200 volts, so switching to 208 volts will pose no problems. A change of taps should be all that is required.

Beware, however, of the increase in current. Service conductors and disconnects sized for 240 volt operation may be too small for use at 208 volts. If undersized conductors are not replaced with those of appropriate size, a fire hazard will exist.



The heart of any effective lightning protection scheme is a central ground system.

Suppression

A good surge suppressor is the only way to minimize lightning transients on the incoming utility power. These devices range from inexpensive "kamikaze" devices that work one time and have to be replaced, to very expensive series/shunt devices.

Somewhere in between is an economical device that will adequately protect the equipment at most every broadcast facility without breaking the bank.

The metal-oxide varistor (MOV) is at the heart of most shunt-type surge suppressors. These devices conduct when the potential across them exceeds a threshold voltage. The devices must be rated to carry most of the anticipated lightning current.

This may seem like an impossible specification, but the device only has to carry the current for a very short period of time.

Modern surge suppressors are available with fused MOVs in many voltage ratings that will hold up well under typical lightning surge conditions, clamping the AC line to ground during the surge and thus protecting equipment downstream.

The fuses are designed to act slowly, holding their state for the short duration of the surge but blowing if the MOV becomes shorted as a result of excess current. The affected MOVs and fuses can then be replaced and the effectiveness of the surge suppressor restored.

Be sure to install the surge suppressor downstream of the main fused disconnect at the site. The ground connection from the surge suppressor must connect to the station reference ground. All the conductors to the surge suppressor must be relatively large, as the instantaneous currents that they will be called upon to carry can be substantial.

When it comes to surge suppression, the best policy is to buy all you can afford. If the budget can sustain a $10,000 series-shunt type, this will provide a high degree of protection. If the little "kamikaze" cans are all that the budget will stand, buy and install them.

Any working surge suppression is better than none. In practical terms, the insurance deductibles and premium increases you will save may well pay for one of the more expensive units in just a few years.

Filter

The final step in creating an effective lightning protection scheme is to build a low-pass filter into all your power, control and monitor cables.

This is easily done by placing a toroidal core over the conductors. This effectively forms an RF choke that presents a very high impedance to fast rise-time lightning and lightning-induced energy. Such cores are available from most mail-order electronic parts houses, and they come in a variety of sizes.

One such core should be placed over each of the cables entering a transmitter cabinet or rack. Run all the AC power wires through a single toroid. Pass the remote control cable through a core, and do the same with any small coaxial feeds (RF drive, mod monitor sample, etc.). Finally, for transmission lines up to and including 3-inch, install one or more cores on the cable just above the connector.

Larger, rigid transmission lines should be installed so that they form a "trombone" section, making at least three 90-degree turns before connecting to the transmitter. The 90-degree bends also present a high impedance to lightning and lightning-induced energy.

Elsewhere

The same principles we've discussed can also be applied at studio locations.

If there is an STL tower, make sure it is properly connected to a ground electrode array. Connect all transmission lines to that array where they leave the tower.

Use a "star" grounding scheme in the studio building with all leads returned to the center of that "star." Make certain that the ground return point from anywhere to anywhere does not go through another piece of equipment. Use toroids on all low-voltage wires, and employ as much surge suppression as the situation can afford.

I used to tell people that the only certain way to protect a piece of equipment from lightning is to completely disconnect it from the outside world, including power, antenna, audio, data and control cables, and then put it under the bed where you are sleeping.

The device may still get hit, but then so would you, so it wouldn't matter anymore.

That remains true. It really is impossible to protect anything from lightning completely, but by giving lightning a place to go that is away from our equipment and by making our equipment unattractive to lightning currents, we can eliminate most of the damage.

Cris Alexander is director of engineering for Crawford Broadcasting Company. The Society of Broadcast Engineers named him recipient of its Broadcast Engineer of the Year Award.

The Great Podcasting Debate

Just How Important Is It for the Radio Industry?

Since its origins in 2004, podcasting has come from a leading-edge concept to part of the general media landscape. But opinions still vary widely on its current and future importance.

Looking back, there's one thing that most agree upon, and which this column predicted in the March 16, 2005 issue: The early fascination with podcasts by amateurs has largely given way to the pros, with most audio podcasts today originating from within the traditional radio content industry.

There is good reason for this, but also significant doubt as to whether or how much positive benefit flows to the radio industry as a result. Let's consider both of these factors.

RaDio TiVo

There are several real advantages to podcasts for radio.

First, the content already is produced for broadcast in most cases (that's how these podcasts become popular, since most users have first become aware of the programs over the air), so there is little extra work required.

Thus offering podcasts of existing radio programs maximizes the utility of their production cost by providing an alternate platform by which listeners can access the shows.

The podcast delivery model could be characterized as 'we-pay-you-to-(possibly)-listen.'

Second, podcasting's use of syndication (i.e., subscription) makes them easier to access than some other alternate platforms like standard downloads or Internet radio.

For podcasts, the listener only needs to perform an online access task once, and future episodes of a repeating program series continue to simply show up on their PCs and handhelds until the listener tells them to stop.

Third, podcasts are inherently portable for most users, because they usually are synced automatically between the PC on which they are initially captured and any associated handheld device(s). The latter in turn can be easily set to play into any (non-PC) audio system in the home or office, connected via wire or wireless to automotive sound systems, or used for personal listening via headphones.

So unlike Internet radio, podcasts already reach almost every place that broadcast radio does — plus a few that it doesn't (like the underground portions of a listener's commute, for example).

Consider also that, like all online media, podcasts are inherently personalized, and they allow the listener to select the content, and then pause, rewind and fast-forward it while listening — none of which is yet offered by regular radio, of course. Finally, podcasts often include some textual or graphical metadata, and some even offer segmentation for improved navigation within a long-form program (e.g., moving between songs in a music show, or between stories in a news magazine).

The site Podcasting Station helps visitors find podcast content — here, programming from KPBS.

Perhaps most suspect when it comes to scrutiny of its business model.

Because a downloaded podcast may never actually be *listened* to, yet each download costs the broadcaster some bandwidth expense, the podcast delivery model could be characterized as "we-pay-you-to-(possibly)-listen," which is a far cry from the traditional broadcast approach.

Pod wars

Nevertheless, recent data shows that podcast listening is still a fringe phenomenon, and has not yet broken through to widespread or mainstream usage.

A recent Pew report shows that fewer than one in five Americans has ever downloaded a podcast, and fewer than one in five of *those* users receives one on any given day.

Although these numbers have grown by about 60 percent since a similar study conducted in 2006, respected radio industry analysts like Mark Ramsey and Kurt Hanson remain unimpressed. Hanson feels that podcasting has not lived up to its hype, while Ramsey labels it still a niche element.

Others feel differently, however. A panel at the NAB Radio Show extolled the virtues of podcasting, claiming that it can generate measurable new revenue for the industry. A few success stories on podcast sponsorship and voluntary listener contributions do already exist, mostly within the public radio sector.

There are also those who feel that, like wireless Internet radio, podcasting is yet another way to feed radio content to younger audiences who don't listen much to broadcast radio. In their view, it's therefore too early to tell what the ultimate impact of podcasting will be.

Then there's the compared-to-what analysis, by which those 1-in-5 podcast numbers look pretty good in contrast to HD Radio penetration to date.

The Big Picture

Photo: Gary Hayes, BBC

by Skip Pizzi

New audience measurement technology eventually could improve on the uncertainty-of-listening issue, but overall podcasting's net business impact likely will remain relatively small for some time.

Perhaps the best way for radio broadcasters to use podcasts today is to promote them as a value-add to their most motivated audience sectors, providing a "premium listening experience" (i.e., personalized, interactive, etc.) for their favorite shows. In this respect, podcasts can also be a brand-strengthener for broadcasters, on both the national and local levels.

So for now, podcasting remains but one viable arrow in the broadcaster's growing quiver. Only time will tell how far it flies, and if its aim is true.

See related commentary on page 44.

Skip Pizzi is contributing editor of Radio World.

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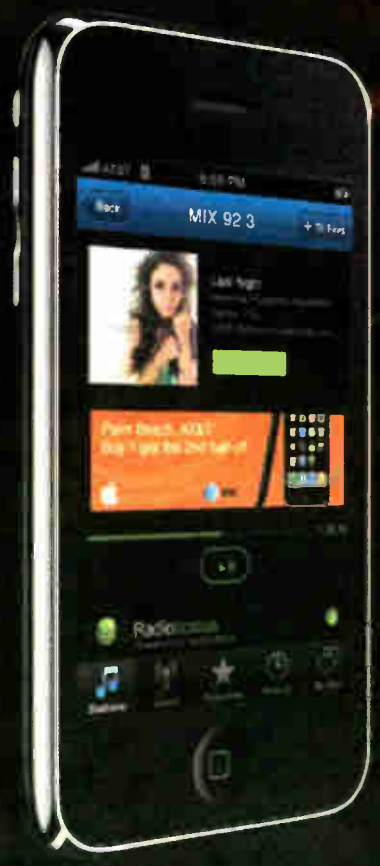

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TECH TIPS

A Clean, Dry Line Is a Happy Line

But Tell Us Something We Didn't Know. Here Are Some Tips for the Real World

by Stephen M. Poole

As I write, the depleted remnants of a tropical storm are finally moving out of the area, leaving behind several inches of rain, some flooding and scattered power outages.

Not nearly as bad as Katrina or Ivan, mind, but we've had non-stop rain for days now. This was the latest event in what has turned out to be a very hot, humid and stormy season.

WYDE(FM)'s main antenna recently had been damaged by lightning. But after replacing the top bay, we were still getting a lot of reflected power, so we had no choice but to take the antenna apart one section at a time.

When the crew got to bay No. 6, they found that the bullets had cooked off, burning the line for several feet in each direction. Molten copper had dripped down into the line below the burnout as well.

Not good. We had no choice but to drop the entire antenna to the ground for a complete cleanout and rebuild.

We ordered Teflon insulators and bullets from ERI — I had some Dielectric inner sections on hand — and got to work.

The biggest problem — once again — was the humidity. Each night we'd store everything in the air-conditioned transmitter building and all that metal would get cold. As soon as we'd move it outside, moisture would condense with a vengeance.

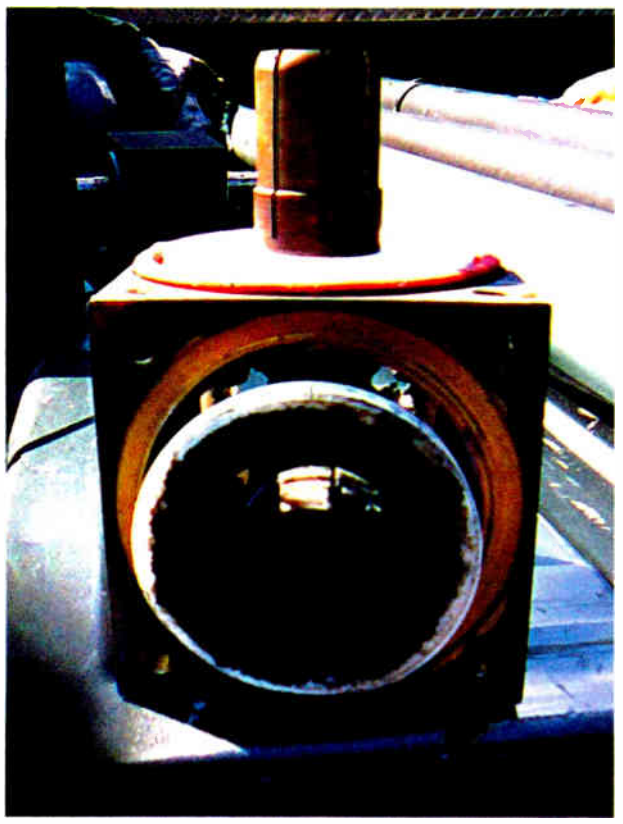


Fig. 1: Burned-out bullet at bay No. 6 in WYDE's antenna.

The Andrew MT-2000 that we use at WYDE(FM) has given me some ideas.

We had water streaming everywhere. When you add in the fact that we were sweating like mad, it was just a glorious thing. We went through several rolls of shop towels and a half gallon of denatured alcohol just keeping everything clean and dry while we reassembled it.

This is something the books and engineering papers don't adequately cover, even though it definitely falls under the heading of "things you need to know as a broadcast engineer." The references just say helpful things like "the inside of the line must be absolutely clean and dry" and "don't get finger oil, grime or sweat on the connectors."

What they don't tell you is how to accomplish this when it's 95 degrees at 85 percent relative humidity! I'd like to share a few tips, most of which come from this most recent experience with WYDE.

A little is too much

Of course, the references are absolutely right: Even a small amount of moisture in an air-dielectric transmission line can cause corrosion, signal losses and arcing.

It's also true that no line is perfectly sealed, especially not as it ages and the seals become less flexible. Then you add the real-world component. One part of a line that's in direct sunlight could be extremely hot (I've measured 180 degrees myself) while 50 feet away, a section that's in shade is much cooler (same case, I measured 80 degrees — a 100 degree difference).

This causes uneven expansion and contraction, exacerbating the problem. Plus, a section that's extremely hot at midday will cool down after dark, so you could have a change of over 100 degrees in a matter of hours, further stressing the line.

To help keep moisture out, the standard practice is to pressurize the line with dry gas; typical values are 3–5 PSIG with a dew point of at least –20 degrees (the lower, the better).

Many engineers just use commercially-bottled nitrogen and a regulator. This has the virtue of simplicity, but it also has drawbacks. You have to pay for regular deliveries and the tanks are bulky and heavy. The worst downside is that if Bubba uses your tower for target practice and punctures a line, that nitrogen will quickly be exhausted. A pump-driven system that uses free air might be able to hold enough positive pressure on that line to keep out the rain until repairs can be started.

You shouldn't just use a stock two-gallon compressor from the local auto parts store to fill a line. The air around us, even in a sealed building with HVAC, will have water vapor in it. Standard HVAC units aren't designed to remove all moisture, because people will complain if the air is too dry. This isn't a problem at the home or office, but that air simply isn't suitable for pressurizing a transmission line.

While an air-conditioned transmitter building will certainly help, you have to take an extra step to make that free air really dry. That's where a dehydrator comes in.

Dehydration

The simplest dehydrator pushes air at relatively low pressure through a desiccant chamber and then into the line. This works fine in many cases, though you do need to monitor the desiccant and replace or recharge it when it becomes moist. Typically, the desiccant (or a window filled with indicating grains) will change color when it's time to service the unit.

Be prepared for when the HVAC fails, too! As Fay swept through our area, the air conditioner died at another station, WXJC(AM). The emergency ventilation kicked on, pulling thousands of cubic feet of warm, moisture-saturated air into the building. WXJC's dehydrator decided to top off the transmission lines right about then ... and the desiccant was fouled in a single fill.

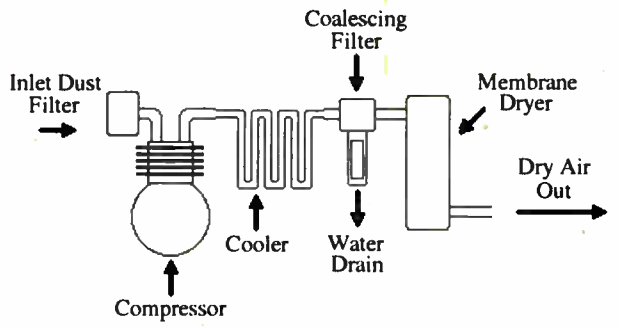
To be safe, especially if you live in a humid climate like ours, you really need to remove as much bulk moisture as possible before the air even gets to the dehydrator.

As it turns out, the Andrew MT-2000 that we use at WYDE(FM) has given me some ideas.

That site has 1,300 feet of 5-inch coax and 1,000 feet of 4-inch rigid line. Even with that industrial-strength dehydrator doing the work, it still takes hours to fill those lines. Fortunately, this thing doesn't use a desiccant chamber; it has a membrane-type dryer. But after looking closely, I realized that the bulk of the moisture removal happens before it gets to the membrane.

Fig. 2 is a simplified diagram that shows how Andrew has combined a trick from industrial pressurization with that membrane to produce 2 SCFM at a dew point of –50 degrees.

Any time you pressurize air, the temperature and the dew point (the temperature at which water vapor condenses) will go up. Most simple desiccant-type dehydrators operate at relatively low pressures, so this isn't an issue with them. But once you get above 30 PSIG (approximately three atmospheres), the rise becomes significant.



Simplified functional diagram of the Andrew MT-2000.

Here's the trick as shown in that diagram. If you cool the hot air from the compressor while maintaining that high pressure, the water vapor condenses into a liquid that can easily be removed with a simple moisture separator or coalescing filter. A large workshop compressor might have a big aftercooler with a fan; the MT-2000 gets by just fine with a simple passive radiator. The coalescing filters do the heavy lifting and the membrane dryer just does the "finish" work, lowering the final output to a dew point of at least –50 degrees.

How effective is this? While I was purging and refilling WYDE's line with our current horrible humidity, the coalescing filters (the MT-2000 actually has two of them, in series) got waterlogged more than once. Had all of that moisture made it to the membrane, it probably would have become fouled.

That gave me some ideas for my other dehydrators that I hope to report on later. Simply putting a coalescing filter in front of a low-pressure pump won't really help, but I'm looking at a way to duplicate this effect with all of our dehydrators here.

Practical purging

When installing a new line, or after repairs to an existing one, you have to rid it of all moisture, dirt and contaminants.

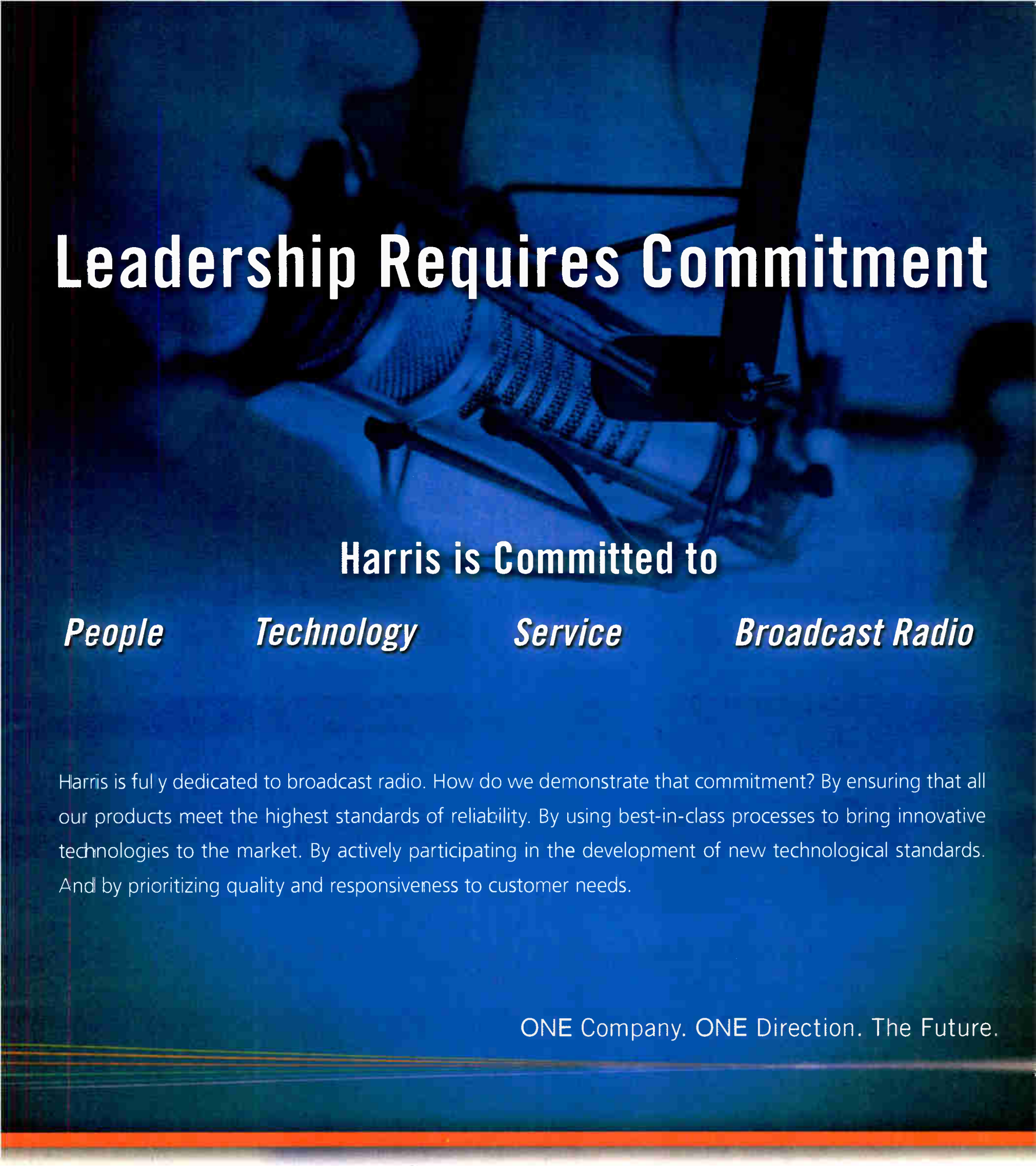
While doing the assembly, use denatured alcohol and plenty of dry rags to wipe all surfaces thoroughly. With rigid line, take one of the inners and make a swab of shop towels; push it through several times. Then wipe the inner. Once you're done and everything has been put together, it's time to do the final purge.

The standard method is to fill the line, drain it, refill it and repeat several times. Jim Coleman of Southern Broadcast Services showed me a better way several years ago (and he says that he, in turn, learned it from an engineer named Dean Shepherd).

He recommends that you vacuum the line. At very low pressure, water boils at room temperature. When you refill the line with clean, dry air, it'll take longer (because you have to add one atmosphere of pressure plus the 3–5 pounds that you normally want), but trust me, this works — especially in the real world here in Alabama, where just popping a line for a minute to check a connector can result in a lot of moisture sneaking in.

You can buy a standard vacuum pump, or you might modify your dehydrator to do this. Go to Lowe's or Home Depot and buy some ball valves and extra fittings so that you can quickly switch your transmission line to the inlet or outlet. But be careful not to leave the pres-

See MOISTURE, page 20 ▶



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What About a Broadcast Consultant?

Areas in Which Your Station Might Benefit; Questions to Ask When Choosing One

by Tom Osenkowsky

Engineering consultants often are called upon to offer their expertise in matters concerning signal coverage improvement, AM directional antenna optimization such as necessitated by IBOC, interference/RFR issue resolution and maximizing vertical real estate potential.

Many times, broadcasters have a facility that fails to cover their desired audience. This usually is due to expansion in previously undeveloped areas. What once were farmlands and landfills have developed into shopping centers and condominium complexes.

Markets as defined by ratings firms dictate the necessity for providing adequate signal outside the original coverage design criteria.

Many AM transmitter sites were chosen 60 or more years ago when the audience was centered in different geographic areas than at present.

Older antenna designs are inefficient compared to today's computer-designed optimized arrays.

Computers and other electronic equipment may diminish reception due to interference. Receivers inside metallic buildings may necessitate a stronger received signal. Increases in the value of antenna site real estate may dictate relocation or sharing a site with other broadcasters.

Techniques such as multiplexing, where two or more stations share the same antenna system, boosters, translators, site moves and optimized antennas are tools that can be used to improve coverage.

Engineering consultants can assist in these scenarios.

... So little time

I asked consultants about the typical questions and concerns they receive from clients.

"This morning's first phone call was from a potential purchaser of a house near a local antenna farm. Last week included a call about lightning protection. An inquiry from an existing client related to a 20-year-old mistake by the FCC in a license grant.

"This morning's first task was an STA application to extend FCC Rules §73.1615 authority for a client's station that is implementing a new DA pattern. This morning's next task will be regarding an impedance match network, and following that, a task to design isolation for a UHF antenna on an AM antenna system."

The range of questions on which a consultant can assist is wide.

A potential homeowner may have questions regarding radiofrequency radiation and/or interference to consumer electronic devices given their proximity to an antenna farm.

A client may be concerned regarding a facility's susceptibility to lightning damage and what measures can be taken to minimize it.

How can a station address an error with the FCC in a license grant that occurred long ago? How can a client get an extension of Special Temporary Authority to operate at variance while an AM directional array is under modification.

What is the proper isolation on a tower to allow an AM station to realize revenue from leasing space to a UHF television broadcaster's antenna? What is the impedance matching network design that will permit optimized bandwidth for the AM station? How can the station design an effective studio-transmitter link, file for it and do the frequency coordination?

Other inquiries concern both AM and FM IBOC installations. What equipment do I need? Which method is best for FM IBOC? Does our antenna system meet the minimum requirements? If not, what steps are needed to make it so? What are the predicted costs?

With increased real estate values for land that was once on the outskirts of town, many AM directional stations find themselves with the opportunity to cash in on the sale of the antenna property. Local zoning rules may make it difficult, or impossible, to relocate towers.

iStockphoto/Chris Fertnig

An important ingredient is rapport with this person, to whom you are entrusting your facility. Also, just as with medical decisions, get a second and even third opinion.

One solution is to diplex, or transmit two or more signals from a single tower (for non-directional) or multiple towers for directional modes. This minimizes the need for real estate while maximizing profit from a land sale. Many such multiplexed systems are in operation.

More popular is the multi-station FM antenna system. In major cities such as New York, Chicago and others, master FM antennas are common due to the limited number of tall buildings or towers.

For IBOC operation, bandwidth is a concern for both AM and FM stations. For directional AM, both impedance and pattern bandwidth are important.

Ask around

How do you choose a consultant? First define your needs as specifically as possible.

If you know another broadcaster who faced a situation similar to yours, contact them and ask which consultant they employed and what their experiences, positive or negative, were.

If such information presents a conflict, the consultant may have filed the FCC application. If so, his/her name would be on the application. This information can be obtained from FCC public records.

Approach several consultants. Ask them how they would treat your needs. Ask for references and their experiences

See CONSULT, page 23 ▶

Moisture

▶ Continued from page 18

sure gauges on your transmission line connected when you vacuum; it'll "suck the needle backwards," which will make the gauge inaccurate at best, and could even destroy it in the worst case. (Speaking from sad experience — you can profit from my dumb mistake.)

How low can you go with the pressure? Jim (and common sense) says that you shouldn't do this with thin-walled waveguide; a hard vacuum will cause it to collapse. But with most any standard 50 ohm coax or hard line, you can vacuum that line as low as your equipment will take it.

As Jim says, let it run until the pump starts growling! If you don't have a vacuum gauge, monitor the output fitting with a moistened finger: when the line is evacuated, no air will be coming out of the pump. Do *not* apply power to the line while it's under vacuum.

You want the pressure as low as possible to get a low boiling point, which will help remove even tiny droplets of moisture that might have lodged in the little nooks and crannies. Once you've drained the line as low as you can get it, wait a few hours for the temperature to stabilize, then refill it with clean, dry air. If you can't get a hard vacuum (or close to it), repeat this process a couple of times.

Stephen M. Poole, CBRE, AMD, CBNT, is with Crawford Broadcasting in Birmingham, Ala., and wrote a version of this article for the company's Local Oscillator newsletter. He is also a frequent contributor to Radio World.

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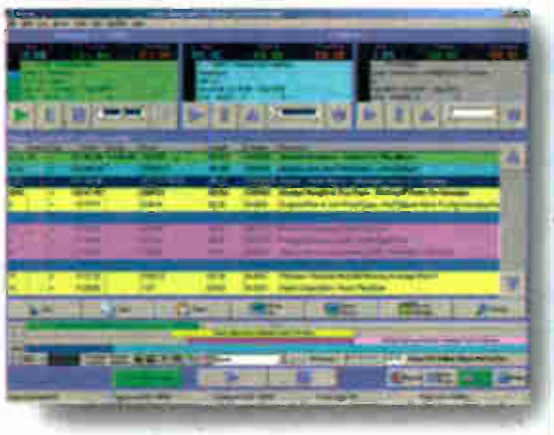
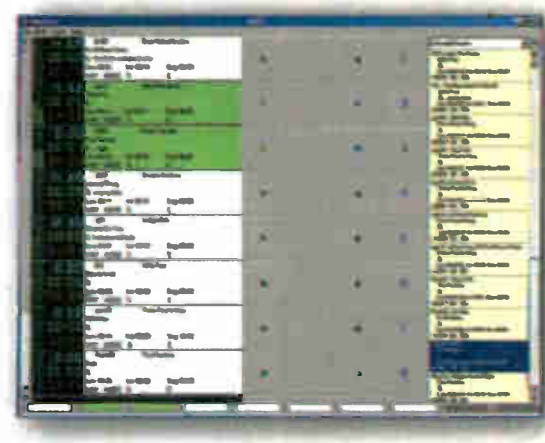


Simian - radio automation and digital playout system.

Instant Audio

Stinger - Instant Access to 288 'rapid-fire' audio files.

Digital Cart Player



WaveCart - the original on-screen cart machine replacement.

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SkimmerPlus - skimming and audio logging with web playback.

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Systems - fully configured with hardware, software and music.

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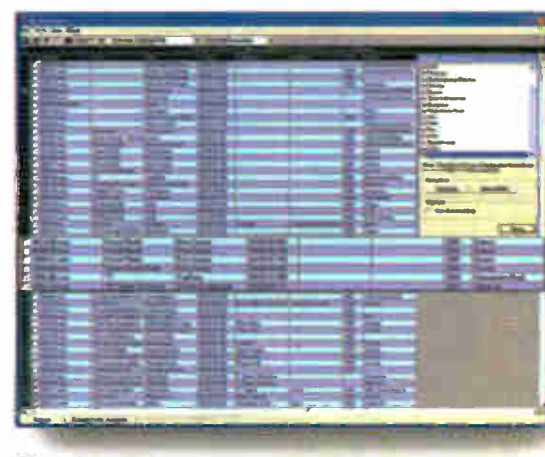
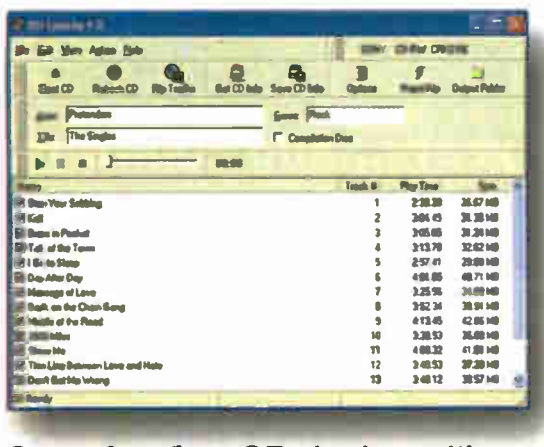


MusicStore - select from over 48,000 ready-to-play songs.

CD Ripping



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Consult

▶ Continued from page 20

in similar situations.

Clarence Beverage, a partner in Communications Technologies Inc., said he hears these questions from clients: "What are your and your firm's particular areas of expertise? Have you done work for any other clients in my geographic area? If so, would you mind if I spoke with one or two? Why do I need FCC legal counsel in addition to your services; can you give me references in this regard?"

I asked one consultant how new clients are treated when they approach the firm.

"When we talk with a potential client we simply tell them what we think we can do for them. It's often useful to describe our work on a previous similar project. If we can't do anything useful or interesting, we tell them so. If we have a conflict of interest we have a (very!) short list of other firms we send them to, usually to a specific engineer who we know is knowledgeable and experienced on the subject at hand."

Relevant information may include the consultant's experience in filing FCC applications, interacting with the commission's engineering staff and equipment manufacturers as well as knowledge of related fields such as aviation, architecture, structural issues, zoning and so forth.

One resource is the Association of Federal Communications Consulting Engineers (AFCCE). Many consultants are members of this organization. Its list is at *www.afcce.org/Members.htm.*

Another is the Society of Broadcast Engineers. Its Web site is *www.sbe.org*. A list of SBE members who offer contract and/or consulting work is at *www.sbe.org/res_eng.php.*

Recommendations from fellow broadcasters, your communications counsel, equipment manufacturers and suppliers should yield ideas to explore.

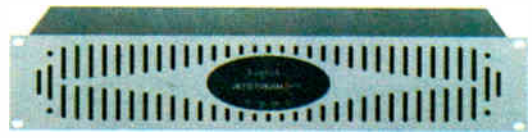
One important ingredient is rapport with the person to whom you entrust your facility. Also, just as with medical decisions, get a second and even third opinion.

In some cases, you may have more than one option. Some consultants may have tools such as software or experience with FCC policies (as opposed to rules) that can aid in your situation.

In one specific case we heard about, it was possible to nearly quadruple an FM station's audience by decreasing power (Class B to B1 change) and relocating the tower inland near the population center. A consultant may be able to assist your facility with upgrades or improvements that increase audience, revenue and worth.

Tom Osenkowsky is a radio engineering consultant based in Brookfield, Conn. He was an associate editor of the Tenth Edition of the NAB Engineering Handbook.

Logitek Moves Into the JetStream



Logitek Electronic Systems has a new routing platform, the JetStream series; first in the line is the JetStream Mini.

"The JetStream represents the next generation of IP-based audio routing systems," said President Tag Borland. The JetStream features a variety of inputs, outputs and controllers. Eight input/output card slots on the backplane can facilitate any combination of analog, digital (AES or S/PDIF) or 48 V microphone preamp. Cards are interfaced with StudioHub+ RJ-45 connectors.

Also available are four control surface interface ports, two USB ports, an external sync interface, a DVI monitor output for use with vScreen and two Gigabit Ethernet ports. Silent operation is facilitated by fanless convection cooling.

One JetStream Mini can talk to four control surfaces. The external sync can control all JetStreams in a network. "Just enter the names of the channels and the JetStream will do everything else. It acquires addresses, advertises its shared channels and makes a list of sources offered by other JetStream units on the network," said Borland.

A single-studio operation with a Remora control surface costs less than $8,000; a networked studio is about $10,000, Borland said.

Separately, Logitek said it has chosen the Radio Systems StudioHub+ system as an input/output form factor.

According to Borland, "The StudioHub+ system has become the wiring standard in radio installations over the past several years."

Info: www.logitekaudio.com.

Can a radio console be over-engineered?

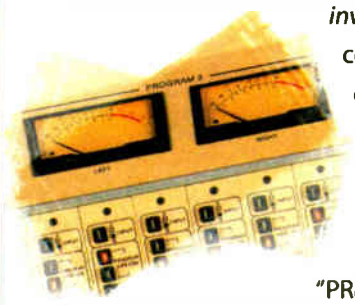
(Only if you think "good enough" really is good enough.)

"OCD" redefined

Building great consoles is more than punching holes in sheet metal and stuffing a few switches in them. Building a great console takes time, brain-power and determination. That's why we've hired brilliant engineers who are certified "OCD": **Obsessive Console Designers,** driven to create the most useful, powerful, hardest-working consoles in the world.

How it began

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



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

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

A new kind of console

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

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

There's a reason these board-ops are smiling. Axia consoles are in more than 1000 studios worldwide.

And we invented a way to network studios, consoles and audio equipment using Ethernet. It's called **Livewire™**, and it's now an industry standard. Livewire carries hundreds of channels of real-time, uncompressed audio plus synchronized control logic and program-associated data on just one skinny CAT-6 cable.

Lots of well-known broadcast software and hardware companies (over two dozen already) now make products that work directly with Livewire. Thanks to this scalable network technology, **integrated router control** is a standard feature of every Element. Any source in any studio can be loaded on any fader with no need for add-on panels.

And Livewire lets you bring computer audio into the air chain without going through multiple A/D/A conversions. Our **IP-Audio Driver** lets you connect computers directly to the network without any intermediate I/O — all that's needed is a CAT-5 cable and your computer's Ethernet port.

Feature packed

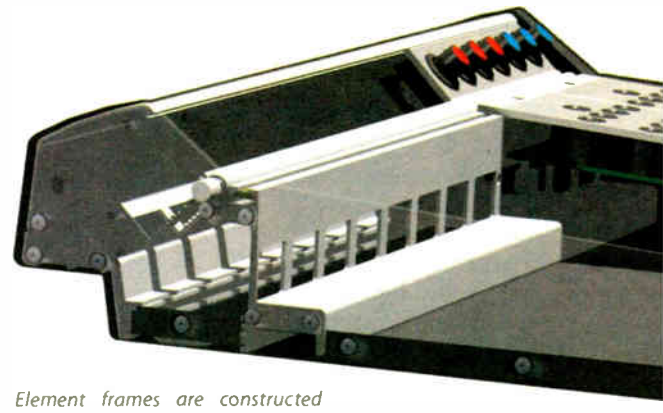
Board-ops told us they wanted a console that's **powerful, yet easy to use.** So we designed Element to be user-friendly, yet still have all the power of a full-on production board.

For example, Element Show Profiles can **recall each operator's favorite settings** with the push of a button — audio sources, fader assignments, monitor settings and more. And each jock's Show Profile contains personalized **Mic Processing** and **Voice EQ** settings that load every time they're on the air (so the midday guy will stop badgering you for "just a little more low end"). There's even a "panic button": one key-press returns a Show Profile to its default state instantly. (No more 3 A.M. "Help!" calls.)

First Axia console prototype. Nice test stand, Catfish.

Did we say "mic processing"? You bet. Every voice channel gets **studio-grade compression, de-essing and expansion** from the processing experts at Omnia, plus three-band parametric EQ to sweeten the deal. There's even built-in **headphone processing** so you don't have to waste money building a separate side-chain just for the studio cans.

Jocks have complained for years that making a mix-minus is too hard — so Element **constructs mix-minuses automatically**. Plus, mix-minus settings are saved for each audio source, so that sources, backfeed and machine logic all load at once. And every fader has a "Talkback" key to **communicate with phone callers**, remote talent or other studios using the console mic.



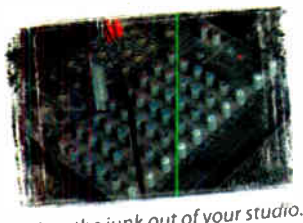
Element frames are constructed from custom aluminum extrusions for maximum rigidity. Module face plates and console side panels are machined fro thick plate aluminum. Even the hand rest is a beefy extrusion. With all th heavy metal, even that ham-handed overnight jock won't be able to dent

Speaking of phones, board-ops have enough distractions without having to reach for an outboard phone control panel. Element has **hybrid controls with dedicated faders** for Telos talkshow systems; there's even a **dial pad** so jocks can dial, pick up, screen and drop calls without ever diverting their attention from the console.

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

The radio console, redefined.

Element was designed to fulfill either a **production or on-air** role, with amazingly powerful features waiting just beneath the intuitive surface. For instance, Element can mix in 5.1 Surround as well as stereo. That's standard; **nothing extra to buy** (except more speakers). There are four stereo Aux Sends and two Aux Returns, so production guys can use their favorite outboard FX boxes. Great for **custom IFB feeds**, too.



Clear the junk out of your studio. Element has 8 submixers built in.

Got a PA mixer tucked away in a studio corner to mix mics for live performers, talk shows and such? Element has **8 Virtual Mixers** — no outboard gear needed. And the Virtual Mixers emulate ACU-1s, allowing tight integration with automation and satellite systems.

You can **administer Element remotely**, from home, the airport — wherever there's network access. A password-protected web server lets you examine the state of the console, see what's on the air and even fix operator mistakes, without ever leaving the comfort of that new Aeron™ desk chair you (ahem) "requisitioned" from the Sales department.

Small VU meters mounted at desk level are hard to read, so we re-invented the traditional meter bridge. Element's **big meters** are presented on an easy-to-read computer monitor along with large analog and digital clocks, event and countdown timers, and tallies that light when mics are open, delay is active, or during phone calls. You can even customize the display by adding your station's logo.

Beneath the surface

There's more to building a great board than just features. **Consoles have to be rugged,** to perform flawlessly 24/7, 365 days-a-year, for years at a time. So when it came time to choose the components that would go into Element, we literally scoured the globe for the absolute best parts — parts that would take the torture that jocks dish out on a daily basis.

First, Element is fabricated from thick, **machined aluminum extrusions** for rigidity and RF immunity. The result: a board that will stand up to nearly anything.

With so many devices in the studio these days, the last thing anyone needs is gear with a noisy cooling fan. That's why Element's **power-supply is fanless,** for perfectly silent in-studio operation.

Element modules are **hot-swappable**, of course, and quickly removable. They connect to the frame via CAT-5, so pulling one is as simple as removing two screws and unplugging an RJ — no motherboard or edge connectors here.

Faders take massive abuse. The ones used in other consoles have a big slot on top that sucks in dirt, crumbs and liquid like the government sucks in taxes. By contrast, our silky-smooth conductive-plastic faders actuate from the side, so **grunge can't get in**. And our rotary controls are high-end optical encoders, rated for more than **five million rotations**. No wipers to clean or wear out — they'll last so long, they'll outlive your mother-in-law (and that's saying something).

Element's **avionics-grade switches** are cut from the same cloth. Our design team was so obsessed with finding the perfect long-life components that they actually built a mechanical "finger" to test switches! Some supposedly "long life" switches failed after just 100,000 activations; when they found the switches used in Element, they shut off the machine after **2 million operations** and declared a winner. (The losers got all-expense-paid vacations to the landfill.)

Individual components are **easy to service**, too. Faders come out after removing just two screws. Switches and rotary volume controls are likewise easy to access. And all lamps are LEDs, so you'll likely never need to replace them.

Engineers have said for years that console finishes don't stand up to day-to-day use. Silk-screened graphics wear off; plastic overlays last longer, but they crack and chip — especially around switches and fader slots, where fingers can easily get cut on the sharp, splintered edges. We decided that we could do better. Element uses high-impact Lexan overlays with color and printing on the back, where it **can't rub off.** And instead of just sticking the Lexan to the top of the module like some folks do, our overlays are **inlaid on the milled aluminum module faces** to keep the edges from cracking and peeling — expensive to make, but worth it. For extra protection, there are **custom bezels** around faders, switches and buttons to guard those edges, too. Element modules will **look great for years.**

By the way, those on/off keys, fader knobs and bezels are our own design, custom-molded to give **positive tactile feedback**. The switch is flush with the bezel, so it's easy to find by touch. But if something gets dropped on it, the bezel keeps the switch from being accidentally activated.

More than just products

Catfish learned something else important from his time at PR&E: "Even the best products are nothing without **great support.**" So Axia employs an amazing network of people to provide the best support possible: Application Engineers with years of experience mapping out radio studios... the most **knowledgeable, friendly** sales people in the biz... Support Engineers who were formerly broadcast engineers. Plus a genius design team, software authors who dream code... one of the **largest R&D teams** in broadcast.

And now Axia has become radio's **first console company to offer 24/7 support**, 365 days a year. Chances are you'll never need that assistance, but if you do, we'll be ready for you. Our 'round-the-clock help line is +1-216-622-0247.

Proudly Over-Engineered

Are Axia consoles over-engineered? **You bet.** If you're looking for a cheap, disposable console, there are plenty out there — but this ain't it. Not everyone appreciates this kind of attention to detail, but if you're one who seeks out and appreciates excellence wherever you may find it... Axia consoles are built **just for you.**

AXIA
A TELOS COMPANY

www.AxiaAudio.com

FIRST PERSON

Classic Gear Hobby Keeps History Alive

Former Engineer Collects Cart Machines and Anything With a Gates Label on It

by Bill Kauffman

With almost a half-century in the broadcasting business, I collect antique radio equipment and refurbish it to resell or collect for myself. My favorite trolling ground for the Gates Yard consoles and cart machines that fill my two studios: eBay. But first a little background.

The year: 1961. I was 14 when I won a guest announcer contest at WEZN(AM) 1600, a 500 watt two-tower DAD in Elizabethtown, Pa. The prize: A gateway for a summer job at this local radio outlet.

Bootleg radio

This was not the first time I had an interest in a radio station. My brother Ross, chief engineer at a local television station, and I had our own bootleg radio station in the garage at home. On occasion, Ross also would let me, his budding broadcaster prodigy, run the Saturday morning programming at the TV station.

For me, the prize from the 1961 contest was the introduction to small-market radio and its equipment: a well-used second-hand RCA 500L transmitter, an Ampex 600 reel-to-reel recorder, a Crown recorder, two Gates 16-inch turntables, one Gates StaLevel leveling amplifier and a Gates "The Yard" console. Plus, it was the start of my (so far) 47-year career in radio and television broadcasting, and my love affair with the Gates Yard.

Three years later in 1964, as a student at DeVry Technical Institute, I received my first phone radio license and with it, my first big job on the air at a major-market radio station in Chicago.

Almost-underground radio — the author at a very early gig, WMHS.

I loved it the first time I gave the station ID: "This is FM for everyone, WCLM Chicago at 101.9, broadcasting from the site of Ft. Dearborn, the 333 building on Michigan Ave., with a power of 60,000 watts and serving you 24 hours a day."

This great announcing job paid $1.75 an hour. My boss was Burt Burdeen, now a professor at Columbia College in Chicago. He taught this young cuss proper announcing skills, and believe me, Burt was a very patient man. A seasoned announcer, Burt did the announcing tracks on most of the programming. These programs were played back on a Magnecorder reel-to-reel.

Author in His Milieu

The facilities might improve but the job is the same: at WHP in the mid-1970s.

Some of the WCLM programming included "Showtime on Broadway," "Frank Sinatra Sings," "Coffee Concert" and the show "Meet the Dawn."

"Meet the Dawn" was my show. Remember in 1964, I was in a major market, but FM was still just the little sister of AM radio. Everyone in those days would listen to WLS, WCFL, WMAQ, WIND, WJJD or WGN.

Although the little sister of AM, WCLM had a great array of equipment: Rek-O-Kut turntables, Ampex 350 reel-to-reels, a Raytheon console, eight Collins tube-type PB190 cart machines and the Gates ST-101, the tape deck with the (almost) foot-wide tape. The transmitter was a modified GE Phasitron with the 10 kW power amp.

Ahead of its time, WCLM also broadcast background music on two subchannels, 41.5 kHz and 67 kHz. The music was provided by Seeburg jukeboxes.

In my mind, I had hit the big time. I worked across the street from the great WLS.

Over the next decade, I worked a variety of small-town AM stations in Pennsylvania: WCMB, WCOY, WHAT

See GATES, page 28 ▶

Stop memorizing audio formats, you've got better things to do.

Portable Reporter Codec

Extremely small & light, the Sporty Portable Reporter Codec can transmit from anywhere, to anywhere, while simultaneously recording to USB sticks or SD cards. Sporty is a robust, portable 4 channel studio with the most modern MPEG-4 HE AACv2 and AAC ELD audio formats: providing "High Quality" & "Low Latency" at the touch of one button with high capacity battery life.

Thanks to MAYAH's unique FlashCast™ technology and full support of the EBU Audio-over-IP standard, Sporty is able to automatically connect to almost any audio codec. Ideal for situations where the destination codec is unknown.

While offering both, traditional POTS and ISDN, Sporty also opens the way to a whole new world of network connectivity by adding WLAN, UMTS/3G and Ethernet. Now you really can transmit your reports home from almost anywhere in the world!
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MAYAH COMMUNICATIONS

Gates

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and WLAN. Then, while in the Navy during the Vietnam era, I worked at WMOG, Brunswick, Ga., and, while stationed in Charleston, S.C., was one of the emcees during the "Navy Hour" every Saturday night on WCSC.

In 1971, I received my big break, the afternoon drive slot on WHP(AM) radio, the CBS radio affiliate and major powerhouse, in Harrisburg, Pa. This station owned the best equipment, the best signal and something I never had before: an audience! I was in heaven. Gates cart machines, Gates turntables and an RCA BC-7 audio board. At WHP, I ran the last Arthur Godfrey show — live.

Five years later, in 1976, WHP moved from the downtown Harrisburg high-rise offices to a completely new, dedicated broadcast facility featuring five fully-loaded studios. The main air studio used a Collins 1C-10 console, and those aforementioned Gates turntables made the move with as well.

A True Golden Oldie: Rek-O-Kut Turntable

Going one, going twice

I discovered eBay in 2005 as my best place to buy Gates broadcast equipment, and another great favorite of mine, cart machines of any kind.

I search sites two times each day, and the rotation goes like this: Spotmaster, Tapecaster, Fidelipac, Audiopak, Gates Radio, Gates Broadcast, Harris Broadcast, Gates Yard, Gates Producer, Collins Broadcast, RCA Broadcast, Ampex 600 or Ampex 620.

I also bid on the manuals for all the gear. My method of bidding might be against the norm. If I want something, I bid the most I am willing to pay first. From that moment on, I watch the bids and see if I win it or not. I do not add any more bids.

Also, to get one cart machine that works, I need at least three machines in various states of disrepair. Some are so bad, I categorize them as "parts only" machines. In my garage, you will find at least 55 cart machines. My favorites are the Collins PB150 and Collins PB190s because they are tubes. My training at DeVry was in vacuum tubes. Plus, these are some of the oldest cart machines made dating to 1959, so they tell me. My score on these is three good out of seven machines.

In addition, most Gates Yards usually come without the power supply amp, so I need to throw a b+ power supply together.

Kauffman's Prized Wall of Stuff

Once I got lucky; one of my Yards came with everything. However, the regulator part of the power supply did not work. In this case, I bypassed the regulator and added a buffer resistor and extra capacitance. Most Gates Yards have eight attenuators for mixing audio. The first version had six mixable; this was the one I first used in the summer of 1961 at WEZN.

Some of the Yards use 6267 tubes in the preamps, some 5879 tubes elsewhere. Most of the program amps need some renewed solder joints on the program and preamp modules due to hairline cracks in the phenolic board. The work is worth it for that great tube sound.

The Kauffman basement, aka Studio A, the entryway of which proclaims 1964 on the door, houses three stacked Yards with an assortment of cart machines. Across the room, in Studio B, you'll find the Harris 5 mono console with Spotmaster, IT, Sparta and BE cart machines. In another portion of Studio B there is a Rek-O-Kut turntable to put 45s onto carts.

The studios do get used. I do some voiceover work for local merchants who are clients of my wife Barbara's PR firm. Also, I do DJ events that take the audience back to a day, say in 1964, and do an hour show just for friends and family that includes newscasts and the Top 40 music from that day.

Every now an then, I get asked to do DJ "record hops" for charity along the same lines. When I perform, I take a Gates Yard, five cart machines and 400 Fidelipacs to put on a show most people can't believe when they see it. Plus it takes most of the day to set up. I do enjoy the setup and sharing my eBay finds as much as, I hope, the audience loves looking at the old equipment.

For those of us who made our living in small-market radio, it was the time of our life. I believe our communities were better for it. Having the equipment to return to those wonderful days is like traveling in a time machine. For me, it is a labor of love.

Retired radio announcer Bill Kauffman is the certified television operator at an NBC affiliate in the 46th market. He can be reached at wkauff111@aol.com.

PRODUCT GUIDE

ADAM Monitors for Multimedia Applications

German international monitor manufacturer ADAM Audio is now shipping its A5 Powered Monitor into the U.S. market.

The small A5 is designed for use in multimedia applications and would be suitable for desktop workstation, small production room and editing bay use.

The A5 is biamplified with dual 25 W amplifiers. The 5-inch woofer is made of carbon fiber in a Rohacell sandwich. The tweeter is ADAM's Accelerated Ribbon Technology ribbon device. A metal grille protects the woofer.

Rear-panel connectors are XLR and RCA.

A new feature called Stereolink allows the A5 to control the volume of other speakers to which it is connected. The A5 comes in a matte black or white finishes but offers an optional piano black finish.

For more information, contact ADAM Audio USA at (818) 991-3800, or visit www.adam-audio.com.

PRODUCT EVALUATION

Quickie 'Codec' on the Cheap

The Cellphone IFB is a Handy Tool for TV and Doubles as an Instant Codec for Radio

by Paul Kaminski

The Cellphone IFB from Active Media was designed for television reporters doing live remotes. The unit acts as a headset with a mute switch. In practice, the TV reporter would call into the studio's IFB (interruptible foldback mix of program and cues) line, insert an earpiece into the unit and can hear cues while reporting on the air live. A lavalier microphone plugs into the unit for talkback, if needed. The reporter flips a switch to talk. The Cellphone IFB unit plugs into the headset jack or proprietary input adapter of a cell phone for the feed back to the studio.

The unit comes with a microphone cord using TA5F connectors (which look like tiny XLR plugs) to plug into the body of the Cellphone IFB unit.

The Cellphone IFB weighs well less than 8 ounces with battery. It is powered by a 9 volt battery (alkaline or lithium cells will work). I used one 9 volt battery for all of the on-air cellphone work I did at Daytona Speedweeks 2008.

Broadcast use

Many Radio World readers (including me) have schlepped their share of remote mixers, microphones, cords and other ancillary gear to impromptu remotes. That schlepping gets especially complicated and heavy if the talent enjoys working the crowd while broadcasting (additional cabling required for instance).

The radio news application is obvious; it morphs into the radio remote application. The user can substitute a handheld XLR-connected microphone. I used both a Shure SM63 and Audio-Technica AT897 to substitute for the lavalier microphone when I tested the unit.

The set up is simple: Connect the microphone to the unit's microphone jack. Turn on the Cellphone IFB and plug the output cable (2.5 mm TRS headset plug) into the cellphone or its headset adapter. Plug in an In-Ear Clarifier or Telex Earset ear piece (used by TV crews and others like police, Secret Service, etc.). Flick the switch on the Cellphone IFB to the talk position, then dial the call to the studio. Once the connection is made, the user can hear the studio end, and can mute the send end (if in a noisy environment, like a NASCAR Sprint Cup Series Victory Lane) before the user needs to take the air or is recorded.

In use I found that the Cellphone IFB gave plenty of gain to a Telex Earset, and the AT897/SM63 microphones on

See CELLPHONE, page 31 ▶

A Typical Cellphone IFB Configuration. The microphone and earpiece are not part of the retail package.

Product Capsule:

Active Media Cellphone IFB

Thumbs Up

- ✓ Compact package, clips to belt, straps, weighs next to nothing
- ✓ Plenty of gain to cut through background sound
- ✓ TA5F connector for microphone prevents accidental disconnect issue

Thumbs Down

- ✓ Volume knob can be inadvertently turned, discharging battery if not clipped to belt

PRICE: $450

CONTACT: *Active Media at (250) 213-1840 or visit* www.cellphoneifb.com

FACILITY PROFILE

Renovations Bring Smiles to WAWZ Crew

It Was A Hairy Six Weeks and We Got Dirty, But the Air Staff Couldn't Be Happier

by Curt Yengst

WAWZ(FM) in Zarephath, N.J., "Star 99.1," originally went on the air as WAWZ(AM) in 1931, the flagship station of the Pillar of Fire Radio Network, owned by Pillar of Fire International.

Back then, as with all radio programming, it was "seat-of-your-pants" live radio, featuring preaching, live music and church services broadcast from the adjoining chapel.

In 1954, Pillar of Fire obtained a license to broadcast on the new FM band. In 1984, the AM station went dark and the AM license was sold.

The WAWZ Studio Circa 1972

A recent 'before' photo of the same studio shows a few changes.

Today, WAWZ continues to broadcast 24/7 to most of New Jersey, New York City and eastern Pennsylvania. The format has since changed from preaching and teaching to contemporary Christian music. But with the advent of HD Radio multicasting, we now provide "Teach and Talk" programs on WAWZ-HD2 and a blend of Christian rock, pop and hip-hop on WAWZ-HD3, a.k.a. The Energy.

Up until April 2008, we were still operating out of the same control room, which was built in the early 1970s and looked the part. It was a cramped 7-by-12-foot room with space for an operator and maybe one guest.

This made doing a morning show with four personalities, plus any guests, uncomfortable at best.

Additionally, the facilities simply weren't designed to accommodate state-of-the-art broadcasting tools, and it became obvious that something had to be done.

Ideas were bandied about for the better part of two years and a design for a new main studio was agreed upon by the end of 2007. There was just one problem: Where would we broadcast from in the meantime?

Another problem the station faced is its location in one of New Jersey's flood zones. While we don't see post-Hurricane Katrina-style flooding (at least not since Floyd in 1999), the odd Nor'easter or just a week of solid rain can leave us with no access to our studios.

Last year, it was decided to address this issue by building an emergency studio at our transmitter site, located about 600 feet above sea level in nearby Martinsville. It has everything our main studio has, just scaled down a bit. We lovingly refer to the small, windowless concrete room as "The Bunker."

Not only would The Bunker serve to keep us on the air in the event of an emergency, it also would be our main studio while the real main studio was undergoing reconstruction.

Tear down this wall

Demolition on the main studio began on March 18.

Chief Engineer Ron Habegger and I began unplugging equipment and cutting and backpulling cables, many of which had been abandoned in place decades earlier. It was part demolition, part archaeology, trying to remember what was connected to what — and why.

Then came the task of removing the old furniture, which was built to last long after those who installed it had passed on. We had to remove a wall to expand the room into the adjoining hallway, adding many more square feet to the room. There was drywalling, electrical work, HVAC and carpeting to be done.

The new furniture was provided by Designcraft USA of Grand Rapids, Mich. They did a wonderful job of taking the dimensions and layout of a room that did not yet exist and creating beautiful and solidly built cabinetry that was easy to assemble.

The nesw studio was conceived from the get-go as a digital studio. We wanted

See WAWZ, page 32 ▶

New Designcraft USA-built studio furniture waiting to be installed.

New ceiling, paint, lights make a big difference.

The author, seated, and Chief Engineer Ron Habegger enjoy the new digs.

Cellphone

▶ Continued from page 29

the send end. The audio fidelity would not please an audio purist, but for the kind of ad hoc work done over cell phones, it makes a noticeable difference, and uses every bit of the 300 Hz – 3 kHz audio band.

If the user's cellphone does not need a headset adapter, both units can be clipped to the belt and the user can roam with one hand free. My Nokia 6103 cellphone has a proprietary headset adapter, so I had to hold the phone in one hand, and the microphone in the other. This posed no problem. So this means that the talent who likes to work the crowd can broadcast among the crowd, and not be tethered to a mixer. The Cellphone IFB lets the user do an interview without having to pass the phone back and forth between the interviewer and interviewee. Everything necessary for an impromptu broadcast can be fit into a fanny pack.

The Cellphone IFB lets the user do an interview without having to pass the phone back and forth between the interviewer and interviewee.

Some glitches: One was a dodgy microphone cable that caused the signal to cut in and out. But a quick call to Active Media, and another was on its way. (Ed. note: Active Media now ships the Cellphone IFB with a stronger cable.) The other involved the plastic collar on the knob that adjusts receive levels. During use and transport, the plastic collar cracked off the metal base (it might have been overtightened originally); that had no effect on the operation on the unit. The knob also turns on the unit and may, if put in a fanny pack, turn on and discharge the battery.

A caveat: The unit is designed for the Telex/In-Ear Clarifier 1/8-inch plugs and receivers. Those professional headsets cost somewhat more but last longer than the inexpensive Walkman/iPod style headphones you see almost everywhere.

I have Telex receivers, connector cords and eartubes that I've used off and on for some 20 years, and they still work and take up hardly any space in my remote kit. All one needs to do is replace silicone eartips on the eartubes or earmolds from time to time. It's a question of whether one likes to buy something inexpensive and replace it more frequently, or buy something once, and not have to replace it as often.

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

PRODUCT GUIDE

Sound Devices Ships 788T Eight-Track Recorder

At eight tracks, the Sound Devices 788T is a little big for the ENG crew, but broadcasters and independent program producers with large ambitions might want to take a look.

A 160 GB onboard hard disk is the media heart of this multichannel recorder but additional storage can be had through a CompactFlash card port or FireWire port. Windows and Mac computers will recognize (and use) the 788T as a standard storage volume.

Performance specs include 24-bit and 32 kHz – 48.048 kHz sample rates. File format is BWF.

Standard features include 48 V phantom power, adjustable high-pass filters, peak limiters and word clock. Each channel has a level control and an LED meter.

Not surprisingly, the 788T has a number of features that video and film sound engineers use, such as a timecode generator, tone generator, NTSC/PAL synching and mini XLR (TA3) connectors. Portability is enhanced through Li-ion batteries.

Though it packs a lot of features the 788T is approximately the size of a hardback novel and its stainless steel and aluminum case weighs less than four pounds.

For more information, contact Sound Devices at (800) 505-0625 or visit www.sounddevices.com.

WAWZ

▶ Continued from page 30

as many audio paths as possible to be completely digital — from hard disk to transmitter. The Wheatstone D-75 console helped us get there. This modular console offered us a ton of flexibility, with each input configurable as either analog or digital. Yes, we still have a few analog sources.

We had installed a smaller version of the same console at The Bunker, using all analog inputs. It offered a myriad of other options as well, eliminating untold feet of now unnecessary wiring running from room-to-room.

Our mic channels are fed by a group of Aphex 230 vocal processors with digital outputs. Our Broadcast Electronics AudioVault automation system feeds the console via Digigram's miXart 8 AES cards. From the console, the signal travels digitally to our Moseley StarLink STL to our transmitter site, where it is processed and fed digitally to the Broadcast Electronics FMi 1405 transmitter. The difference in our on-air signal was immediately apparent. We've never sounded this clean before. No longer is our audio going through half a dozen A/D and D/A conversions and sounding like mud when it gets there.

The Down-Under View of All the New Goodies

The Pride and Joy: WAWZ's New Console

With a few strategically placed rigid fiberglass panels and other accoutrements, on May 1, the new broadcast studio for Star 99.1 made its debut.

It was a pretty hairy six weeks, and Ron and I got the dirtiest we've been in a long time; but there were zero injuries and the on-air staff couldn't be happier.

Morning show host and Program Director Johnny Stone says he still gets excited walking into the room every morning, and our Station Manager Scott Taylor has recently hinted at wanting his own air shift again. We look forward to many years of service from this new studio.

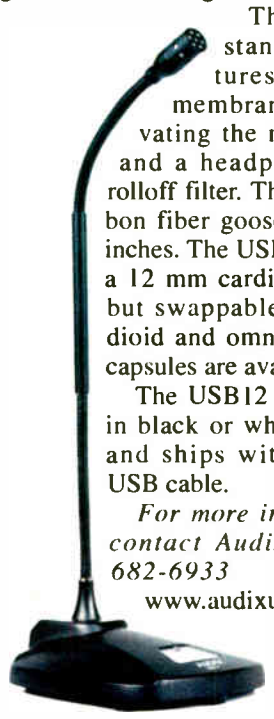
Curt Yengst, CSRE, is the assistant engineer for WAWZ(FM).

Got a new studio story to tell? Let us know at radioworld@nbmedia.com.

PRODUCT GUIDE

Audix Debuts Gooseneck USB Microphone

Microphone-maker Audix is taking a slightly different approach as it joins the USB microphone crowd. Taking a cue from the contractor/installation market, Audix's USB12 has its own gooseneck and integrated stand.



The metal stand also features a control membrane for activating the microphone and a headphone jack. rolloff filter. The quiet carbon fiber gooseneck is 12 inches. The USB ships with a 12 mm cardioid capsule but swappable hypercardioid and omnidirectional capsules are available.

The USB12 is available in black or white finishes and ships with a 6-foot USB cable.

For more information, contact Audix at (503) 682-6933 or visit www.audixusa.com.

GM Journal

Radio World | Resource for Business, Programming & Sales | October 8, 2008

Not Easily Impressed?
Page 40

Rural Radio: Where Farmers Come First

Agribusiness Broadcaster Also Senses the Importance of the Internet to Its Future

by Ken Deutsch

You might not know much about soybeans, heifers or pork bellies. But these topics are vital to the farmers of Nebraska.

Eric Brown and his group of radio stations specifically target people with an interest in agribusiness in that state, a $10 billion industry.

Brown's father Max started KRVN(AM), Lexington in 1951, in part because of the blizzards of late 1948 and early 1949. Area farmers were unable to get timely weather information, and as a result, human lives and livestock were lost. Max Brown believed that better communication in this thinly populated area was essential.

Eric Brown became station manager in 1979. Since that time he has added an FM and four other stations across the state. All provide information and a sense of community to his farming audience.

"We have a niche," he said. "It's old-fashioned, full-service radio. But we have updated it by having Web sites that get up to a million page views each month. The population of Nebraska is pretty small, so the Internet is a great equalizer for rural people. They can access our information and make purchases without having to drive long distances."

Brown believes that in time, his Internet billing will equal his traditional revenue.

"You have to realize that out here people are not listening in 75-story office buildings," he said. "They're in these small communities listening on farms and in their pick-ups. The Internet is so important to us that we launched a service that builds customized Web sites for our advertisers. We are in the information business, not just the radio business."

> People are not listening in 75-story office buildings. They're in these small communities listening on farms and in their pick-ups.
>
> — Eric Brown

The station's Web site, *www.krvn.com*, offers more than the expected market reports, weather and news. There are podcasts of interviews and features, opportunities for people to buy and sell equipment, school lunch menus, guided trips and tours that listeners can take around the state and elsewhere, funeral announcements, photos of state fairs and tailgate parties, local sports calendars and more.

Ads on this Web site are not "giveaways" for advertisers as they are on some stations. Fixed positions on the site are sold at a premium.

Reaching out, touching you

There are 30 full-time and eight part-time employees at KRVN(AM/FM), which is a high level of staffing by anyone's standards. This includes a couple of 26-year-old computer gurus whose identities Brown wants kept under wraps.

"It's like they're in the KRVN witness protection program," he said. "They are very good at what they do and we don't want to lose them."

In addition to KRVN and its FM, "River 93," station engineers also service KNEB(AM/FM), Scottsbluff, 200 miles west of Lexington; and KTIC(AM)/KWPN(FM), West Point, 200 miles to the east. All are owned by Nebraska Rural Radio Association (NRRA). But this is not your typical group owner. NRRA comprises 4,200 farmers and ranchers with a nine-person board of directors. Brown serves as secretary treasurer.

"Our owners give us input by e-mail and letters or occasionally they'll pick up the phone if there is something important to talk about," said Brown. "We hold focus groups with young farmers and conduct audience research using a Sioux Falls company called Ag Media

See RURAL, page 34 ▶

Eric Brown. He is standing next to the statue 'Breaking News,' which noted KRVN's 50th anniversary in 2001 and is 'dedicated to the farm and ranch families who tune their radios to KRVN, KNEB and KTIC for weather, markets, agricultural news and entertainment.'

Rural

▶ Continued from page 33

Research. We are really in touch with the farming community all over the state."

In 2005, Brown helped set up Rural Lifestyle Marketing LLC, a loose confederation of stations across the upper Midwest, and he serves as president. The purpose of the group is to band together to sell advertising to clients who wish to reach the agribusiness market.

A bit of history

In 2001, Eric Brown's flagship station marked a half century of broadcasting with the publication of a commemorative paperback, "KRVN: The First 50 Years of Service to Agriculture," by Max, Eric and Ruth Brown. Ruth is married to Eric and is an associate professor of communications at the University of Nebraska at Kearney.

The book is rich with that sense of history. For example, the station was initially capitalized with $50,000, collected from almost 5,000 people at $10 each. By its charter, profits from the station cannot revert to the owners. They are to be used first for better radio facilities and programming, and secondly for agricultural education, rural youth and the College of Agriculture.

Other highlights from the book: KRVN signed on as a day-timer at 1010 on the dial. In 1972 it received FCC approval to kick up its power to 50,000 watts and switch to 880 kHz. Live music filled a big part of the broadcast day with the likes of Dick "Noodle Soup" Klasi and his accordion, Doc and Esther Embree on guitar and piano and Polka Paul and his Band. Other colorful entertainers on the KRVN airwaves included Walt Shrum and the Westernaires, Harry Evans and the Rhythm Wranglers and Jack Lloyd and the Happy Tones. There are archival photos of remote broadcasts from the Omaha Grain Exchange and other local spots of importance.

The book is available through the station, and while much has changed since 1951, the hallmarks of KRVN remain constant: agricultural news and more accurate weather for the farmers.

In 2008, it is hard to find and train good employees, but it is even more difficult to find new blood in one of the most sparsely populated states of the union.

"It's a constant search process," said Brown. "We want people who enjoy a rural lifestyle with good schools, clean air and a nice environment for families. We pay pretty well, but I think our benefits package is far better than most of the stations in the Midwest. It includes a defined benefit retirement plan and an optional 401(k) plan, items only about 10 percent of the businesses in the country have anymore."

Brown is taking steps in other directions as well.

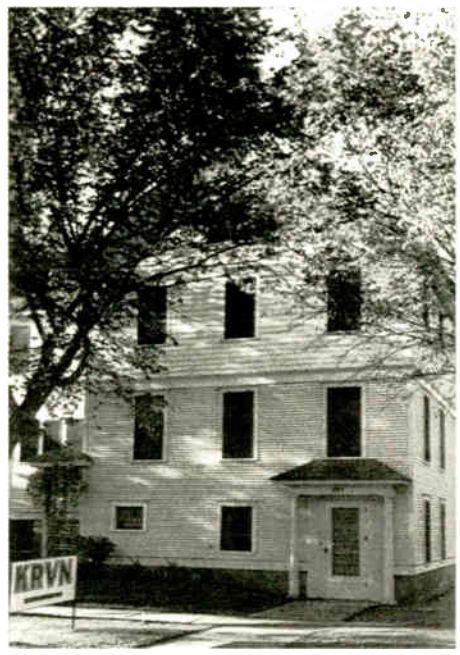
"I was just elected to the board of the National Association of Broadcasters," he said. "And we in Nebraska lobby our congressional delegation every year. There are now more issues than ever, including the music royalty tax that some folks want to put on us."

As for the future, Brown is sure that the Internet in general, and podcasts in specific, will be even more important to his farming audience. But as to whether terrestrial radio will ever be replaced, he is unsure.

"My crystal ball just doesn't go that far."

Ken Deutsch broadcast the agricultural report every morning on the now-defunct WGLN(FM), Sylvania, Ohio.

This year's summer promotion, Teammate Tailgate. KRVN staff travels across Nebraska attending almost 100 fairs, rodeos, parades, open houses and summer celebrations. This year's winner got to drive home a bright red, new Dodge Dakota.



The station's original home. The front half was an apartment building, the back was a mortuary. Brown says that's why he still worries about dead air.

Dick 'Noodle Soup' Klasi and his accordion.

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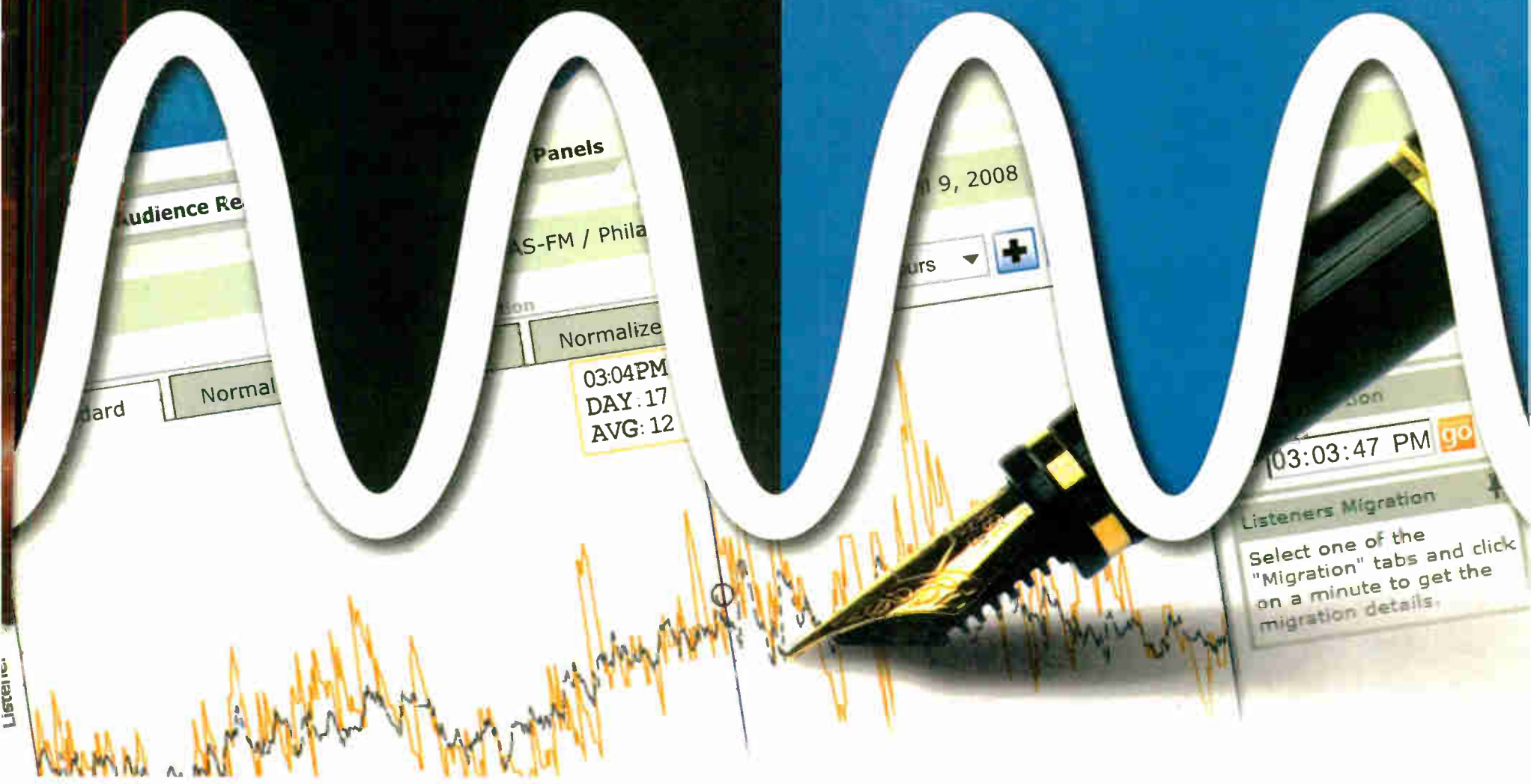

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NEWS MAKER

Top Volunteer Loves Community Radio

When Sue Gerber Retired Early From AT&T, She Found a New Niche at KRCL

by Ken Deutsch

Your long-time employer is downsizing and offers you a retirement package you can't refuse. You take the deal, but now what do you do with your time?

This was the dilemma faced by Sue Gerber, who was 48 when AT&T nudged her out the door. She decided to spend part of her week volunteering for her community radio station, KRCL(FM), in Salt Lake City.

That was in early 1999. After nine years of answering phones, helping with mailings, organizing public service announcements and anything else station management asked her to do, she received the Volunteer Year of the Award from the National Federation of Community Broadcasters, based in Atlanta.

Sue Gerber. 'The longer I stay, the more I see that needs to be done.'

It's a mission

"When I first started listening KRCL it was the ethnic programs like 'Global Gumbo' and the world music that hooked me," she said. "They played every kind of music you can imagine except classical, which is heard on the NPR station in town. Before I found this station I listened to commercial radio, which didn't play bad music, but I hated the loud commercials that assaulted me every two minutes. They just yell at you, and the worst commercials seem to be car dealers. I now listen to KRCL all the time unless I am playing my own CDs."

At a small station like this one, volunteers are the lifeblood of the operation.

"I work on public service announcements, mail out thank you gifts and if I need to, record an underwriting message," she said. "I'm not the type of person who says, 'I'm above that.' I do everything they ask me."

In commercial radio, employees may sometimes think of their jobs as, well, jobs. Gerber sees her job as a mission.

"When we say 'community,' it isn't just a slogan," she said. "We reach out to everyone but especially the under-served, which is how the station began in 1979.

"It was started by Stephen Holbrook, a peace activist. Our station, known as 'Radio Free Utah,' still reflects a left-of-center political view, although not all the programmers are like that. Public affairs programs on the station are definitely progressive and include 'RadioActive,' a local call-in show.

I listened to commercial radio, which didn't play bad music, but I hated the loud commercials that assaulted me every two minutes. They just yell at you.

— Sue Gerber

"We talk about the war, lesbian-gay-bisexual-transgender issues, and we are particularly concerned with the threat of resumed nuclear testing. There are cancer victims around here that call themselves 'downwinders,' because they were downwind of the former Nevada testing grounds."

Radio World asked Gerber what the term "Radio Free Utah" meant to her.

"Free to let progressive voices on the airwaves. Free to air local music, free to air music that is not considered commercially viable by the corporate media, such as folk, world, reggae, bluegrass and Native American music," she said.

"Free to air the music of communities that don't have a voice on corporate radio."

In community radio, content is king and funding is always a challenge.

"Most of the programmers have their niche, their passion, their love," said Gerber. "They know all about the artists in their particular musical genre, but they all have 'real' jobs outside the station, too.

"The Corporation for Public Broadcasting gives us some money, we have some underwriters and a few grants from local foundations. The bulk of the station's funds come from listener support."

The station raises cash with radiothons in the fall and the spring. Listeners can also pledge money at any time via the Web site. The station has an underwriting specialist and a development director who works on preparing grant applications. Gerber has no other job outside of volunteering at the station. She works anywhere from eight hours a week to several days a week during radiothons.

KRCL has its own building in Salt Lake City with an air studio, two production rooms and a separate studio that is used for "RadioActive" and live musical performances.

The joy of volunteering

What is it about community radio that causes people to give so freely of their time and money?

"It is rewarding," said Gerber. "We are a part of a like-minded community. The longer I stay, the more I see that needs to be done. In Salt Lake City, a lot of the high schools have programs where the kids have to volunteer for something, so there is a vibrant volunteer base here. I feel like I'm giving something back to the community, not just observing it from the outside."

Gerber's general manager at KRCL is Donna Land Maldonado, who not surprisingly speaks highly of Gerber.

"She is always reliable, and she is unusual because she is shy. She has no interest in being on the air. Sue comes in twice a week or more if we need her," she said. "She is extremely cordial to everyone, easy to get along with and never asks for anything. We couldn't ask for a better volunteer."

The National Federation of Community Broadcasters, the organization that recognized Gerber, honors a community volunteer each year. The awards can go to people volunteering in operations, subscriptions, training, administration, engineering or programming. For details, visit *www.nfcb.org*. Listen to a live stream of KRCL or make a donation at *www.krcl.org*.

Sue Gerber seems to have found her niche.

"When I retired nine years ago I had no idea what I was going to do," she said. "Now I know."

PEOPLE NEWS

Jim "Turbo" Turvaville was named corporate director of engineering of **WAY-FM Media Group**, overseeing the 19 full-power and 60+ low-power facilities operated by the non-profit group. He earlier had worked as a network engineer for the company in Nashville before moving to the Colorado Springs corporate office as corporate expansion director.

Jim 'Turbo' Turvaville

Also at WAY-FM Media, **Morgan Grammer**, who served as director of engineering and technology, will now focus on the company's presence in the Rocky Mountain region as Colorado regional DOE, managing the technical needs of the seven Colorado broadcast outlets and network operations center in the Denver area. The announcements were made by Bob Augsburg, president and CEO.

Morgan Grammer

Jay Tyler

Wheatstone promoted **Jay Tyler** to director of sales. He will oversee the sales team for all of the company's product lines: Wheatstone, Audioarts Engineering and Vorsis. He reports to President Gary Snow. Tyler joined the company in 1996 as sales manager for the Audioarts Engineering product line; he has worked on the company's larger consolidation projects and in 2006 was promoted to director of Latin America sales. He will continue to manage Audioarts distribution.

The **North American Broadcasters Association** named **John A. Harding** as executive director. He reports to Secretary General David Baylor. Harding was president of the Strategic Marketing Group and is a former president of the Radio Marketing Bureau. He replaces **Carol Darling**. Harding lives in Toronto.

Texas broadcasters elected new officers and filled vacancies on the **Texas Association of Broadcasters** board. The new officers are Chairman **Jason Hightower**, Vice Chairman **Danny Baker**, Secretary **Matt Martin** and Treasurer **Brian Jones**. The immediate past chairman is **Jackie Rutledge**.

Joe Meleski

Electronics Research Inc. appointed **Joe Meleski** as director of services. He will lead its Structural and RF Installation and Field Service organizations, with responsibility for supervision and management of service delivery. Also he will provide technical sales support for structural products to the ERI field sales staff and be responsible for the management of specific installer and tower accounts.

He will report to Jerome Gruber, VP and director of the RF division. Meleski had been a district sales manager for Harris Corp. In an earlier stint with ERI, he was involved with some of the largest broadcast tower and antenna projects in North America, the company said, as director of the Installations Division.

Clear Channel Radio named 17 employees to receive its 2008 Performance Excellence Award.

Engineer Matt Howell, the DOE for Clear Channel Radio in Washington/Baltimore, was among the recipients.

They also include **Adam Stubbs**, assistant program director/promotions director, Lite 98 WRVA-FM; **Alan Korowitz**, regional VP/director of sales, Clear Channel Radio Sales; **Bob McCuin**, general sales manager, Clear Channel Radio New York; **Bob Murphy**, operations manager, Clear Channel Louisiana Platform; **Eddie Martiny**, president/market manager, Clear Channel Radio Houston; and **Gregg Swedberg**, operations director/KEEY program director, Minneapolis.

Also: **Julie Talbott**, EVP Affiliate Services, Premiere Radio Networks; **Mary Menna**, general sales manager, Clear Channel Radio Boston; **Massimo Rosati**, director of sales, Clear Channel Radio Denver; **Matt Gillon**, director of sales, Clear Channel Radio Des Moines; **Michael Bryan**, program director, WXXL-FM; **Owen Grover**, senior director of programming marketing, Clear Channel Online Music and Radio; **Pam McKay**, VP/market manager, Clear Channel Radio Austin; **Pat Connor**, director of sales, Clear Channel Radio Denver; **Rich Lauber**, operations manager, Clear Channel Radio Syracuse; and **Thea Mitchem**, operations manager, Clear Channel Radio Philadelphia.

Radio World

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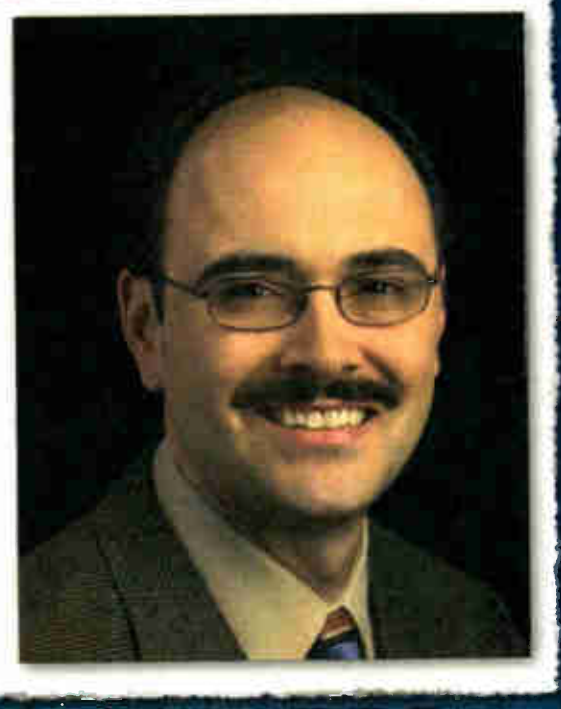
2008



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BROADCAST LAW REVIEW

Compelling Co-Tenant Coordination

Love Thy Neighbor, But Also Realize That Sharing Tower Space Can Create Practical Problems

by Steve Lovelady

Many of us have never climbed a broadcast tower, and probably have no desire ever to do so. We can only imagine the hazards faced by the hardy souls who climb towers to earn a living.

In addition to the natural dangers (wind, rain, temperature extremes, and flocks of migratory birds which, according to some, smash themselves into towers pretty much all the time), tower workers must also contend with manmade radiofrequency electromagnetic fields (REFs) generated by broadcast users of towers.

In an ideal world, at least from a tower worker's perspective, transmitters should be turned off so that antennas stop radiating RF when people have to climb a tower to maintain it or install/repair/remove equipment attached to it.

Of course, this solution is less than ideal to those broadcasters who would have to turn their stations off, albeit temporarily — after all, their businesses are based on beaming their signals out to their audiences, so turning off means shutting down the shop.

Such shut-downs can alienate advertisers and drive previously loyal listeners to other stations. Obviously, most broadcasters are reluctant to risk either of these phenomena.

In order to protect tower workers, the Federal Communication Commission's rules limit the amount of REF to which broadcasters can expose people working around transmitter and tower sites.

The FCC emphasizes the importance of compliance with these particular rules by including the following explicit written condition in each new construction permit and broadcast license it issues: "The permittee/licensee in coordination with other users of the site must reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic fields in excess of FCC guidelines."

The issue of "coordination" between two or more parties to reduce power or cease operations makes a contract very useful in this context.

For while the FCC's rules — and the terms of each broadcast license — require broadcasters to coordinate with each other to protect workers at a tower site, actual enforcement of that coordination is made a lot easier when a tower user has the right wording in a tower lease or other site sharing agreement with other users.

If you have a contract with the other site users or the tower owner, you have the option of going directly to state or local court to enforce the terms of your contract, and relief may be much quicker and more effective.

The difference is that if you rely only on the FCC rules and the FCC's enforcement of those rules to resolve coordination conflicts, you could wait for a long time for the FCC to act and still not get the relief you are seeking.

But if you have a contract with the other site user(s) or the tower owner, you have the option of going directly to state or local court to enforce the terms of your contract, and relief may be much quicker and more effective.

For example

A hypothetical situation may help to illustrate this point.

Able Radio Inc. and Baker Television Company both are tenants on a tower owned by Big Stick Tower Corp. Baker wants to install a new DTV antenna at the top of the tower. Able's FM antenna is side-mounted on the tower about 100 feet below Baker's antenna.

In order for the tower crew to install Baker's new antenna, Able will have to reduce its signal to 10 percent of its normal power from 8:30 a.m. to 5:30 p.m., Monday through Friday, for two weeks while the tower crew rigs up, takes the old antenna down, puts the new DTV antenna up and then rigs down. If there is bad weather, that procedure could be extended for another week or more.

In many cases, Able Radio might be very happy to cooperate. But let's throw a wrinkle into the fact pattern.

Let us assume that Baker's DTV installation is scheduled right in the middle of Arbitron's rating period in Able's market. Able's showing in those ratings will directly affect Able's ability to sell advertising time on its station for the next calendar quarter.

So turning its station off smack in the middle of ratings is clearly not an attractive option for Able, no matter how altruistic it might otherwise choose to be.

So Able tells Baker that Baker's work will have to wait until after the ratings measurement period is over. Baker says that this is the only time that the tower crew will be available for the foreseeable future, the work has been scheduled for a long time in advance, and Baker just can't wait. If Baker doesn't have a provision in its tower lease that forces Big Stick to make Able reduce power, or if Baker doesn't have a tower sharing agreement directly with Able which covers this issue, then Baker's only avenue for relief is to ask the FCC to enforce its rules requiring Able to "coordinate" with Baker.

The problem Baker faces is that the FCC's staff may think that making Baker wait is reasonable, regardless of the economic cost or inconvenience to Baker of delaying its new DTV antenna's installation. Or the FCC might try to craft a compromise position that would require Able to reduce power only between the hours of 10 a.m. and 4 p.m., thus preserving Able's full-power signal during "drive-time" hours — thereby helping Able keep its ratings up, but costing Baker more money in the process, since this altered schedule would take the tower crew longer to complete the work.

Also, the speed at which the FCC's staff may consider the parties' arguments and decide upon a solution could be lengthy if the commission's staff is preoccupied with other issues of more universal concern than a simple dispute between two licensees.

Worries about how and when the FCC might act could have been avoided if Baker had previously negotiated power reduction coordination provisions into its tower lease, and/or struck a separate agreement with Able directly when it first became a tenant on the tower.

In such circumstances, Baker would have the option of going to a local court and asking for an injunction to enforce such agreements.

Although the enforceability of any particular contract term often varies from jurisdiction to jurisdiction, most courts have rules which permit expedited hearings for requests for injunctions or restraining orders. Baker's ability to take action in a local court, although not guaranteed to ultimately be

See TOWER, page 40 ▶

Products & Services SHOWCASE

Listeners Aren't Easily Impressed

Think You Are Better Than Average? You Have to Exceed Expectations

PROMO POWER
BY MARK LAPIDUS

People have expectations about your radio station.

This is obvious.

What's not so obvious is that when you meet a consumer's expectations you are, for the most part, being average. When you're delivering an average product — unless the product itself is on fire, like country music in the early 1990s — you are unlikely to make an impression.

And a strong impression is vital to your success because that's what's driving a diary-keeper or wired People Meter person to vote for you.

Do you know what your potential audience's expectation is of you? Research could answer your questions, but in today's environment, you're unlikely to have a research budget rich enough to delve into such a big issue.

iStockphoto/Domen Colja

She's looking for an 'oh, wow' moment. Are you ready to give it to her?

Memorable

So, how do you figure this out?

Begin your exercise by coming up with a list of audience expectations for your format.

Here are some examples. Your listeners expect you to: Play the most popular songs for your format; discuss topical issues; provide short, entertaining chatter; give away T-shirts at events; and honor their desire that you not go off the air.

Make your list as long as you can, but don't stretch your assumptions beyond being reasonable. If you're in doubt about what people expect of you, do three or four small focus groups with a volunteer advisory panel and you'll see the trends fairly quickly.

As always with panels, if you can't stop yourself from leading the group to give you answers you want to hear, bring in someone who can. Never ask the panel to predict the participants' future behavior.

It's easy to deceive yourself into thinking you've created a magic moment for your audience when in truth you've simply met its expectation.

Stay in the present, finding out *why* they listen to the station. If you go off-track and ask them what they'd really like that you're not providing, expect to get a mixed bag of not very reliable information.

As I know you realize, the next phase of this exercise is much more difficult. It takes ingenuity and a bit of risk-taking to devise and then implement a plan to exceed expectations in the niche you occupy.

The goal of this project is to create "Oh, wow!" moments for your listeners.

Here are a few ideas. It would be most unusual for a country station in any market to take a release from even a superstar like Alan Jackson and play songs from his new CD throughout the daytime hours — or all at once. Memorable? You bet.

How about an oldies station that, unannounced, played only sound clips (no music) from the decades they feature during morning drive and then never did it again?

What if a talk station surrendered its entire weekend to local high schools, each of which got an hour for the most articulate kids to talk about designated topics that resonate with them and their parents — sex, drugs, abortion, adoption, driving, money management.

How about giving away babysitting as a prize? Not money for babysitting ... I mean background-checked, professional baby sitters who show up at someone's house.

Part of the key is to do this with enough frequency to get noticed, sticking with the plan that these special moments are *not* something your audience expects. A to Z weekends? Been there. Local music on Sunday night? Done that. Evening of love songs? Um, okay.

Listen with their ears

Be certain you are doing something truly unexpected — not from your perspective, but from that of your audience.

I say this because it's easy to deceive yourself into thinking you've created a magic moment for your audience when in truth you've simply met its expectation.

For example, it may be unusual for a music station to have an in-studio interview with a big star, but it's likely your audience believes that you have them all the time. Radio has done a tremendous job of convincing people we have access to stars — so when you actually get hold of one, don't be surprised if the audience doesn't find this as special as you do.

I am not suggesting that this effort at creativity is simple or is every program director's cup of tea. However, in your quest to touch your listeners in a way that they will remember, please consider investing the energy to identify what goes beyond exceeding expectations and be the one in your market to have listeners saying, "Oh, wow!"

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

Tower

▶ Continued from page 38

any more successful that asking the FCC to enforce its rules, at least gives Baker some additional leverage in negotiating with Able and Big Stick to reach a satisfactory solution to the competing economic interests of the parties.

So when negotiating a tower lease, broadcasters should consider trying to include carefully crafted wording dealing with how and when users of the tower will coordinate power reductions to protect tower workers from REF hazards.

Alternatively, broadcasters should consider the possibility of negotiating an agreement directly with the other tower tenant(s) to deal with this issue. Negotiating these issues will generally be easier *before* an actual dispute arises than after the gloves hit the ice, and will in most cases afford greater predictability for all parties involved.

The author is with the law firm of Fletcher, Heald & Hildreth. Contact him at lovelady@fhhlaw.com. *This article also appeared in the firm's newsletter.*

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GUEST COMMENTARY

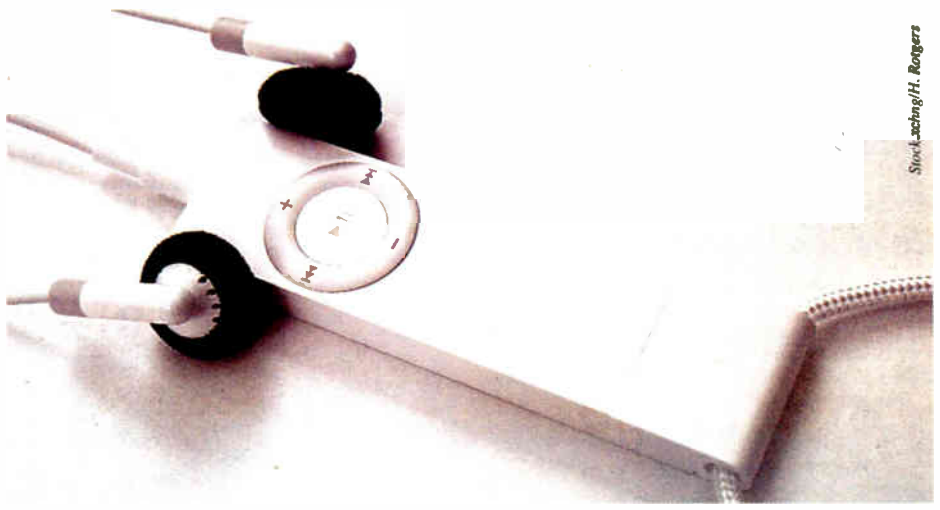
Enjoy Podcasting While You Can, Kids

Internet-Based Venues That Require More Than the Usual Flick of the On/Off/Record Switch Have Yet To Offer Serious Competition to Legacy Media

by Matthew Lasar

Podcasting continues to grow at a rate that's faster than a snail's pace, but not by much.

The Pew Internet and American Life Project reports that almost one in five Internet users (19 percent) say they have saved a podcast for later listening. That's up from 12 percent in Pew's August 2006 survey.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But the latest study also concedes that "podcasting has yet to become a fixture in the everyday lives of Internet users, as very few Internet users download podcasts on a typical day."

Just 3 percent do so, in fact. And there's a real generational divide here of which media trend watchers should take heed. After 30, podcasting download rates take a dip; after 50, they take a serious dive; after 65, forget it.

Is podcasting competitive?

Podcasting isn't just an important issue for content fans, it's an important question for broadcast ownership regulators, especially at the Federal Communications Commission.

They, and the rest of us, are constantly being told that the FCC's rules limiting ownership of radio and TV stations are no longer relevant because of the proliferation of new platforms. Podcasting is often cited here; it was mentioned constantly by boosters of the now completed merger of Sirius and XM satellite radio, a move that raised some widespread antitrust concerns.

The podcast solar system has its hot spots. Podcast Alley has catalogued over 43,000 podcasts with more than 2 million total episodes. iPod users gravitate toward certain subjects, listed in order of popularity: technology, comedy, religion and spirituality, and business. And you can download and read the Wall Street Journal on your iTunes desktop.

But the Pew report suggests once again that Internet-based venues that require more than the usual flick of the on/off/record switch have yet to offer serious competition to legacy media — TV, radio, newspapers — especially for older media consumers.

I believe in yesterday

The Pew survey involved talking to 2,251 adults who were 18 or older between April and May of this year. Back in April 2006, participants of all ages under 65 told Pew that they downloaded podcasts. But now the study says that there's a dividing line at age 50, "with Internet users under 50 years old significantly more likely than older users to download podcasts." This is in contrast to Internet use in general, which Pew also tracks, and which enjoys substantial popularity across all age groups.

Almost a quarter of those questioned who are under 50 say they've saved a podcast. On average, only 13 percent of people over 50 have done so, and only 1 percent of this group downloaded a podcast "yesterday," according to the report. "Since 2006," it concluded, "younger generations have more fully embraced the technology."

This is probably the most obvious demographic trend in the survey. People in households that earn $75,000 or more listen to more podcasts, the report says, but not by much. Guys do podcasts more than women do, but the difference isn't that extreme: 22 percent to 16 percent. But the age trend is pronounced. 27 percent of 18 to 29 year-olds have downloaded a podcast. But usage drops to 20 percent in the 30 to 49 age bracket, then down to 15 percent among those aged 50 to 64, and it falls off to 8 percent among the 65+ bracket.

The Pew study confirms my longstanding, college instructor's perception: Podcasting is and will continue to be a popular pastime for media consumers with lives unstructured by those twin tethers, full-time jobs and children.

So enjoy podcasting while you can, kids. Because 20 years from now, after you've gotten through the first and second shift, you won't have a lot of mental energy for much more than the car receiver dial, the remote and the couch.

The author is a contributor to Ars Technica, where this text originally appeared. It is printed with permission.

GUEST COMMENTARY

Radio Must Focus on Today's Consumers

Why I Said Video Was Framed and That Radio Actually Committed Suicide

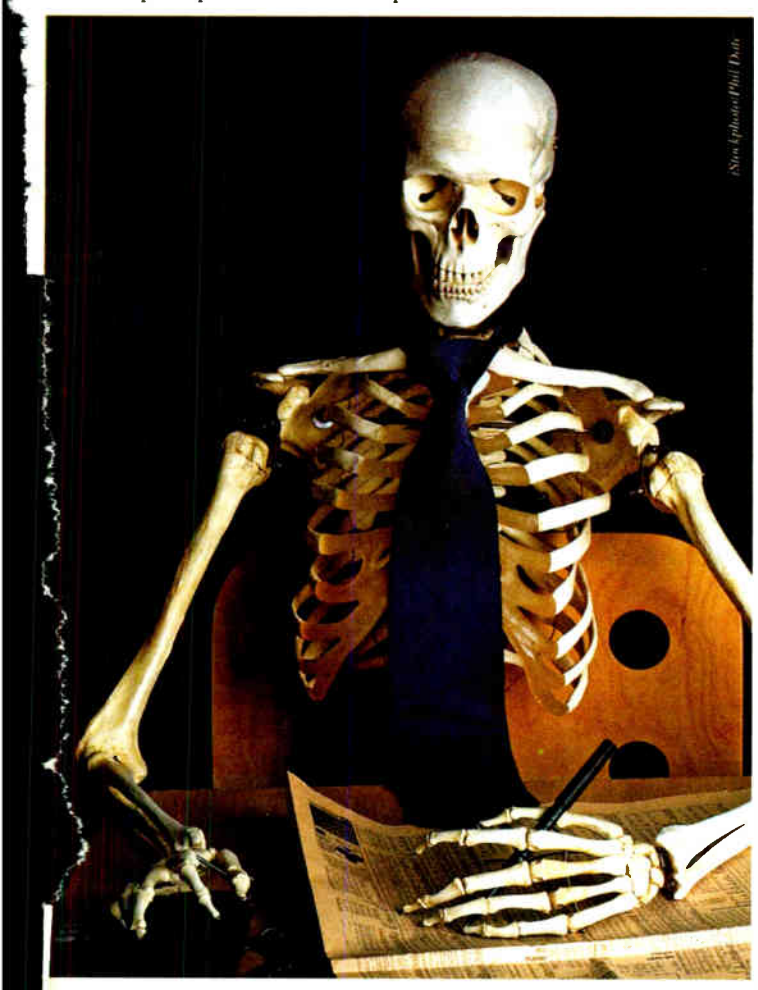
by Dave Wilson

The author is senior director of technology and standards for the Consumer Electronics Association and owner/operator of two FM stations in North Carolina.

I recently stirred some feathers when I suggested on the CEA Digital Dialogue blog that radio is committing suicide. Here's why I said it, and also how I reply to critics.

USA Today recently reported that consumer adoption of HD Radio has been slower than some expected. This article may be slightly misleading, for CEA's own research suggests that consumers are not passionate about AM/FM receivers in general. That is, perhaps the "HD" has nothing to do with it.

As I noted here earlier, in late 2007 CEA conducted a study to help it predict what products would be most in demand during the important holiday shopping season. People were asked what consumer electronics product they would most like to receive as a gift. They were not prompted with a list of pre-selected choices.



The number one response? Portable MP3/digital audio player. Among the other audio-related responses were in-dash satellite radio and satellite radio generally in no specific form. Smart phone, cell phone and iPhone were also mentioned. What percentage of people said they wanted an AM/FM tuner? Zero. An AM/FM receiver? Zero. An AM/FM radio for their car? Zero. A clock or table radio? Zero. A portable AM/FM radio? Zero.

Perhaps consumers' interest in free local radio, in general, is waning.

Fear of expansion

And who can blame consumers? Let's consider the things drawing them away from free local radio.

Satellite radio offers hundreds more channels than free local radio. Internet radio offers thousands more channels than free local radio. GPS devices let consumers get traffic and weather information instantly, without having to wait for the next report on free local radio. And the list goes on.

Competition from new services and radio's own lack of expansion are the main reasons consumers are looking elsewhere.

As an industry, radio has traditionally been afraid of expansion and terrified of new competitors. Of course fear of new competition is natural, but new competition is a fact of life that everyone must deal with. Unfortunately, it seems to me that radio sometimes deals with it by running to the government and requesting regulatory roadblocks that will keep new competitors at bay.

While that may seem wrong to some, at least we can understand radio's fear of new competition, and it's not like it's the only industry that seeks government interference in the free market for the purpose of blocking competition.

What's hard to understand is radio's fear of expansion. Eighteen years ago its trade association hatched a plan to have new spectrum allocated for radio so that radio could expand and grow into the digital age. But the industry revolted, largely because such a plan would have narrowed the difference in signal quality between the highest-powered FM stations and the lowest powered AMs.

Radio tends to oppose improvements in its *own service* that would enable stations with poorer coverage to gain too much competitive ground on stations with great coverage, or that would allow new local programming to come on the air.

That's right, radio tends to oppose improvements in its *own service* that would enable stations with poorer coverage to gain too much competitive ground on stations with great coverage, or that would allow new local programming to come on the air. (See Ken C. Pohlmann's "Principles of Digital Audio," published by McGraw-Hill Professional, page 647.)

It seems to me that radio's desire to block new competition at all costs, including lack of expansion of its own service, may have an unfortunate side effect: a loss of focus on radio's own customers.

Everyone else

My concern is best illustrated in this quote from Bob Botik, a broadcaster, in the early years of digital radio development: "What is under debate here is not what is logical or simple or in the best interest of all, but what is best for America's current owners and operators, screw the rest of the world." He was quoted in W.A. Kelly Huff's 2001 book "Regulating the Future: Broadcasting Technology and Governmental Control," published by Greenwood Publishing Group.

When you separate people into two groups, America's current radio station owners and everyone else, I'm afraid that consumers fall into the category of everyone else. Taking care of customers is the key to any business' success.

What's amazing to me is that even after all this time, with all of the new competition that radio faces, the industry seems to be taking additional steps to prevent its own service from expanding.

The wireless industry is out there buying up as much spectrum as it can to provide wireless Internet service everywhere, most recently buying up UHF TV spectrum that will be vacated next year when analog television is turned off. Soon wireless spectrum will be used even more effectively as direct competition for radio's drive-time listeners. There are thousands of Internet radio stations out there, and hundreds of satellite radio stations. Yet radio actively opposes any efforts to obtain new spectrum that would enable it to provide better service to consumers.

Just this summer the NAB Radio Board adopted a resolution opposing the use of television Channels 5 and/or 6 for radio broadcasting after analog TV signals are turned off. Think of the great new services radio could provide if it were to unleash the full potential of HD Radio with 100 percent digital service in Channels 5 and 6, or in some other spectrum.

I'm afraid that radio's like a ball team whose players are all focused on their individual stats, out there competing with one another. I fear we don't care enough about the team winning, and I know we should be focusing on the fans because the other teams keep scoring and we have to wonder how much longer the fans will keep showing up.

Commoditization

Some responded to my post by arguing that radio broadcasters don't need to be concerned about consumers' lack of interest in AM/FM receivers because radio receivers are a commodity and everybody already has multiple radio receivers.

I agree that AM/FM radios are a commodity, but I don't see this as a good thing. Just because AM/FM radios are a commodity does not mean they will always be everywhere, like milk and oranges. People have to eat. People don't have to listen to free local radio.

There are plenty of examples of commodities for which consumer demand dried up. Remember the cassette player? It won't be long before people are asking, "Remember the CD player?" too. How about dial-up computer modems?

I think I've made my point. Declining consumer interest can indicate that a product is heading for extinction, even if that product is a ubiquitous commodity.

Some who commented on my post argued that the Telecommunications Act of 1996 and the changes it brought to radio programming are to blame for declining consumer interest.

I agree that radio programming is a very significant part of the puzzle, and that the changes that occurred in this area post-1996 have generally resulted in many listeners having a lower opinion of AM/FM radio.

This is because of a mix of factors. Yes, local content is important to many, but in reality with today's analog technology it's very hard for a radio station in a metropolitan area to be local enough to satisfy most people. I only want to hear local content for my specific community, not any of the other communities in the rest of the metropolitan area. If I had a digital delivery system that allowed me to store and filter the content sent to me I could achieve this.

Far more damaging than less local content, in my view, was the increase in the number of spots broadcasters had to run to pay off the loans they took out to buy up other stations.

Radio listeners are sick of commercials because radio broadcasters loaded up their schedules with so many spots over the past decade that listeners began to perceive that the ratio of spots to desired content was out of balance.

Radio's collective behavior in this regard was typical of a monopoly. While no individual radio company had a monopoly, the AM/FM service as a whole had a monopoly on live audio from the dashboard. And because it had a monopoly, it got away with abusing the consumer in terms of jamming more and more commercials into the mix.

Free local radio's monopoly on live programming in the car is now being challenged by satellite radio, and will be further challenged when local TV stations become receivable in the car in a few years. For years AM/FM radio stations only had to compete with each other for in-car listeners who wanted live programming. Now we've got competitors that are forcing us to raise our level of play.

Radio needs to focus more on serving today's modern consumers — no one wants to read its obituary any time soon.

Comment on this or any article. Write to radioworld@nbmedia.com *with "Letter to the Editor" in the subject field.*

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NewBay Media

Could Radio Use Channels 5 & 6?

Industry Should Take a Patient Look at BMC's Idea, Not Dismiss It Immediately

We think the idea to develop a new home for AMs on an expanded FM band using TV Channels 5 and 6 is a fascinating one.

In the name of more efficient spectrum use, a small group of consulting engineers and a lawyer calling themselves the Broadcast Maximization Committee has proposed that analog TV Channels 5 and 6 be repurposed for radio after February's DTV transition (to read our story from the Sept. 10 issue, search for "Could EXB Band Be Your New Home?" at *radioworld.com*).

"Due to the inherent noise limitations on the lower VHF frequencies for TV, the digital doesn't work so well," BMC spokesman Bert Goldman told Radio World. Of 1,814 TV stations going digital, only 24 in the nation have chosen to stay on TV Channels 5 and 6 (76-88 MHz) for their DTV channels, according to the FCC.

BMC included a migration plan for these stations in its proposal, as well as a suggestion for helping them pay to relocate.

Then it outlined a way for licensed AMs, LPFMs and noncom FMs that wish to move to the "EXB" band. LPFMs would use the new band and noncoms would be "repacked," all in the name of more efficient spectrum use and helping make the nation's radio signals more robust with reduced interference from channel overcrowding.

The new EXB AMs would operate as FMs on 100 kHz channels, giving them the ability to go all-digital. The proposal also calls for "repacking" the remaining (likely clear-channel) stations on the AM band to provide more space between channels.

This plan certainly is dramatic. It would require careful long-term planning and it would upset many apple carts. But the BMC has provided a valuable service. They took an idea that others have banged around and attempted at least to begin to address specific implementation questions. Of all the plans to repurpose TV Channels 5 and 6 for radio, this is the most comprehensive; it provides a possible road map.

Aside from the boon to small, strapped AM operators, a big benefit of using Channel 6 is that it would greatly improve the situation for NCE FMs that have been limited in power for so many years. The current NCE Channel 6 problem would be removed, not just shifted down the dial, because TV Channel 4 is not contiguous with Channel 5 and whatever new use is made of Channel 4 will not be adjacent to the low end of the proposed radio band.

Creative use of this spectrum also opens the intriguing possibility of a nationally reserved channel for NOAA/DHS uses.

The BMC acknowledges that many contentious decisions would need to be made by the FCC, such as who would move first and how long the migrations would take. Reaction to costs could derail such a plan. TV stations would incur expenses, as would any radio stations that opted to move.

Many radio groups will no doubt oppose the idea of a new band, having spent money to transmit digitally from where they are; further, radio companies have invested a great deal in branding their stations. To move to different frequencies is a frightening idea for some people.

Many elements would have to fall into place for the plan to work; and as the pace of adoption of HD Radio has shown, such changes may take — indeed probably require — a very long time to come to fruition.

However we think the idea should be treated by industry leaders as a platform to launch serious debate about whether the industry and its listeners would benefit from spectrum reallocation.

We need to take a long view for a healthy radio service. We need to think creatively about how to make best use of our spectrum. Like BMC, we believe this can be the start of a conversation.

The NAB board passed a resolution recently opposing repurposing TV channels for radio. We think it acted too quickly in doing so.

We'd like to see a session at the next NAB convention that would allow the consultants to explain their ideas and answer questions. Let's get talking.

— Radio World

◆READER'S FORUM◆

Wrong Mentality At BBG

George Woodward's commentary "BBG Should Enhance SW, Not Replace It" (Aug. 13) is probably the best article I have seen on this subject.

The sense of frustration he conveys at trying to get the Broadcast Board of Governors and its staff to listen to anyone who actually knows anything about radio is palpable at VOA headquarters where I work.

The same mentality that he describes in trying to broach technical issues with the BBG is also present in trying to explain why the Burmese, Georgian, Russian and literally a dozen other language services, including Worldwide English, should not be discontinued or relegated to a tab on the Internet.

Bravos to Mr. Woodward and Radio World for broadcasting some common sense where there's been mostly static.

These comments reflect my own views and almost certainly do not reflect the views of the VOA or BBG.

Neil Currie
Senior News Anchor
VOA Worldwide English
Washington


OPINION

BBG Should Enhance SW, Not Replace It

Consumed By New Technologies, It Should Improve Shortwave, Not Replace With the Internet

by George Woodward

The BBG uses the cost argument against shortwave. That logic is flawed. The Internet, when comparing apples to apples, is actually less cost-effective at present.

◆READER'S FORUM◆

Lights Out For OPB

The Loudest Voice

Thank you for the editorial by George Woodard on the neglect of HF broadcasting by those controlling the RFE, VOA and RL services. Glad you gave him a chance to speak out.

Reliance on foreign-owned radio outlets in potentially hostile nations compares nicely to the State Department bungling during the Vietnam War.

As for the Internet, I have seen this in domestic radio. Less-experienced but otherwise competent program producers and stations seem to fixate on the newer digital technologies, even when available numbers show them to be inefficient in delivering the required audience.

If the U. S. wishes to continue as a significant player in Europe and the third-world states of Persia, we need to maintain the loudest possible voice, particularly on the radio.

Andy Eliason
VCY Radio
Milwaukee

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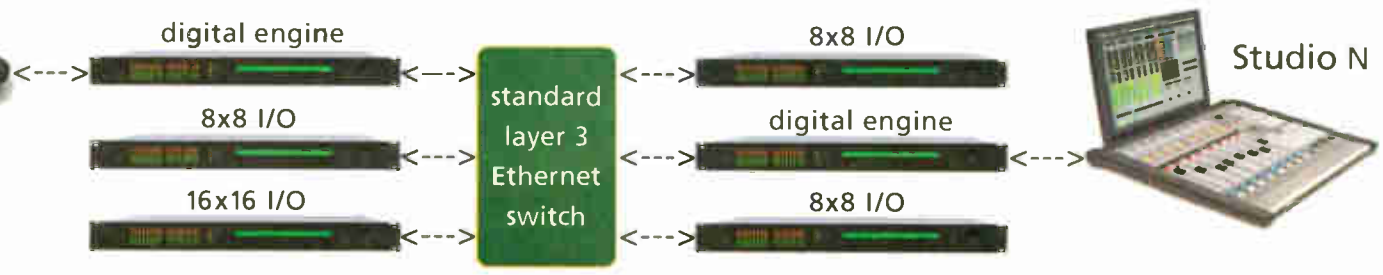

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