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$2.50 The Newspaper for Radio Managers and Engineers April 20, 2006

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Got a Workbench tip?
E-mail
jbisset@bdcast.com

Unions and NPR Lock Horns Over Tech Work

Audio Quality, Job Security at Heart Of Network Technical Union Dispute

by Randy J. Stine

WASHINGTON Changes to jurisdictional work rules and job security concerns are at the heart of contentious contract negotiations between National Public Radio and its broadcast recording technicians.

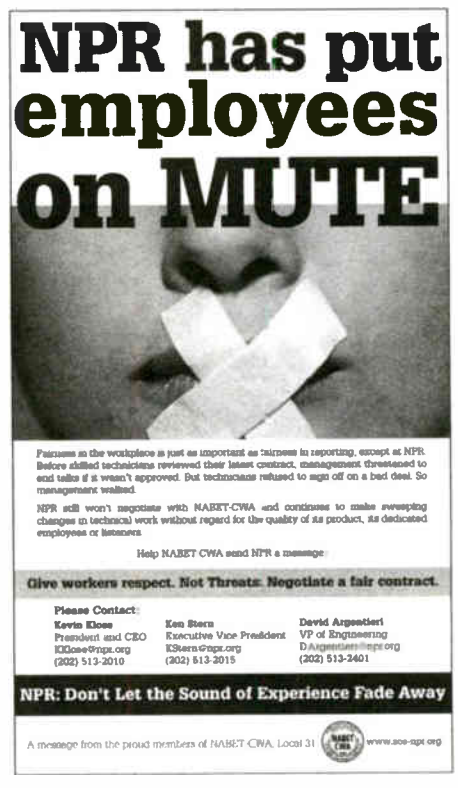
The unionized technicians — members of The National Association of Broadcast Employees and Technicians union, which is part of the Communications Workers of America — have been working without a contract since last fall.

They say changes in work rules proposed by NPR designating who can record and mix audio for air would adversely affect the sound quality for which NPR is known. Network managers say the changes would have no impact on the network's signature sound.

Meanwhile, an arbitrator has given NPR until the middle of May to cease and desist assigning broadcast technicians' duties to AFTRA-covered employees.

NABET represents approximately 90 broadcast recording technicians at NPR's Massachusetts Avenue headquarters in

See NPR, page 12 ▶



NABET ran this ad in various newspapers in Washington.

FIRST PERSON

The Really New Newsroom Is on Wheels

Mobile Wireless Broadband: A Trend for Radio Reporting?

by Jim Ryan

The days of scratchy cell phones and spotty RPU signals may be drawing to a close with the advent of wireless technology that makes filing over the Internet from remote places faster, easier and more economical. The newsroom of the future might have a steering wheel and fenders instead of desks and chairs. And at least one news manager predicts IP-based technology will be more heavily used to cover upcoming big events, such as the next election cycle

Just after Hurricane Katrina, I was outfitted with a Verizon PC 5740 EvDO (for "Evolution Data Only") wireless broadband access card.

"Virtually all of our correspondents have the capability of using them," said Jeff Fitzgerald, director of news operations for ABC News Radio in New York. "Every time they go into the field, they

See WIRELESS, page 6 ▶

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World Radio History

◆ NEWSWATCH ◆

North Hall to Change Next Year

WASHINGTON Some changes are afoot in and around the "radio hall" at next year's spring NAB convention.

On its Web site in the exhibitors section for NAB2007, NAB states about the floor plan for that event: "The show has all but outgrown our current configuration within the Las Vegas Convention Center. Therefore, for NAB2007, we will be expanding our use of the facility to include the entire North Hall, so that we can better meet the needs of both our exhibitors and attendees. This will require some change in the way the various halls are categorized."

An NAB spokesman confirmed that the organization has decided to change how the North Hall is used, citing exhibitors' increased demand for space in the LVCC. Currently, NAB uses only two of four halls available in the building known as the North Hall, according to spokesman Dennis Wharton.

NAB intends to use all of the North Hall in 2007 by moving in some TV, film and video exhibits and one or more major exhibitors. It's also considering moving the main registration area out of the Central Hall and to the North Hall.

"The intent is to keep the radio exhibits in the North Hall," said Wharton, who added that part of the strategy is to even out distribution of major exhibitors across all halls instead of having most of the exhibits in the South Hall. That, in turn, NAB believes, creates a logistical strain throughout the facility.

As it did when the South Hall opened in 2002, NAB would promote the expanded use of the North Hall, he said.

A source on the exhibitor committee worries that the change bodes ill for radio exhibitors; when radio and TV have been mixed in the past, he said, radio companies were overlooked amid the "huge" TV offerings.

EAS to Move to New Bureau

WASHINGTON The commission could have its new Public Safety and Homeland Security Bureau operational by the end of May; Emergency Alert System responsibilities will move to the new bureau.

The bureau will be created after congressional and union notification and after a set of procedural paperwork is completed, according to Tony Dale, acting managing director in the commission's Office of Managing Director.

By elevating the status of the commission's Office of Homeland Security and creating a new bureau, the FCC hopes to be able to respond faster to terrorist attacks, natural disasters and other emergencies. Public safety communications, 911 emergency calling rules, disaster management and network security would also be handled in the new department.

Functions spread out among seven locations within the agency would be consolidated.

The bureau will be the smallest at the commission, he said, with most employees transferred from other bureaus in the Washington headquarters.

Dale did not have an exact number of employees in the new bureau, but noted that the International Bureau is currently the smallest at the agency with about 150.

The last time the FCC had a similar reshuffling, in 2002, it took about two months to complete, he said.

Asked whether more resources will now be devoted to EAS, Dale said staff was working on that question.

See NEWSWATCH, page 3 ▶

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WHEATNET LETS YOU ROUTE THOUSANDS of bi-directional signals at ONCE in just 60 microseconds—all secure, virus-proof and in just 2 rackspaces! **WHEATNET** leaps way ahead of conventional stacked router or IP-based designs, interconnecting up to 48 studios (each with its own independent mix engines and I/O resources) using just one CAT-5 wire per studio, plus providing systemwide X-Y control from one central location. You can even meter and monitor (in stereo) any signal systemwide.

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World Radio History

New HD-R Gear at NAB2006

A broadening range of products is emerging for HD Radio users, equipment intended to establish and measure HD signals as well as to help stations feed audio and data into those new HD pipelines.

Here's a sampling of products for, or relate, to HD Radio that manufacturers plan to show at NAB2006, using information provided to us by suppliers prior to the convention. Look for a detailed product wrapup after the show. Vendors can e-mail new product information to radioworld@imaspub.com.

Photo by Bob Kovacs

Chuck Lakaytis of Alaska Public Broadcasting, left, listens to Wendell Lonergan at NAB2005 explain Nautel's demonstration of digital reception of multiple stereo programs using Tomorrow Radio technology.

The presence of HD Radio is making itself felt in categories as disparate as codecs, digital audio management systems, translators and mod monitors.

APT will show the WorldNet Chicago II, which the manufacturer says offers digital audio over IP for bidirectional stereo transport, featuring enhanced apt-X for low-delay, AM, FM, HD Radio audio quality while ensuring that costs of an audio network remain competitive. New for the WorldNet Oslo codec for multichannel applications is the option to transport audio over IP in addition to E1/T1 links for STL/TSL and studio-to-studio networking applications.

The XLator analog and HD Radio translator from **Armstrong** detects the IBOC and analog FM signal from a station and retransmits both signals on the assigned frequency. The product is meant to be a replacement for analog-only translators, according to the supplier.

ATI/Day Sequerra will showcase the M2 HD Radio Modulation Monitor for AM and FM bands, including multicast channels. Features include balanced audio outputs and a digital audio output that is 5.1 surround-capable.

Audemat-Aztec will be at NAB with modulation monitors suitable for digital applications. The Goldeneagle HD AM, FM and AM/FM with spectrum analyzer allows a user to monitor multiple AM and FM analog and HD signals with a single unit. The company's Navigator HD-FM is a compact product for field surveys and on-site/studio monitoring of a station's FM and HD signal.

Several products are on tap for **Broadcast Electronics**, including a 4MX 25 kW medium-wave transmitter and a base Big Pipe system that the supplier says lowers the cost of entry for broadband connectivity between studio and transmitter sites and includes the capacity to handle HD Radio applications.

For studio ops, BE will demonstrate its AudioVault digital system with enhancements, including AVLogger capture and logging application. Also shown will be SoniXtream for Web radio creation and management and several products from The Radio Experience line, including a data management application for multiple stations as well as an RDS generator and RDS data receiver. BE will host a pavilion with **NPR Labs, Traffic.com, Mozes** and **FM411T** featuring text services for the deaf, audio services for the blind, billboard text broadcasting and personalized radio services.

Continental said it will display an operational 816HD transmitter employing a new Continental IBOC Exporter. The 816HD uses low-level FM and HD combining, common amplification, and patented grounded screen technology. TPOs range from 10kW to 40kW.

Crown Broadcast will show an IBOC translator, featuring an "Offset Design" receiver and linear amplifier in separate and combined applications to allow analog and digital signals to pass through the system without demodulation.

Dielectric Communications is showing its DFM Series Manifold Combiner, touted as a low-cost multi-station combiner solution, as well as its HD Plus Antenna and HDR Dibrid Combiner

ENCO Systems will emphasize PADapult, which allows real-time manual sending of data to HD Radio, RDS, Web sites and other locations directly from a control room while integrating data output from an automation system or satellite provider.

Fraunhofer, Telos/Omnia/Axia and **BE** will do a live demo of a non-matrix, FM 5.1 surround sound for HD Radio. The Fraunhofer IIS surround encoder /decoder system uses technology from the forthcoming MPEG surround specification, which Fraunhofer says is expected to be standardized this July.

Inovonics has the 532 FM/HD Modulation Monitor, which shows simultaneous transmission parameters for analog FM and for HD digital carriers. Its Omega digital split-airchain processing is suitable for FM and IBOC.

Harris will unveil its Flexstar HDX-FM exciter, which uses real-time adaptive correction technology. It can be seen with the Flexstar HDI-100 importer, HDE-100 exporter and Z-Series FM transmitter as part of an HD Radio Exgine multicasting demo. The company will introduce Flexstar BoostPro, which allows stations to operate multiple transmitters from a single HDX-FM exciter.

Harris will show its display test system, ManDLS, for the first time. The supplier says it allows broadcasters to increase revenue through advertising and other advanced text display formats that go beyond basic artist/title capability of RDS.

As Harris is the reseller of the Day Sequerra HD Radio Monitors, the M2 and M4 models will demodulate HD Radio signals in the Harris booth.

HD Radio technology developer **Ibiquity Digital Corp.** isn't planning a booth this year. A spokeswoman said the company felt its manufacturing partners could best showcase the Ibiquity technology.

The JMPC-HD Radio antenna from **Jampro** is designed for use as a separate or interleaved antenna for HD Radio. The antenna is available with and without deicers. The Optimizer JBCP-H-HD FM side mount antenna is for HD-R applications that require separate or interleaved

See GEAR, page 5 ▶

Newswatch

▶ Continued from page 2

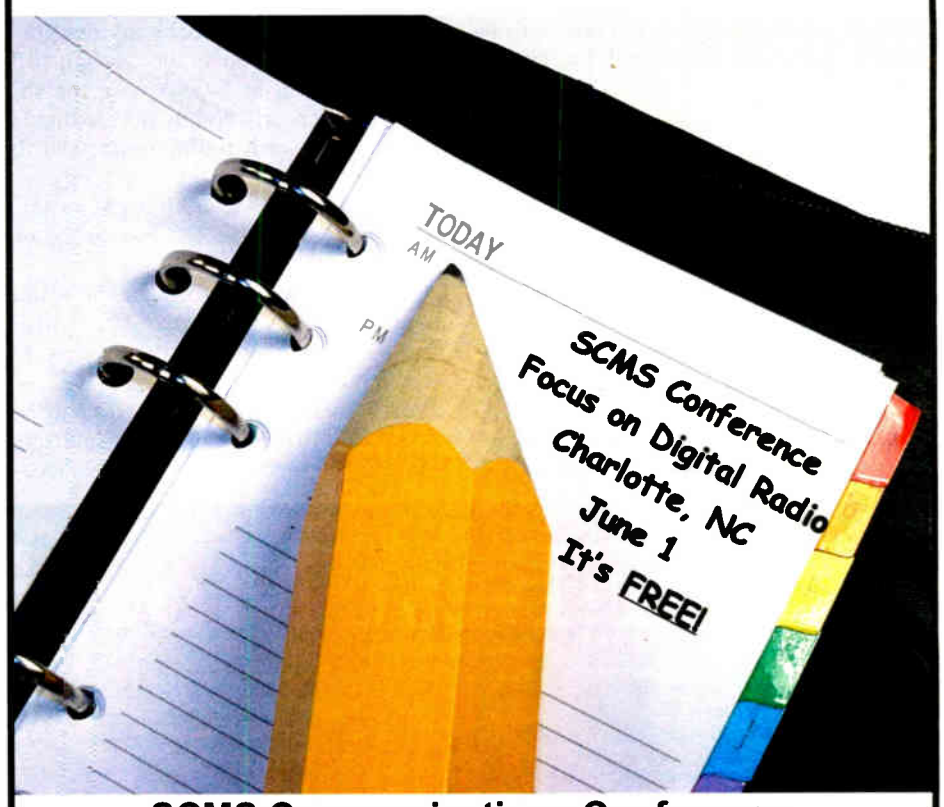
In 2003, the commission had moved EAS responsibilities out of the Enforcement Bureau to its Office of Homeland Security.

Commissioner Jonathan Adelstein said after the recent vote approving creation of the bureau, "We have to consider how we can improve our response," for example, to incorporate other languages into the EAS system. "I want to achieve a higher standard of emergency preparedness and not get bogged down in bureaucratic distractions that have plagued other agencies in their ability to react."

Commissioner Michael Copps said, "It's been almost five years after 9/11 and America is not ready," in case of another terrorist attack. The new bureau can help coordinate first responders, he said.

— Leslie Stimson

Mark Your Calendar!



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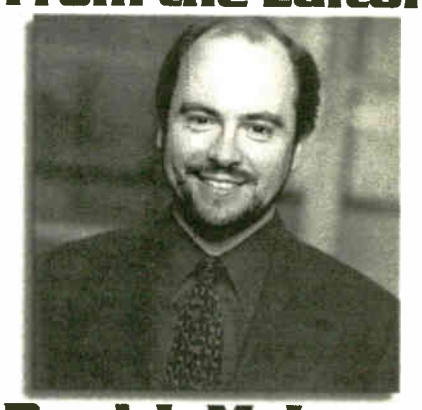
World Radio History

HD Radio: Ace, Net or Long?

From the Editor



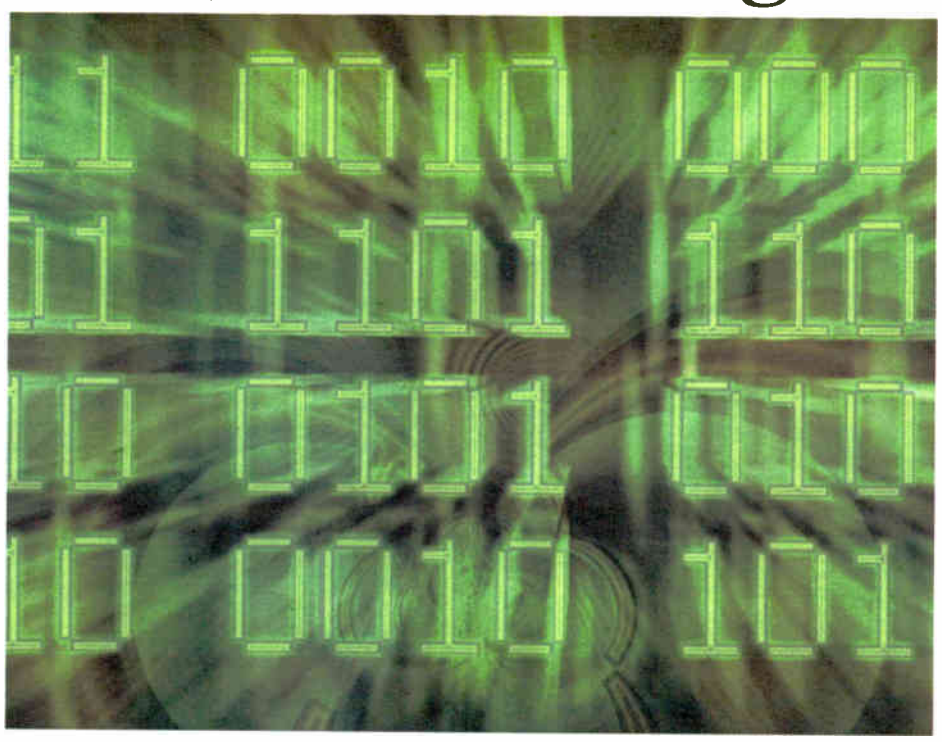
Paul J. McLane

I was musing over comments by radio manager Paul Marszalek that appeared in a programmer's publication, FMQB. He asked whether HD Radio is stumbling out of the gate and described his experience after buying a Boston Acoustics receiver (at the earlier price of about $500).

After experiencing the pleasures of "fantastic" audio on certain channels as well as the hassles of digital drop-offs, limited choices and having constantly to reposition his antenna, he concluded, "This whole thing was just not working as advertised."

He lamented advice from Boston Acoustics that he try a Terk antenna or a coaxial converter and cheap dipole. He criticized promotion of the commercial-free aspect of multicast — why undercut radio's business model? — and worried that terrestrial digital isn't quite ready for prime time.

Any consumer comparison with satellite right now, he concluded, will fail — and that's unwise, given the importance of convincing early adopters and spreading positive word of mouth. His conclusion: Ibiquity and its broadcast partners should better test the products of their manufacturing counterparts, to get the consumer experience right, early in the game.



4F or glitch-free?

Some of his criticisms have since been addressed; for instance, at the end of March Boston Acoustics decided it will include a second, better antenna with its model and make that available free to earlier buyers.

But Marszalek's and other programmer and consumer comments about the early experience of listening to digital radio are important. I asked several RW contributors to share thoughts with me about these arguments and the state of the rollout. A kind of tennis match via e-mail resulted.

One school of thought — call 'em cautious optimists — argues that the above comments are not typical of the HD Radio experience in most major markets, particularly since the first days of the launch of the BA Recepter HD model, which in any event has dropped in price since.

"As for technical glitches, we've been buying them left and right since the middle of February and they have been trouble-free," wrote one member of the RW family, a director of engineering.

But, he continued, "Broadcasters, particularly engineers, can't treat their HD signals like they don't matter (and I know that many do). The time-alignment has got to be right, the processing has got to be right and the coverage has got to be the best it can be." Otherwise, he said, early adopters will rightly decide that HD Radio isn't worth fooling with, and that will spell disaster for the technology.

Another school of thought is more troubled by how IBOC looks to the outside world.

One RW author told me he's been hearing plenty of criticism from inside and outside the industry. In this view, HD Radio has all the makings of a "4F" — a "fully formed and failed format" — while satellite, despite its fiscal challenges, continues to look like a successful launch.

There's a "very big difference between digital radio on the ground and in the sky right now," he states. Unless the gap narrows this year, HD Radio will be in trouble, he thinks.

The more upbeat school of thought responds: "If that's the way HD Radio really looks to the outside world, it's mostly our fault as broadcasters." The success or failure of HD Radio — and, for the long term, the viability of terrestrial radio — is up to us.

"If we give it a lukewarm treatment, both technically and promotionally, it can't help but fail," wrote the first writer. It's the equivalent of a salesman who begins his pitch with, "Say, you don't want to buy any widgets, do you?"

"If we are enthusiastic about HD Radio, treat it as if our future depends on it — I think it does — make it the best it can be technically (enhancing the 'wow!' factor) and then promote-promote-promote, it really does represent a 'better mousetrap,'" he said.

"I think the questions we need to be asking are: 'If HD Radio receivers proliferated, would consumers listen? Would they have a load of complaints, or would they find the HD Radio experience pleasant and desirable?'

"From my perspective, as one with HD Radio receivers in car and office to which I listen all day every day in a market that is HD Radio-saturated, the answers are yes, consumers would listen; and they would find it pleasant and desirable," he wrote.

"So the success or failure of this thing really comes down to getting the receivers out there, creating the demand and driving the prices down. Our part of that is to put out the best technical product that we can, promote on the air and off, and partner with local retailers, auto dealerships and the like to get those receivers out there and create the momentum. ... I'm glad that a few broadcasters are doing their part. It's my hope that more and more get aboard while there's still time."

Volley

Replies the pessimist: "I hope he is right, that the future of HD Radio is truly in broadcasters' hands. What I worry about is that 'this thing doesn't work well enough,' that interference, compression artifacts, multicast tuning latency and cliff-effect failure — i.e., technical, not marketing problems — will be the culprit, particularly in the-ever tougher 'compared to what' analysis that consumers perform today."

If that's the case, skeptics feel, no amount of championing on the industry's

See HD, page 20 ▶

World Radio History

Martin on Indecency, Ownership

by Leslie Stimson

WASHINGTON Chairman Kevin Martin has been struggling with a disadvantage since being promoted to the FCC's top seat a year ago: no majority-party voting bloc.

But although he hasn't moved as many initiatives as he would probably like, a year into his tenure his style has emerged. Experts note his different management approach than that of the top-down style preferred by predecessor Michael Powell. Martin himself said he tries "to make sure that we're having a collegial environment here so that we can try to take the various commissioners' perspectives."

One year in, Martin held his first press conference as chairman and discussed his priorities for this year and beyond.

Here are excerpts on various topics. Also see related news item on HD Radio, page 8.

Public Safety: "We're trying to address homeland security and public safety issues and put them all ... in one area.

"One of the things we saw in Katrina is that many of the challenges that were faced were consistent across platforms. So in other words, access during a time of an emergency — making sure that you've got adequate fuel for your generators, or water for your generators. That was a consistent theme that we heard from both the broadcasters, to the cable companies, to the telephone companies to the wireless companies.

"Those kinds of issues need to be addressed in a comprehensive fashion. Increasingly people are aware that many of the public safety and homeland security issues have consistent problems during times of an emergency across the different platforms that we regulate. ...

"The commission is going to constantly look at how it can be organized most efficiently. The commission will continue to address those kinds of issues and whether there's further changes to be made."

Broadband deployment: "We've got a petition ... from Verizon, for example, saying that their fiber optic deployments, not just their broadband DSL, but their higher-speed broadband capabilities using the fiber that they're installing now, not just to consumers, but to commercial entities, should also be free of many of the current regulations. I think the commission should act on that. ...

"Increasingly, wireless broadband is an important component, especially in trying to reach ubiquitous service throughout the country. ...

"This summer we'll be going through an auction of some spectrum that can be used for advanced wireless services; we'll also begin proceedings to put in place the rules for how we're going to make sure we go forward with the auction in the (TV) broadcast spectrum (in 2008). ...

"Certainly the broadcast spectrum that's going to be returned as a result of that hard-date legislation that was passed, is some of the spectrum that can be most utilized for broadband and data capability. The technical characteristics of that spectrum enable it to carry large amounts of information, to penetrate walls more easily with relatively low power levels. It's spectrum that's very valuable in trying to deploy wireless broadband."

Disability access: "The commission was very active over the last year in disability access, in trying to update our rules for telecommunications relay services to make sure that they can be implemented for Spanish-language homes, not just for English-language homes. We're going to make sure that the kinds of translation services that are now available through IP technologies continue to be fully interoperable and interconnected. ... We've taken strong enforce-

See MARTIN, page 10 ▶

Photo by Leslie Stimson

New Commissioner Deborah Tate, left, joined colleague Michael Copps and Chairman Kevin Martin in voting to create a new Public Safety and Homeland Security Bureau. The fourth commissioner, Jonathan Adelstein, not shown, also voted yes.

Gear

▶ Continued from page 3

bays that are relatively insensitive to icing conditions.

Nautel's V5 HD Radio FM Transmitter features Digital Adaptive Pre-Correction technology for HD-R transmission to comply with the FCC's FM mask. The unit can be used in FM, FM+HD or HD-only modes to provide an analog backup to the HD-R system.

Neural Audio will introduce two products and demo codec improvements with bit rates down to 16 kbps. The NeuStar4.0 Codec Pre-conditioning Audio System is aimed at HD Radio, Internet streams, ISDN/POTS, DRM, DAB and compressed STLs. Neural says the product addresses specific challenges associated with multichannel broadcasting.

The associated NeuStar 4.0s Software-Based Codec Audio Pre-Conditioner is the software version of NeuStar 4.0, using the same processing algorithms and feature sets as the NeuStar 4.0. The NeuStar 4.0s is designed to run on Windows XP computers or server, including the HD-R importer.

OMT Technologies will show HDNow. With one workstation, program directors can create multicast programming by choosing from 150,000 music titles or 100 professionally programmed channels in various music formats. From a central location, multiple systems can be managed remotely to include customizable music, liner and commercial content relevant to each market, the manufacturer says.

The **Orban** Optimod-AM 9400 offers two independently adjustable processing chains — analog AM and digital AM — in one unit. The company also is introducing Opticodec-PC 1010, which the manufacturer says is the first MPEG-4 AAC/aacPlus encoding software for high-quality streaming audio.

Propagation Systems is showing FM broadcast antennas, combiners, filters and transmission lines in various configurations and directional and non-directional designs in standard and IBOC broadcasting modes.

Prophet Systems is introducing Prophet Importer, which enables advanced HD Radio capabilities such as multicasting and datacasting.

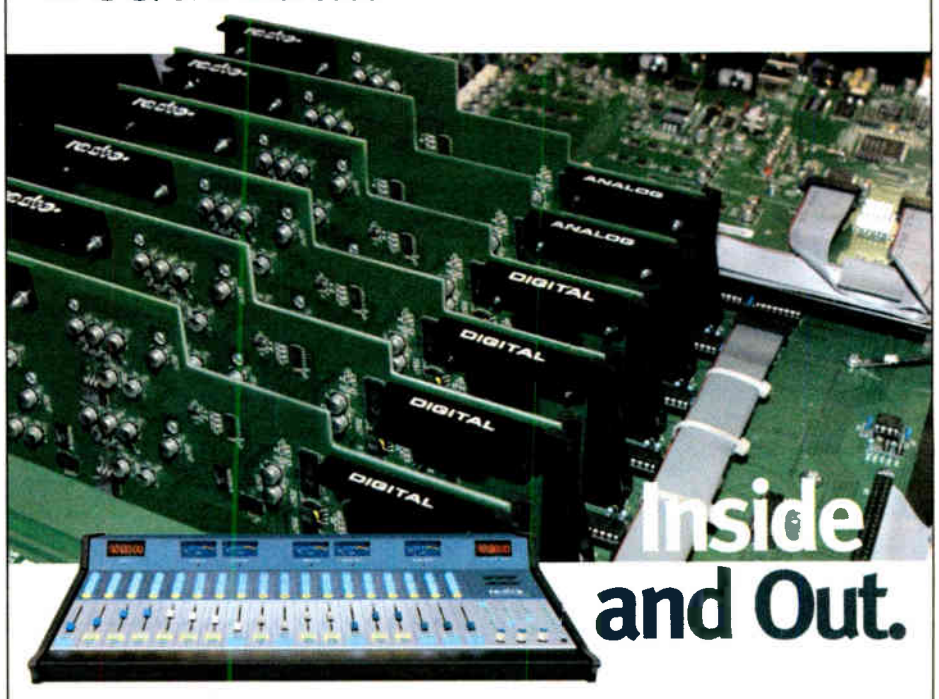
SRS Labs says professionals can use SRS Circle Surround to deliver surround sound beyond HDTV onto two-channel environments like HD Radio, iTunes, Napster, DVB, MediaFLO, Vcast, and Sprint TV. SRS plans to introduce two products geared for live event capture and offline production.

Radiosophy said it will have a demonstration suite at the Hilton and will be available by appointment. The company makes digital radio receivers.

Wheatstone will exhibit the Vorsis HD P-3, an HD Radio multiband processor, and the Vorsis AP1000, a multiband, dual-path FM-plus-HD processor.

The RDSReady increases data delivery on FM, HD Radio and Internet streams, according to **WireReady**. The product generates "now playing" data and multiplexes additional time-based announcements as well as integrating EAS alerts, traffic and weather and other time-sensitive announcements.

Millenium Digital Consoles Beautiful...



Radio Systems' Millenium Consoles go digital with a beautiful new look and an unbeaten complement of digital features including:

- Analog or digital inputs on every channel
- Sample rate conversion on every digital input
- Mic thru line level sensitivity on every analog input
- Simultaneous digital and analog outputs
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Contact Radio Systems or your dealer today about the best looking and most functional low-priced digital console available.

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World Radio History

Wireless

▶ Continued from page 1

have them."

Since my card was activated last August, a day hasn't passed that I haven't used it to its fullest, not just for checking e-mail and researching stories on location, but for filing material to ABC and to my home station, WBAP(AM) in the Dallas-Ft. Worth market.

I've found that the speed of sending audio files via the broadband card is comparable to using my Blitzz Super G Wireless Notebook Adapter. The big difference is that the Verizon product doesn't require me to sit in a Wi-Fi "hot spot" for service.

Although I still carry my Blitzz card, questions linger about the legality of "borrowing" bandwidth from unsuspecting hosts. A Florida man caught sitting in his vehicle with a laptop computer and accused of tapping into his neighbor's open wireless router was charged last year by St. Petersburg police with "unauthorized access to a computer network," a third-degree felony that carries a maximum sentence of five years in prison.

The author's in-vehicle laptop rig.

For my filing process, interviews/voice tracks are recorded onto my Marantz PMD660 Flash recorder, and then fed into Cool Edit, my old tried-and-true version of the software now known as Adobe Audition. My Dell Latitude LS is secured to a RAM laptop mount, purchased for $175 online, and installed between the front seats of my station's Chevy Blazer news unit.

Quick production, filing

I edit stories and convert them from WAV to MP3 format for quicker filing, then e-mail the material to WBAP or upload it to ABC's FTP site.

Once the user is comfortable with the process, it takes only a few minutes from finishing an interview to having the produced story arrive at the other end.

Readers will find a few drawbacks to filing wirelessly, especially if they're working primarily out of a vehicle and using the Marantz deck that I use. In order to "Flash" audio from the PMD660 via the unit's USB port, the deck must be plugged into AC. I get around the problem with a power inverter, purchased for about $30 at a sporting goods store. In the photo that accompanies this story, the inverter can be seen mounted atop the police/fire/aviation scanner located near the bottom of the shot.

Fitzgerald predicts that the next election cycle will be covered real-time via Internet Protocol using laptops, WiFi and wireless broadband cards

The Chevy Blazer is ideal as a mobile newsroom because it has two power ports, besides the cigarette lighter. I've hardwired the scanner into the lighter, freeing up one port for a cell-phone charger and the other for the power inverter.

Powering the PMD660 is worth the trouble because of the time you'll save in moving digital audio tracks into your editing software. Of course, the other solution is to play the analog cuts into your laptop, real-time. The Marantz, with its dual line/headphone outputs, is great for this; you can hear the cuts being fed into the mini jack of the computer, assuming you use the mini "line" output jack.

If you've ever tried to balance your computer on your knee, you'll know what a great investment the RAM laptop

See WIRELESS, page 8 ▶

Sometimes, getting out the ladder is just too much work.

WFCJ's John Graham does a little studio maintenance.

With the Mosaic, even a light bulb change is easy.

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World Radio History

◆ NEWSWATCH ◆

Martin: FCC to Act Soon on IBOC

WASHINGTON FCC Chairman Kevin Martin predicted in March that the agency would act soon on the final digital authorization for terrestrial radio and final rules will include provisions for AM nighttime digital broadcasting and multicasting.

During his first press conference since becoming chairman last March, Martin was questioned by Radio World about the status and details of the final IBOC rules.

"I anticipate the commission will act fairly soon on the digital radio side," he replied. "The digital transition provides consumer benefits, both in terms of quality of service, particularly in the AM bands but in the potential for multiplexing on all the different bands."

While AM nighttime presents more challenges, such as limits on the ability to receive distant AM signals with skywave signals, he said, "I think the commission will end up adopting it, and we do need to develop a standard that allows for the conversion, not just of FM, and not just of AM during the day, but to all digital radio signals soon."

NPR Takes Over VOA Frequency

BERLIN NPR this month planned to begin broadcasting from its first standalone station. The operation is in Berlin. German broadcast regulators have awarded a frequency reserved for a U.S. broadcaster to the network.

The 400-watt FM station on 104.1 MHz serves an area with 3 million potential listeners.

NPR already reaches audiences abroad through various channels; it streams programming on its Web site and offers podcasts, in addition to cable and satellite offerings.

The network said it can't estimate how many listeners abroad hear its offerings now, but believes more than a quarter of the 6 million visitors to its Web site every three months live overseas. The new FM station represents another way to extend the organization's reach to a global audience.

Historically, Berlin designated one frequency each to the United Kingdom, France and the United States, said spokeswoman Andi Sporkin. Voice of America held the seven-year license in Berlin but it has expired. Since the fall of communism in Europe, U.S. government broadcasters don't deem VOA's presence in Berlin essential, and the Broadcasting Board of Governors recently proposed $671 million in budget cuts for publicly financed broadcasting services as it shifts VOA away from an English-language focus to the Middle East.

The German government chose NPR from among several applicants for the channel, Sporkin said. To keep costs low, NPR mostly will re-air American programming. It will receive a low-cost license from the German government.

"We're not staffing a station and creating a newsroom," said Sporkin, who said the network would provide material for the station from its NPR Worldwide, comprised of news produced by NPR, stations, Public Radio International and American Public Media; it will also work with non-profits in Germany to create a weekly one-hour program.

Groups Challenge Expanded-Band Return Rule

WASHINGTON Eleven broadcasters, including Clear Channel, Entercom, NRG, Multicultural and others, are asking the FCC to waive its rules that say licensees of AM expanded-band stations must return one of their licenses — either the expanded-band license or the one for their original frequency — within five years.

The group is also asking the commission to allow current owners of the original AM frequencies and the expanded band frequencies to sell the one they need to give up to a qualified small business.

Four public interest organizations support the request: the Minority Media and Telecommunications Council, National Black Owned Broadcasters, the Independent Spanish Broadcasters Association and the United Church of Christ's Office of Communications.

'Wearable' Deal Lays Licensing Base

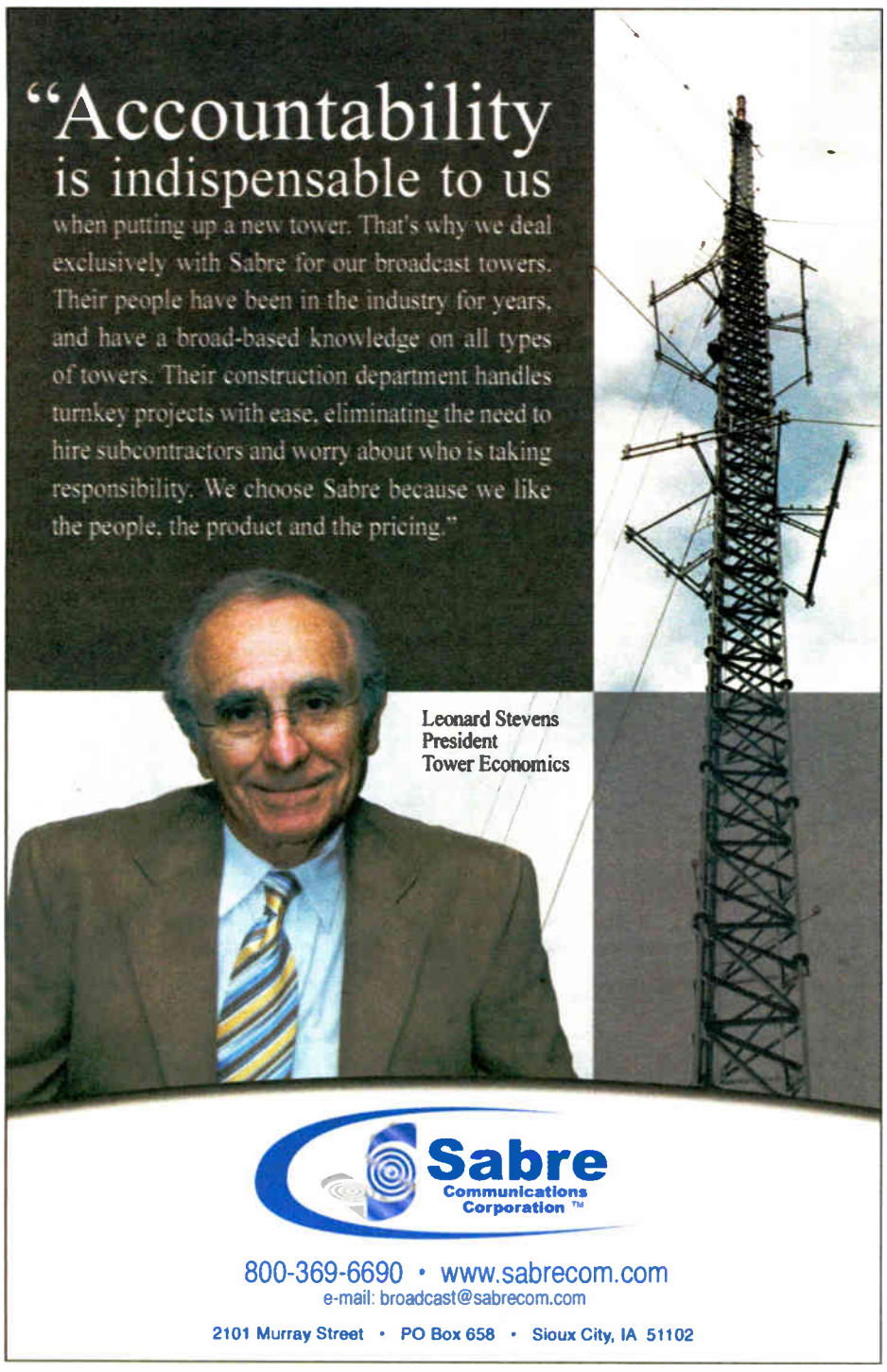
NEW YORK Sirius reached a deal with three recording labels to allow their songs to be played on a new wearable satellite radio that can record and store music for future playback.

The deal sets the stage for rival XM to do the same and, perhaps, appease the labels at least temporarily, in the battle over digital music licensing.

Sirius will pay a fee to Warner Music Group Corp., Sony BMG and Vivendi Universal SA's Universal Music Group for each unit new S50 radio device that it sells, according to officials from the three companies.

Other terms were not disclosed, however sources close to the agreement told the Wall Street Journal that Sirius would pay a fee for every S50 sold and limit the total number sold.

See NEWSWATCH, page 10 ▶



Wireless

▶ Continued from page 6

mount is. You should not use your keyboard while driving down the street, but once a map, for example, is on your screen, it takes only a glance away from the road to see where you're going.

Normally I keep the laptop closed while I'm driving, but when it's open, it blocks only a sliver of my peripheral driving vision. Once I'm parked, I can swing the computer into position and begin working with my audio.

Speed, baby, speed

The heart of the mobile newsroom is the wireless access card. My PC5740, about the size of a Chiclets box, boasts download speeds of 400–700 kilobits per second, many times faster than a dial-up connection, but much slower than the 108 Mbps maximum of the Super G Wi-Fi connection. The Verizon card can be had for about $50 after rebates, and provides unlimited Internet access for around $80 per month.

"The benefits are worth the investment," said ABC's Fitzgerald, who notes that ordering a single POTS line can cost $400. "You can file anywhere you are, whether you're on a campaign bus or out in the field without access to phone lines."

Sprint Nextel has rolled out its own EvDO product, AirCard 580 by Sierra Wireless, which lists on the Sprint Web site for free, after rebate, and PCS Unlimited Data Link for $80 per month. Download speeds for the Sprint Nextel and Verizon products appear to be identical, but coverage maps on both companies' sites show different availability, depending upon where you live.

On the issue of signal strength, the Verizon card has been extremely reliable. (I have not used the AirCard). Driving from Dallas to Houston, for example, I found that I was still online well outside of either major city. My Internet access did eventually drop off, but not until I was nearly 100 miles south of Dallas, and then only until I came to the next town of moderate size.

The obvious drawback to FTP and e-mail filing is that it cannot be live. Or can it? Fitzgerald predicts that the next election cycle will be covered real-time via Internet Protocol using laptops, WiFi and wireless broadband cards.

"Some radio stations are broadcasting live through the Verizon card and it's our hope to use this technology in the 2008 presidential campaigns," Fitzgerald said. "We've made it known to companies providing codecs that they need to develop IP-based technology; we expect the industry to blossom."

As more businesses and even some local governments launch wider Wi-Fi "hot spots," the need for wireless broadband networks like that of Verizon and Sprint Nextel might eventually decline. For now, though, popping in the EvDO and going online from just about anywhere is the radio road reporter's dream come true.

The author is southwest correspondent for ABC News Radio and senior reporter for WBAP News/Talk 820, Ft. Worth/Dallas.

Share your wireless experiences. E-mail radioworld@imaspub.com.

World Radio History

"Connect POTS to ISDN? You've got to be kidding!"

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Instead of proprietary algorithms, we chose **MPEG-standard *aacPlus*®**, the same coding used by XM Satellite Radio, Digital Radio Mondiale, Minnesota Public Radio, Apple Computer and many others to deliver **superior audio at low bit rates.** (An optional ISDN interface lets Xport connect to Zephyr Xstream with Low-Delay MPEG AAC, or with nearly all third-party ISDN codecs using G.722.)

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World Radio History

Martin

▶ Continued from page 5

ment action against broadcasters who've failed to meet our current rules.

"The commission is taking some important steps to make sure that 911 is available, but we still have more work ... to do, both in the formation of a homeland security bureau; we'll be getting reports back from the Katrina panel in the coming months that we'll be trying to implement.

"We have an Emergency Alert System that we need to have more integrated, using new technologies. We have an open proceeding on that."

Media ownership: "I had put forth a proposal last summer to try to start a new notice of proposed rulemaking on media ownership in light of the (Third Circuit) court's overturning of our last set of rules. ... It was one of the few issues that the current commission was unable to get a majority on to address, so I'm certainly hopeful that the commission will be able to address it as soon as we can. ...

"We need to end up addressing it. The courts have overturned our rules and sent them back to us. So we're going to need to open up a proceeding that asks what the new rules should be. ... I think our newspaper-cross ownership rules need to be updated. They were the only rules that have actually still been put in place since the 1970s without any updating since then. I continue to think that that is not a reflection of the multiple new sources of news and information that are available today. ...

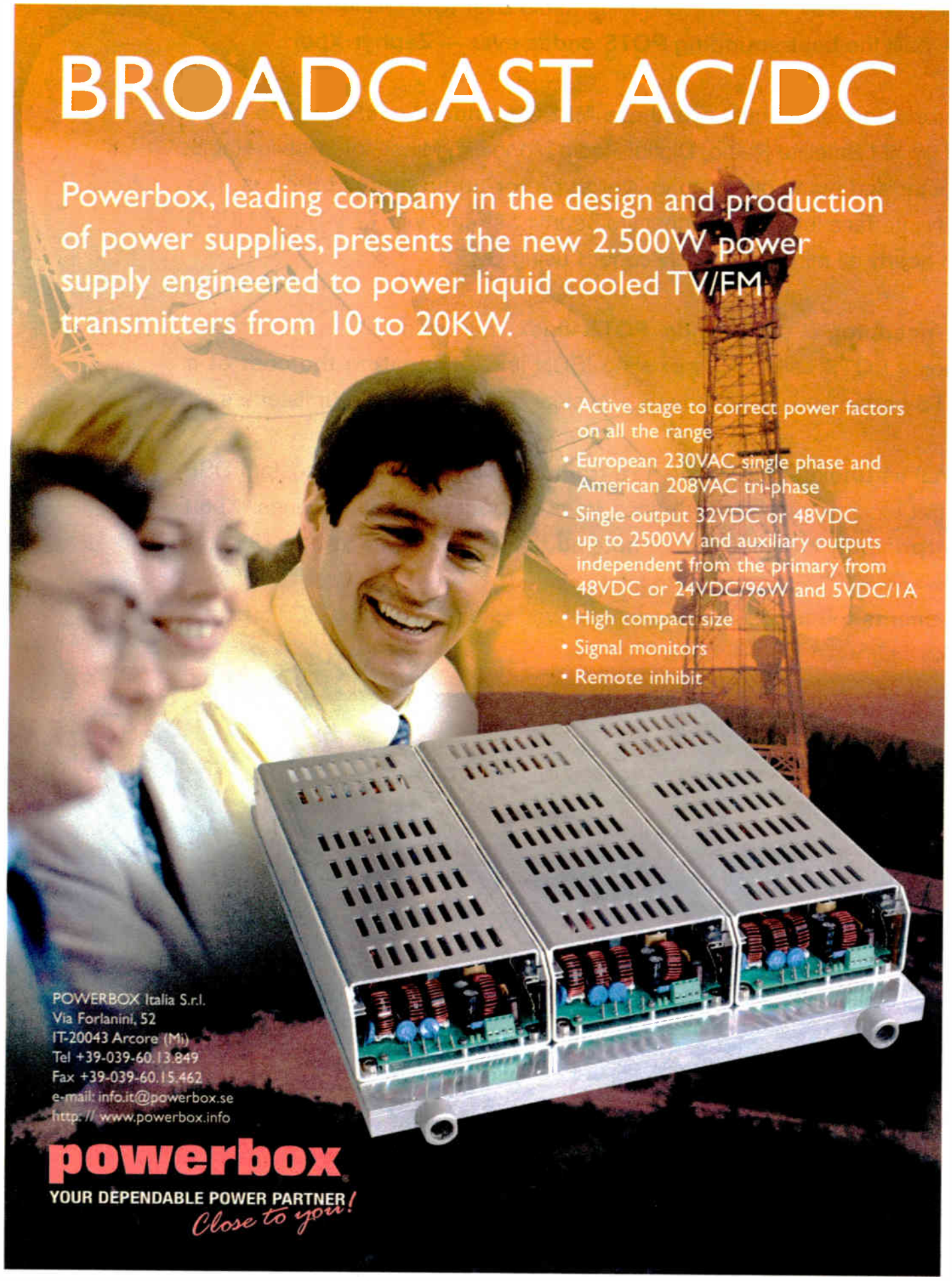
"We'll do our best to update that rule and the other media ownership rules."

Indecency and recent TV fines. (See related story, page 30): "Whenever the commission is trying to end up determining what is appropriate or inappropriate, there's inherently lines that end up being drawn. And all of that ends up involving the context for the way particular words are used or not used. ...

"Whenever you say that the context is going to be taken into account that means you're going to look at the broader use of the words and how integral they are to the underlying show; and whether or not it would have been easy to provide that same show without including the language that was included. ...

"There's more guidance when the commission has released a significant set of orders saying, 'We got thousands of complaints dealing with these number of shows, and these are the ones that we thought were problematic or inappropriate, and these are the ones that we said didn't violate our rules.' I think that's more guidance than there was before the orders."

Payola: "We do have open investigations on the payola issue and have for some time. We have coordinated and gotten information from some of the other law enforcement agencies that have been investigating this. We've opened up our own investigations. We've been in contact with many of the companies. ... The commission is going to continue to investigate it."



Newswatch

▶ Continued from page 8

The Sirius S50 allows users to capture and store up to 50 hours of Sirius content or a mix of Sirius programming and MP3/WMA files, as previously reported here.

Analysts predict about 1 million of the Sirius units will be sold in total.

The music labels believe they should receive more than the standard license fees they already receive from Sirius and XM because the devices allow users to store and playback music in any order.

RIAA Chairman/CEO Mitch Bainwol has said record labels don't want to see satellite receivers, or someday HD Radios, to allow users to cherry-pick music and bypass what would have been a music sale.

XM was due to launch portables, the Samsung Helix and the Pioneer Inno, this month. The portables combine XM service with an MP3 player and the ability to store content (RW, Feb. 15, page 3). XM was in talks with the major labels in March, the Journal reported.

XM to Debut Regional News

In late spring or early summer, XM will introduce six regional news and talk channels produced by Clear Channel. XM said the addition would complement its recent addition of Cincinnati's news station WLW(AM), also owned by Clear Channel.

Details would be announced prior to launch, XM said. NAB had no comment on XM's regional channel plan.

WLW is now the only terrestrial station airing on XM's new programming lineup, although the satcaster has aired the signals of other Clear Channel stations in the past.

The satcaster said the channels, provided by Clear Channel, would comprise a new category on its channel guide called "Regional News, Talk & Music Channels." This category will

See NEWSWATCH, page 12 ▶

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World Radio History

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World Radio History

NPR

▶ Continued from page 1

Washington, and approximately 15 technicians spread out among bureaus in New York, Chicago and Los Angeles. The American Federation of Television and Radio Artists covers a total of 375 NPR reporters, producers, anchors and editors in the production unit.

NABET members rejected NPR's final contract offer in January, which prompted the network to declare an impasse and file a grievance with the National Labor Relations Board.

That allowed NPR to begin implementing provisions of its offer, which included shifting some of the technicians work duties to AFTRA reporters and producers, said NPR spokeswoman Andi Sporkin.

An impasse

"In January we began implementation of many of the provisions in the last and best final contract offer," Sporkin said.

Shortly thereafter, AFTRA filed a grievance with the NLRB claiming that NPR management violated its contract by assigning technical duties to reporters and producers without first consulting the bargaining unit.

Those technical jobs included tape syncing, mixing audio, live host remotes and desktop recording.

Arbitrator Laurence Evans issued a decision in March saying that NPR had violated the AFTRA contract by unilaterally assigning NABET duties to AFTRA employees.

"I am directing the NPR cease and desist assigning the work at issue to the AFTRA bargaining unit no later than 60 days from now," Evans wrote in his decision.

Sporkin said NPR will abide by that decision. However, she said, the arbitrator's ruling specifically addressed AFTRA's concerns with how NPR rolled out implementation, not whether NPR had the ability to assign additional work.

"The arbitrator's decision is simply a speed bump. It changes the timetable but doesn't change our long-term needs or plans to adapt the workplace to new technologies," Sporkin said.

Mark Peach, president of NABET/CWA Local 31, said, "It's pretty clear that NPR does not want to negotiate and is more interested in just implementing these work changes."

NABET has contested NPR's formal declaration of an impasse and it too filed a grievance with the National Labor Relations Board. NABET claims NPR has bargained in bad faith. NPR vehemently denies the charge.

"Our three-year written offer in January included annual wage increases of 9.5 percent over the life of the contract, the addition of five new union staff positions, job security and a $1,500 signing bonus if the contract would have been ratified," said Sporkin.

It's pretty clear that NPR does not want to negotiate and is more interested in just implementing these work changes.

— Mark Peach, NABET/CWA Local 31

As part of the contract offer, Sporkin said, NPR sought the right to make "modest, minor changes" in some of its technical operations in Washington to take advantage of current broadcast technology.

Broadcast technicians say they feel increasingly vulnerable as NPR adopts new technologies that allow it to streamline operations. NPR's digital transition began in 1997 with the purchase of Dalet Digital Media Systems software for newsroom workstations.

Sporkin said many of the proposed workplace changes are in place at NPR bureaus and studios in New York, Chicago and Los Angeles.

Who does what?

Barbara Krieger, NABET/CWA Local 31 vice president, said NABET contractual rules apply in all NPR facilities. "However, outside of the contractual boundaries of 50 miles from NPR's Massachusetts Avenue headquarters, things such as tape syncs and some multi-mic recording are sometimes done without our technicians. Our technicians have still maintained responsibility for quality control before it makes air.

"This 'quality control' issue is one of the jurisdictional issues (NPR) is attempting to compromise," she said.

The jurisdictional flap has not created tension between NABET and AFTRA members at NPR, Peach said.

"It has, if anything, brought the two sides together. We even provided them help when (AFTRA) filed their grievance against NPR. They do not want to do the technicians' jobs," Peach said.

AFTRA officials failed to return messages seeking comment for this story.

NABET negotiators say they are ready to extend the jurisdictional flexibility sought by NPR. However, additional job guarantees are needed, they said.

"This is not a money issue. We are more interested in preserving jurisdictional work rules and jobs at this point. Giving our work away would result in a loss of money," said Peach.

NPR's technicians faced similar challenges to work assignments when agreeing to a three-year contract with NPR in 2002. When ratified, that contract gave non-technicians, including producers and reporters, the right to mix audio for air. However, all produced material still had to be reviewed by an audio engineer prior to airing. That caveat appears to be a major point of contention now.

Broadcast recording technicians currently spend approximately 60 percent of their time mixing audio at NPR, according to the network's statistics.

"NPR's latest offer did not offer any other work, or an equal opportunity for both sides (AFTRA and NABET) to share aspects of production and engineering," Peach said. "Nor does it deal with attrition or what happens if a show is cancelled."

Meanwhile, NABET has stepped up the efforts of a public campaign it launched last fall, including quarter-page ads in the Washington Post urging members of Congress to deny interviews to any NPR reporter unaccompanied by a NABET technician.

Peach said U.S. Sen. Evan Bayh (D-Ind.) reportedly refused an interview for NPR's "Day to Day" in January due to those circumstances.

NABET also is appealing to NPR listeners and sponsors to support the union while it negotiates a new contract for its technicians.

"The next step would be asking people not to donate to NPR member stations during pledge drives. We hope it doesn't come to that and that we can restart negotiations," Peach said. Such a move would be unprecedented, he said.

NPR management hopes the audio technicians will choose to revote and ratify a package that is not just fair, but substantial and unique in the current broadcasting environment, Sporkin said.

"The last, best and final offer that we made in January remains just that. The offer is still on the table," Sporkin said.

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Newswatch

▶ Continued from page 10

also include Clear Channel-programmed music channels KISS, MIX, Nashville and Sunny, plus the launch of WSIX, with country personality Gerry House live from Nashville.

XM is adding more channels in part to establish a total of 69 commercial-free music channels and make up for four Clear Channel-programmed music channels that will begin carrying commercials in May.

In March, an arbitration panel said Clear Channel has the right to air spots on those channels. The decision ended a dispute between XM and Clear Channel over the right to air commercials on those streams. XM and Clear Channel will split the revenue from the ads, an XM spokesman confirmed.

Clear Channel, along with DirecTV, General Motors and a private investment group, made a combined $250 million investment commitment in XM in 1998, before the satcaster began airing commercials on its music channels.

News Roundup

THE FCC projects it will collect nearly $300 million in regulatory fees for 2006. It has proposed an increase of just over 3 percent in fees, due between August to September 2006. The agency is asking for public comment on fees; reply comments to MD Docket 06-68 are due April 21.

STEPHEN SHENEFIELD, who helped create the first tabletop HD Radio while at Boston Acoustics, is now the senior vice president of receiver development for international satellite broadcaster WorldSpace. Shenefield was vice president of engineering at Boston Acoustics. At WorldSpace he's responsible for development, strategy and production of the next generation of WorldSpace satellite receivers.

THE FCC UPHELD a fine of $14,000 against Gibson Tech Ed Inc. of Orem, Utah, for marketing two models of unauthorized FM broadcast transmitters. The Enforcement Bureau proposed the fine last September; the FCC said in its latest decision that Gibson did not reply, so the agency issued a Forfeiture Order in March. Gibson had 30 days to respond.

THE DOJ closed two antitrust investigations into Clear Channel Communications and took no adverse actions, the company said in a regulatory filing with the Securities and Exchange Commission. The DOJ looked into whether the broadcaster had violated antitrust laws in one of its radio markets and whether Clear Channel had tied airplay or the use of certain concert venues to the use of the concert promotion services of the company's former live-entertainment business.

SENATORS Olympia Snowe, R-Maine, Max Baucus, D-Mont., and Trent Lott, R-Miss., introduced S. 2418, the "Local Emergency Radio Service Preservation Act of 2006." Among other things, if passed, the bill would require the FCC to rule within 270 days whether satellite radio companies may offer locally originated services on nationally distributed channels. The legislation is nearly identical to H.R. 998, which has now gained 111 co-sponsors in House, according to NAB, which applauded the action.

HARRIS has established a new office in Dubai Media City in the United Arab Emirates. Harris also appointed two local industry people, Jamal Khalili as systems specialist and Sohail Shafi as technical sales specialist to support the office and address what Harris sees as the increasing needs of the broadcast market across the Middle East.

— Leslie Stimson

World Radio History

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World Radio History

Workbench

Radio World, April 20, 2006

Past columns are archived at www.rwonline.com/reference-room

Failures From Wire-Wound Resistors

by John Bisset

One of the best things you can do to foster teamwork among fellow department heads is to pass on useful information. For programmers, it may be a new feature that your hard drive automation system will perform. For the sales manager, maybe it's the new strip mall that you saw on the way to the transmitter site — ripe pickin's for new spot sales.

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Ideal for a game of catch, the flexible Fling springs from its case and is thrown like a Frisbee or similar flying disc. More information can be obtained by heading to the Web site *www.flingprom.com*. Pricing information can be obtained by e-mailing *sales@flingprom.com*. Download the info and pass it on to your promotions folks. You may be pleased at the reaction you get.

★ ★ ★

Don't leave grounding for critical facilities to chance. If you're in charge of planning and constructing new studio or transmitter facilities, Lyncole Industries is hosting another two-day grounding course, this time in St. Louis, May 11–12.

The Lyncole Grounding Course covers all aspects of electrical protection, grounding, lightning protection, surge suppression and ground system testing. Tuition is usually $795, but if you mention that you read about the course in *Workbench*, a reduced fee of $695 will be charged. This discount only applies to the St. Louis course.

The company has 20 years of experience in grounding everything from computer clean rooms to communications towers. Even if you can't attend the course, head to the Web site for interesting white papers and test instrumentation.

For assistance regarding the course curriculum, or to register, call John Totten at (800) 962-2610, extension 183. More information can also be obtained at *www.lyncole.com/contact.asp*.

★ ★ ★

Robin Cross, the chief at the University of Missouri-Kansas City's KCUR, writes that the computer tech at the station, Chris Prewitt, has established an e-mail reflector for computer-related problems for broadcast. Chris' intent is to field specific

See WORKBENCH, page 16 ▶

Fig. 1: Fling one of these to your promotions director.

Fig. 2: Broken ceramic on wire-wound resistors usually indicates failure.

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World Radio History

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World Radio History

Workbench

▶ Continued from page 14

problems related to broadcasting, and not general computer problems like fixing the sales staff's computers.

Examples would be live streaming in any of its forms, podcasting, archived programs or these type of server questions. As things seem to be changing faster than the speed of radio waves, having such a resource should be helpful to broadcast engineers straddling the broadcast/IT divide.

The e-mail address is *IT4Broadcast@yahoogroups.com*. The site is *http://groups.yahoo.com/group/IT4Broadcast*.

Thanks, Robin, for helping to get the word out. Robin Cross can be reached at *crossr@umkc.edu*. Chris Prewitt can be reached at *prewittc@umkc.edu*.

★ ★ ★

David Wigfield, assistant technical supervisor at KCBS/KLLC in San Francisco, read our mention about occasionally checking transmitter bleeder resistors — or for that matter, any high-power wire-wound resistor, as seen in Fig. 2.

He was reminded of a similar problem experienced at KLLC a couple of years ago. In David's case, the problem wasn't with a bleeder, but rather a wire-wound step start resistor. Occasionally, the main breaker on their BE FM20B would pop whenever there was a quick power failure.

David's first thought was that the breaker was getting old, and needed to be replaced. Before replacing the breaker, however, they looked at the step/start resistors.

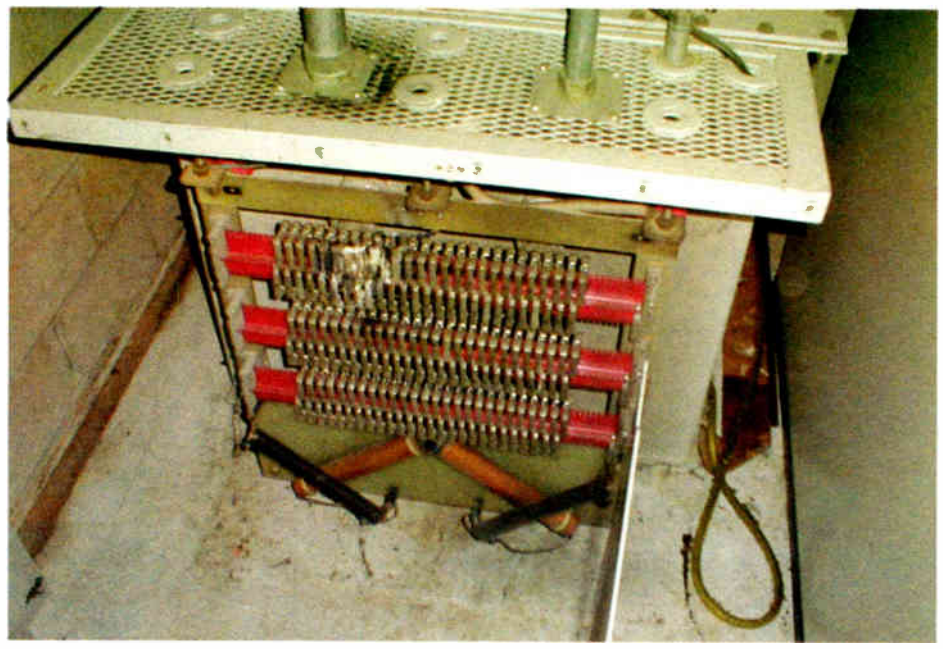

Fig. 3: Look hard enough and you'll find the cause of the failure.

Visually they looked fine. A test with an ohmmeter, however, revealed that two were open. Closer inspection after the resistors were replaced found a fine hair-line crack that was not visible when they were mounted in the transmitter.

With the new resistors in place, no more circuit breakers blew. David now makes it a practice to measure them with an ohmmeter whenever he is in the transmitter.

Good advice. It only takes a couple of minutes, and in the case of the bleeders, discovering an open resistor could save your life.

David Wigfield can be reached at *wigfield@sfradio.cbs.com*.

★ ★ ★

Laverne Siemens of Canada's Golden West Radio has been following our discussion and pictures of the solenoid breaker reset schemes with interest.

Laverne had an issue with a Continental 816R-2C a few years ago, where he could have used one of those devices. However, the reset device wouldn't have *solved* his problem. Read on ...

His site was located a full hour's drive away from the studios, and one summer the Continental's plate breaker started tripping. There was no backup transmitter in place, so after a couple of break-neck trips across the back roads to get the station back on the air, Laverne and his staff knew they could no longer write the breaker trips off to random power blips.

The engineering staff suspected the problem was heat-related and that it likely had something to do with the power control circuitry. To further investigate, they took a hair dryer to the unit.

If you stand on a step ladder at the back of the transmitter, you can direct the hot air through the top-panel ventilation grid work. There's no need to place hands inside the transmitter; from this angle, it's easy to hit the power control SCRs with the hot air. This procedure is performed while the transmitter is on the air. After just a few minutes of applying the heat, they could get the breaker to trip.

A few tries later and the problem was narrowed down to the exact SCR. Laverne and his staff concurred that the SCR was breaking down and that the excessive heat was causing it to misfire, which in turn caused the excessive plate current draw.

The SCR was replaced and the breaker hasn't tripped since.

Laverne Siemens is director of engineering for Golden West Radio and can be contacted at *lsiemens@goldenwestradio.com*.

Laverne's diligent searching eventually paid off in disclosing *why* the transmitter was shutting down. Look closely to diagnose the failure. The burned rectifier stack in Fig. 3 was obvious when the front cover of the HV supply was removed, but it might have been the smell or the smoke marks on the top that led the engineer to this problem.

John Bisset has worked as a chief engineer and contract engineer for more than 30 years. He is the northeast regional sales manager for Broadcast Electronics. Reach him at (571) 217-9386, or jbisset@bdcast.com. *Faxed submissions can be sent to (603) 472-4944. Submissions for this column are encouraged, and qualify for SBE recertification credit.*

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MARKET PLACE

Snaptune Links Listeners To Music Buying

The Snaptune One is touted as a software product that "downloads" songs, talk shows, interviews and live sessions from FM radio to a PC. "Snaptune One doesn't just record the radio; it isolates and identifies complete songs, talk shows and other interesting segments automatically," the company trumpets.

Snaptune One — Enjoy finding new music

Users pick favorite stations; the Snaptune One displays a list of songs playing as it finds them. Users can sort, play, write, burn or transfer them to an iPod or other media player.

Co-founder Ian Mercer told Radio World that the product is intended for consumers but has had interest from station managers who wish to monitor market signals. "Snaptune can provide unique information about what's playing on the radio," he said. "Over time, as it 'learns' a radio station, it becomes even better in many cases than the commercially available monitoring services."

The system works with tuner cards like those in most Media Center PCs and with external USB FM tuners like the Griffin radioSHARK. It can work with a line-in cable connected to a radio or FM receiver.

The company says it uses pattern matching to find songs without reference to play lists or other external data.

Snaptune One can podcast across a home network to iTunes on a laptop and from there onto an iPod; so an iPod can be ready each morning with news and songs found during the night.

The company works with online stores to provide a link to purchase albums related to songs it finds. Album covers and reviews are shown in the user interface. Snaptune plans to add links for song downloads, ring tones and concert tickets.

Two versions are available in beta. One is free; it can write or transfer 20 songs. A premium version is $39.95 and can export an unlimited number of songs in WMA or MP3 format. Both versions will be upgraded automatically to the final version when available.

For information contact the company in Washington state at (425) 256-2858 or visit www.snaptune.com.

World Radio History

"Showcase studios take time, right? Not this time."

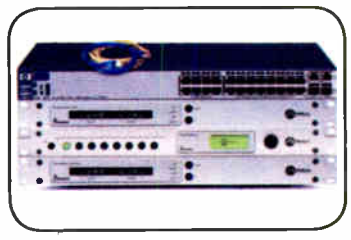
"'Challenging' didn't begin to cover it. Our showcase studios were to be located in the high-visibility West Edmonton Mall. With only six weeks 'til our on-air date, our challenge was finding a manufacturer we could trust to deliver on our timeline.

"We'd almost decided on one of the traditional console/router companies; working 25/7, we could *barely* make our deadline. Then we found out about Axia IP-Audio networks.

"Axia gear goes together with RJ-45 connectors, so adding sources to the network takes almost no time. A few clicks and you're done! That produces a substantial cost reduction in terms of wiring from room to room.

"And because the Axia system routes audio using ordinary Ethernet instead of expensive mainframes, the ease of adding to the network allows it to grow and change dynamically with our operations.

"When we decided to go with Axia, the router guys had a fit. They actually tried to tell us that the IP-Audio network would catch viruses! We laughed for days about that one.



"Our studios were finished with time to spare. The installation came together really well, and since going on the air we've been trouble-free.

"We've had several announcers tell us how much they love working with the Axia surfaces and how easy they are to operate. It's great to be able to setup and save multiple configurations that can be recalled at a moment's notice.

"Our experience with Axia has been all positive; we've had no audio glitches or dropouts whatsoever. I don't know why we hadn't gone this route earlier. Where we're installing new equipment, we're onboard with Axia."

— Owen Martin, Director of Engineering, Newcap Radio, Alberta, Canada

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World Radio History

News of recent equipment contracts and facilities projects. Information is provided by suppliers and/or buyers. E-mail news to radioworld@imaspub.com.

Consulting engineer **Jay Rose** switched mic models for Las Vegas station **KVEG(FM),** now using the **Heil Sound** PR-40. The station owner is Will Kemp. The manufacturer says the station eventually plans to have at least 10 Heil PR-40s. The mics are distributed by **TransAudio Group.** Rose made the choice after talking to **Leo's Pro Audio.** ...

XM is using four **Zandar** FusionPro 1RU MultiVewers for digital signage and display of multiple images including live video, audio and computer signals. The project was by systems integrator **On Location Visuals.** Two are in front of DJ booths at the Jazz station at Lincoln Center in New York. A unit in Washington drives a display in the XM lobby; another will be installed in the control room. The lobby setup shows the inner workings of the station. In New York, a transparent screen floats in front of the space-limited DJ booths. ...

ATA Audio recently sold Prontonet IP codecs via **Broadcasters General Store** to **ESPN Radio** and **WFSU-Florida**

Jay Rose and Bob Heil at KVEG. The Las Vegas FM switched to Heil PR-40 microphones.

State University. Separately, **KTKT (AM)** in Arizona, **Real Presence Radio** in North Dakota and **The Ackley Group** in St. Thomas recently purchased Prontonet IP codecs. ...

Kentucky Web hosting ISP **Win.Net Internet** said listeners can hear **Public Radio Partnership** stations on their PCs using enhanced audio streaming capabilities it provides. The streaming is available for FM stations WFPK, WFPL and WUOL. The Public Radio Partnership stations broadcast from a facility in Louisville, Ky. ...

Wheatstone reported the installation of a Generation 6 On Air Control Surface at **WDEL(AM)** in Wilmington, Del. The order includes one Bridge SAT cage, prewiring and custom guest panels designed to insert into WDEL's existing furniture. The G 6 Surface and Satellite Cage integrate into the station's Bridge Router system. The facility planned an additional G6 Surface and Satellite Cage for sister FM station **WSTW.** ...

Telos Systems said **WETA(FM)** in Washington is using NewScreener call screening software for its call-in shows. Telos is the North American distributor for the product, which integrates with Telos TWOx12 and Series 2101 broadcast phone systems. ...

Omnirax reported the completion or pending completion of projects including four rooms of on-air and production cabinetry for **Z99/Rooster 101** in the Cayman Islands; two for **WZBA(FM)** in Baltimore; two rooms for **KYSL(FM)** in Frisco, Colo.; four rooms for **KNBA**

Zandar FusionPro MultiVewers are used by XM for digital signage and display of images including live video, audio and computer signals. One is hanging at right

(FM) in Anchorage; four rooms for **WRBZ(AM)/WDNC(AM)** in Raleigh, N.C.; two for Clear Channel station **KNEW(AM)** in San Francisco; six traffic desks for **Metro Networks** in Jacksonville, Fla.; 10 production workstations for **Univision Radio** in Houston; seven rooms for **KPAM(AM)** in Portland, Ore.; and three rooms for **KCWU(FM)** at Central Washington University in Ellensberg, Wash. ...

IDC said its PROFLine subsidiary in Europe received an order from the **World Family of Radio Maria** to supply equipment for a major satellite radio network upgrade. The value of the order from the Catholic religious network was put at $1.25 million Canadian, roughly $1.08 million U.S. The order calls for the delivery of Profline satellite receivers based on the Digital Video Broadcasting (DVB) standard and designed for the radio broadcast market. ...

Harris Broadcast Communications Division said **Simmons Media Group** in Salt Lake City is using Intraplex SynchroCast digital multiplexers to interconnect three stations. The group added SynchroCast to FMs KEGA, KJQN and KFMS and "achieved dramatic gains in signal coverage, improved business operations, as well as phone and IP service to remote transmitter sites." The system interconnects the three stations with the Salt Lake City headquarters; it also uses seven frequency boosters per station to cover shadow areas in the mountainous terrain. Scot Mathews is DOE for Simmons Media in the market. ...

Crawford Broadcasting is using five **Omnia**-5EX audio processors at its Denver cluster, with plans to add two units this year as a part of its transition to digital radio. Ed Dulaney is chief for the

Simmons Media Group in Salt Lake City is using Harris Intraplex SynchroCast digital multiplexers to interconnect three stations.

Colorado region. ...

KTIS(FM) at Northwestern College Radio in St. Paul recently acquired a **Broadcast Electronics** HD Radio transmitter and planned multicasts, one for young listeners and another for 60+ listeners. The general manager is John Engen. The religious station ordered an FMi 703 HD Radio package including transmitter, digital FM exciter and HD Radio signal generator; it will add an IDi 20 Data Importer for multicasting. BE said Northwestern planned to roll out HD Radio and eventually HD2 multicasting to stations in Duluth, Fargo, Madison, Waterloo, Des Moines, Sioux Falls and Sarasota. ...

KJNP in North Pole, Alaska, turned on a new **Nautel** V10 FM transmitter this winter. The country/gospel station is operated by Calvary's Northern Lights Mission and serves interior Alaska with the help of translators outside the reach of the main station. Gen Nelson is president, Roger Skold is GM and Redgy Swedberg is chief engineer. Walt Lowery of **RF Specialties of Washington** handled the sale for Nautel. ...

The Nautel V10 during installation at KJNP(FM). The site is on Ester Dome west of Fairbanks, Alaska.

Also on that project, **Jampro Antennas** said KJNP ordered a JHPC antenna from Jampro and **RF Systems Inc.** The antenna is the medium-power version of the Penetrator model. The supplier said KJNP specified the JHPC-5-RFR.9-R model because of its bandwidth, leaving open the option for later HD Radio using interleaved, low-level or high-level combining.

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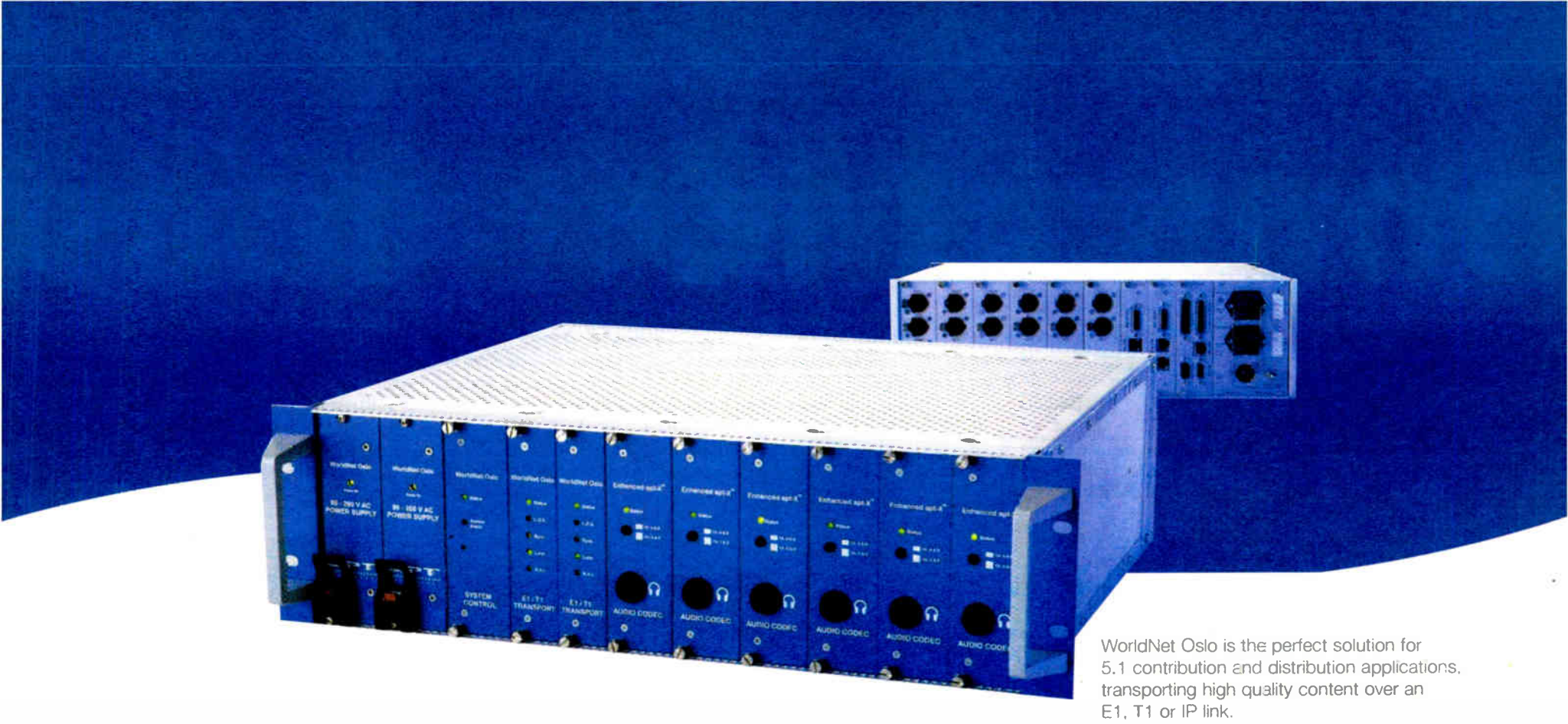

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World Radio History

HD

▶ Continued from page 4

part can win the day. But if HD Radio is judged technically good enough, the "trinity of requirements" for success still apply: cheap, available receivers; new, exclusive and compelling content; and heavy promotion from all quarters.

"Even then, broadcasters can't do it all themselves, but they can go pretty far with content and promotion," he said. "So there are variables at two levels, neither of which is yet settled."

A third party weighed in.

"I recently ordered a Recepter from Crutchfield and got it in seven days," he told me (before the company announced its antenna "fix"). "There was an ominous back-order message that I got initially, and then the radio just arrived. I'm hopeful they can start shipping them immediately to overcome the 'no-one-can-buy-these-things-yet-because-no-one-has-them' problem. Boston Acoustics certainly has an interest in overcoming this.

"Crutchfield is offering a $20 rebate on the Recepter, so the new consumer cost is $279," he continued. "That is far more attractive than the original listing of $500."

His audience — public radio listeners — has shown itself willing to pay $350 for the Bose Wave radio without CD player, comparable to the Recepter; so he thinks the price point is fine for non-commercial stations.

"The sound quality is quite competitive with the Bose, if not better; the Recepter has real stereo because of two speakers vs. the Bose single-box approach."

He feels the factors of price and availability have mostly been addressed.

"Our local Tweeter audio/video store is well aware of the digital Recepter, and on my last visit there the salespeople knew of digital HD and were dying to get their hands on it. Ours is a good market to sell these radios because there is a fairly good concentration of HD stations, and also a fair selection of HD2 stations. Tweeter is a national chain so this means the attention is out there now in retail outlets; it just hasn't reached down to Best Buy or Circuit City yet," he said.

"A year from now it needs to be down to that level. And of course, availability in cars is essential."

As to reception problems, this writer hadn't had that experience with two different Recepters.

"As table radios they work as well as anything I've ever used here, up to that $300 price point. The Recepter in fact works better than most. If you can get the digital, you can get the HD2 — some folks may assume it affects the reception but it doesn't."

Sound quality, he continued, is "far superior" to his XM units, which he says still present substantial artifacts on voice material. He doesn't think much of the quality of the XM receivers; he has reception problems with those and has to install an external antenna to make it work when it gets flaky. And this is in a market with a significant repeater infrastructure.

"Add to that the negatives of monthly subscriptions and reception latency — it takes a little while for a channel to come in when you retune, similar to HD — and you have a technical package that features many of the same problems as HD."

His point: consumers are willing to pay for XM, technical warts and all, in order to get the programming.

Christmas season

He takes a realistic approach to the question of multicast content.

"Even here, where there has been an enormous push to deliver HD2 programming, I have found channels that change format, go blank or work perfectly well depending on the day I listen," this third writer said.

"This is a broadcaster problem, and one that they are working hard to get ready for prime time. I can get about eight of them as of a couple of weeks ago. I know that there are two key stations in the market that are furiously trying to roll out their HD and HD2 by NAB," he stated.

"I'm now hearing on-air promotions of HD Radio on a number of stations, so they are starting to build awareness of the fact that the HD2 will be non-commercial music," he said. "I think the realistic goal for our market is to have widely available receivers and programming in place for the Christmas market, starting in September. I think they will make it."

He feels new content drives early adopters more than any other selling point.

"That is how it played out in United Kingdom, anyway. The different feature in the U.S. is the fact that XM and Sirius got there first and have made pretty good strides at getting listeners to adopt the new technology in order to get a new range of content. In the U.K. they had years to come around to the need to offer something different. HD doesn't have the luxury of that extra time."

This observer agrees that the next 12 to 18 months are critical. "I would observe, though, that Ibiquity and the broadcasters have shown themselves to be fairly flexible in fine-tuning their approach; the recent push for HD2 and the codec changes are good examples of late-in-the-game adjustments.

"I wouldn't count them out just yet; and if other issues come up they should be able to make further adjustments as needed — like including a Terk-powered antenna with every Recepter? There's a no-brainer; XM is already doing this with their boombox radios.

"This time next year," he concluded, "we will have a good idea of whether or not it is going to work."

Your thoughts? Share them with me at *radioworld@imaspub.com* or write to the address on page 46.

World Radio History

Broadcasters, Pick Your Poison

Is Internet Radio or Satellite Radio The Greater Threat — And to Whom?

by Skip Pizzi

Many of the competitive concerns on broadcasters' minds today involve fear of satellite radio's further incursion into a marketplace formerly held exclusively by terrestrial AM and FM stations.

It's easy to downplay the similar threat from Internet radio, because it seems like such a different animal. Internet radio also occupies a different venue — given its predominant usage on computers today — whereas satellite radio lives primarily on a multiband (AM-FM-satellite) receiver; so its directly competitive nature to traditional radio is overt and in plain sight. Further, satellite radio is actively stealing talent and other content (such as major league sports), and even some advertising dollars, from terrestrial radio.

There is continuing, slow growth among devices that serve as 'Internet radios,' including the Roku Soundbridge.

In its stealthy way, however, Internet radio continues to pose a threat, which ultimately could deal an even more damaging blow to the prospects of terrestrial radio in a digital world. Yet if properly managed by broadcasters, Internet radio can become an ally.

The enemy of my enemy ...

One of Internet radio's biggest advantages over satellite radio is the lack of a requirement for any new hardware purchases by consumers.

Internet radio leverages the world's existing personal computers, and — although it works on any Internet connection, including dialup — the rapidly growing worldwide broadband penetration has greatly increased the value of Internet radio. Most Internet radio services also do not require a subscription, making them far more accessible for sampling (and ultimately more palatable) to traditional radio listeners.

While the old canard that a computer doesn't make a very good radio (or book) remains true, the proliferation of laptops and WiFi have lessened the power of this contention somewhat through their closer approximation of traditional radio's portability. Nevertheless, radio still holds a considerable edge in form factor and cost-effectiveness when it comes to mobility.

There are also more than 2 billion radio receivers out there, a lot more than there are computers. But when it comes to satellite or HD Radio, consumers need to buy new equipment from scratch, and there are a lot more computers in use that can hear Internet radio today than there are satellite or HD receivers. (Consider that HD Radio is an *upgrade* process for most broadcasters, but it's a *replacement* exercise for listeners.)

By such "availability" analysis, it's clear that Internet radio is in the strong second position, with satellite radio lagging behind. For now at least, HD Radio isn't even on the chart yet.

Then there is the appliance factor. Notwithstanding the point just made regarding Internet radio's leveraging of existing hardware, there is continuing, slow growth among devices that serve as "Internet radios." Many of these double as MP3 players, either as audio-only nodes of a home media network (like the Roku Soundbridge), or as standalone WiFi radios (like the handheld Music Gremlin, or British manufacturer Acoustic Energy's tabletop design, the AE WiFi Radio).

Thus the Internet radio trend also leverages the popular movement toward digital music, both in hardware and at service sites.

This latter category has come a long way since Kerbango, but the concept remains an appealing one. You don't need a full PC to receive Internet radio, just a barebones device that can access one default Web site (the device maker's

See THREAT, page 22 ▶

The Big Picture

Photo: Gary Hayes, BBC

by Skip Pizzi

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World Radio History

Threat

▶ Continued from page 21

master site), which in turn populates the device's limited display with navigation info on the current list of streaming stations available. The device can then be "tuned" to any of those services much like a traditional radio.

What's really different about today's latest models is their broadband, and particularly, their wireless capabilities, bringing them ever closer to duplicating real radio's functionality. It's conceivable that the differences between regular terrestrial broadcast radios and Internet radio appliances will continue to dwindle until they are negligible, and most listeners don't even notice the difference. The coming of WiMax and Mobile WiMax service may speed this transition.

Services proliferate

Again in sharp contrast to satellite — or even terrestrial — radio, the Internet is a wide-open marketplace, allowing many operators and types of services to coexist.

The range that exists today is enormous, from the simple duplication of terrestrial and satellite radio streams (the latter by subscription), to the creation of Internet-only streams (by on-air broadcasters as well as Internet-only providers — from all over the world), to the development of large aggregation sites with dozens of streams. The latter approximate the satellite radio model, with some even duplicating satellite radio's subscription model. There are also interactive and peer-to-peer distributed streams that serve as hybrids between radio and on-demand services.

An important component of all of these approaches is the incremental growth opportunity they afford to their providers. Internet broadcasters and content aggregators can build their online radio services gradually, adapting to fast-changing audience needs and trends, and adjusting business models accordingly. Therefore growth or tweaks of an operator's online offerings can occur continuously, and without playing the zero-sum bandwidth game required by IBOC multicasting, or plunking down the vast upfront sums required to launch a satellite service.

Eventually, an operator may "get it right" and hit a sweet spot that optimizes audience satisfaction with revenue-generating potential. (Remember that it took broadcast radio a while to find its proper fortunes, too.)

Another key factor: Real-time streaming audio is only one mode of service available on Internet radio. On-demand streaming, downloads and podcasts are also possible, with free, ad-supported, a la carte purchase or subscription models applicable to any or all of them.

This high degree of flexibility and scalability may become the greatest advantage of Internet radio, and could ultimately bring it to a dominant position in the digital media game. In fact, some of the most popular online radio streams are ancillary services found at online music sites. Users discover these services when they come to the sites to purchase music, and site operators use them to introduce new music to customers.

Note that satellite radio operators are now trying to enter *that* game from the opposite direction, by offering devices and services that add music recording, downloading and purchasing options to their suite of services — albeit incurring the wrath of the recording industry in the process.

The good news for terrestrial broadcasters is that they can easily hedge their bets and get into the online services game alongside Internet-only providers, while using their on-air signals for cross-promotion of any Internet radio channels they choose to offer. (Of course, the Internet-only providers do not have the inverse option.)

On the other hand, satellite radio is largely closed to any such terrestrial broadcasters' participation. But as Internet radio's star rises, it naturally thwarts satellite radio's growth. Thus by joining the Internet radio party, terrestrial broadcasters may indirectly keep the competitive forces of the Death Star at bay.

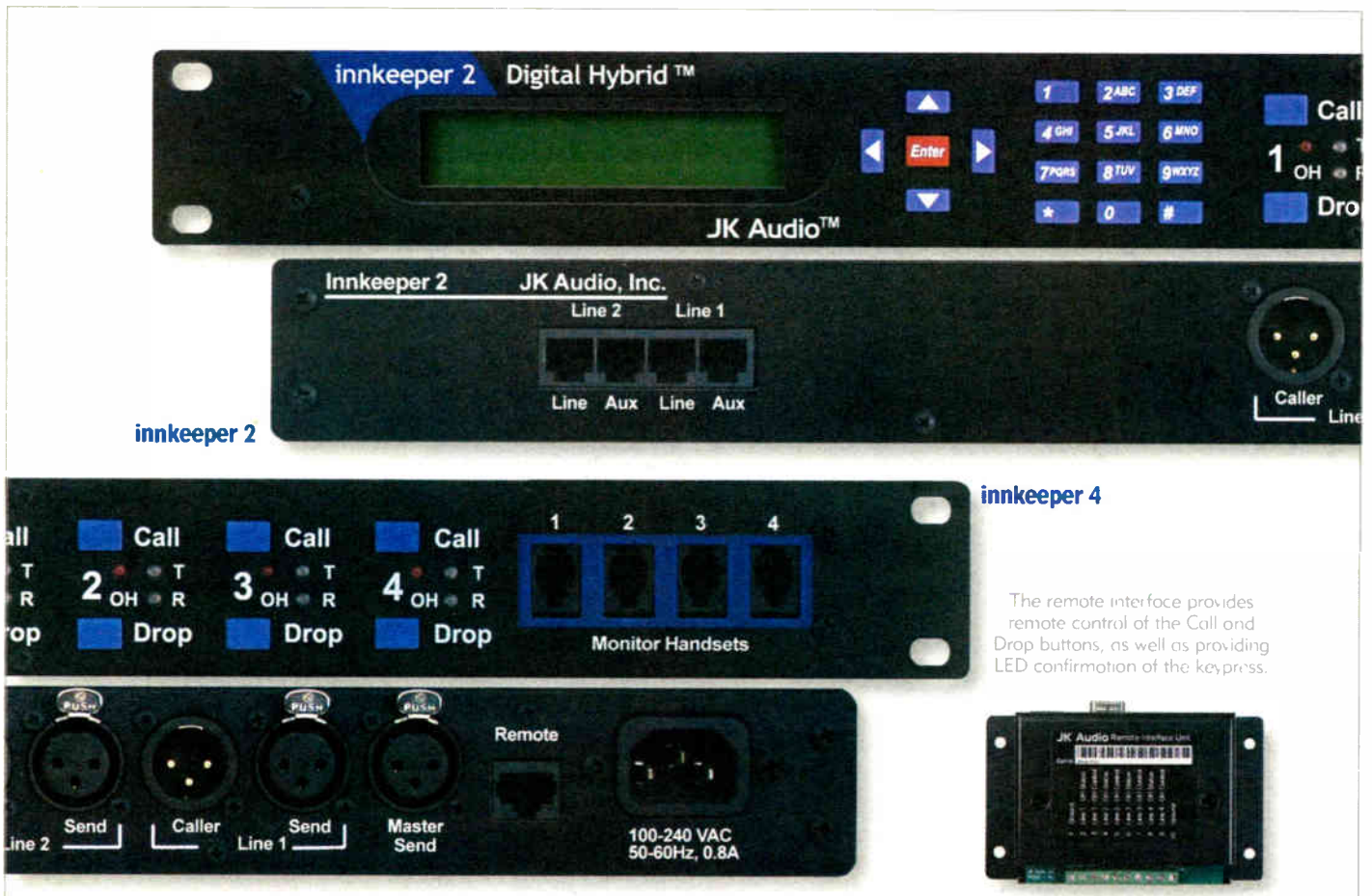
Ultimately, Internet radio may therefore have more negative impact on satellite radio than it does on terrestrial radio. (While both satellite and terrestrial radio can use Internet radio for ancillary purposes, the free culture of the Internet is far more congruent with broadcast radio's free access than it is with the subscription model preferred by satellite operators.)

Thus local radio should explore the ever-expanding Internet radio environment. If its success continues, terrestrial radio broadcasters could share its wealth, and protect their businesses' future stability in the bargain.

Comment on this or any article to radioworld@imaspub.com.

Skip Pizzi is contributing editor of Radio World.

By joining the Internet radio party, terrestrial broadcasters may indirectly keep the competitive forces of the Death Star at bay.



The remote interface provides remote control of the Call and Drop buttons, as well as providing LED confirmation of the keypress.

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innkeeper 2 & 4 multiple digital hybrids kinda redefine the entire concept of "work..."

There are times when a single digital hybrid just isn't enough, but rack space is at a premium. No sweat. Innkeeper 2 and innkeeper 4 squeeze two or four independent digital hybrids (respectively) into a 1U rack space.

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Innkeeper 2 and 4 feature Auto-Answer/Auto Disconnect for use in on-air applications such as telephone interviews and talk shows as well as behind the scenes applications like intercom, monitoring and conference room full duplex applications.

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World Radio History

MARKET PLACE

Armstrong Has Hybrid Digital/Analog FM Translators

Armstrong Transmitter has introduced FM translators intended to help stations planning to go digital. They begin shipping in June.

TRX-HD Series FM translators are "designed to transition with a station as it journeys from analog-only broadcasting to the digital hybrid mode and eventually to broadcasting in 100 percent digital," the company stated.

The TRX-HD receives an FM station's signal payload over the air, including its HD Radio Digital component. The content is transferred to the TRX-HD transmit side for retransmission on the translator frequency.

"The TRX-HD Series allows a stations to operate their translators within the confines of their HD Radio licensing agreement because it does not take signal back down to base band audio," stated Sales and Marketing Manger Ernie Belanger.

"There is no longer a need for translator owners to purchase an analog translator now, only to find themselves forced to replace in a year or so, when a station begins broadcasting in the hybrid mode and eventually the all-digital mode," Belanger said.

The series is available at three power levels: 10, 50 and 100 watts in hybrid digital mode. Higher hybrid power levels are achieved by adding an Armstrong solid-state

amplifier. Units can be used as analog-only systems at 30, 150 and 300 watts for stations that have begun broadcasting an HD Radio component.

Features include front-panel frequency agility with LCD screens that display the parameters of the receiver and transmitter sections. Parameters are available via RS-232 and DB-25 connectors on the rear panel for remote control.

For information contact the company in New York at (315) 673-1269 or visit www.armstrongtx.com.

Powerbox Debuts Transmitter Supply

European power supply company Powerbox is offering a line of 2,500 W power supplies compatible with European 230 V single-phase or American 208 V AC three-phase. They are suitable for use with FM transmitters from 10 to 20 kW.

The power stage uses full-bridge technology and offers constant power output protection, able to supply 75 A subdivided in four separate channels from 32 VDC.

A metal sheath is used as the principle radiator, coupled with the customer's water-cooled heat sink. "The power supply unit guarantees two auxiliary outputs independent from the primary output from 48 VDC/2.5 A and 5 VDC/1 A respectively," the company states. "The product is also protected from overloads, short circuits, over voltage and overheating."

For information contact Powerbox Italia Srl, part of the Powerbox Group, at 011-39-039-60-13-849 or visit www.powerbox.se.

NEWS WATCH

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Heil Sound is sponsoring the annual Amateur Radio Reception at NAB again this year.

"Bob and Sarah Heil would like to invite any and all amateur radio operators who will be in attendance at the NAB show to join them for this annual fun event," the company said in its invitation. "Plenty of food and beverages after a long day on the convention floor."

The reception is two hours and takes place in Ballroom B of the Las Vegas Hilton, next to the convention center, from 6 to 8 p.m. on April 26. A show attendance badge gains admittance.

For information call Bob or Sarah Heil in Illinois at (618) 257-3000 or e-mail bob@heilsound.com.

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World Radio History

HUMOR

Analog CD Recorder: Best of Both Worlds

by Jack Cheese

Since the compact disc debuted in the early 1980s, the analog LP record has waned in popularity. Although digital recording has replaced the analog methodology that reigned supreme for nearly 100 years, there are still plenty of diehards who are convinced that analog recordings are a superior product. Witness the variety of analog mic preamps and audio processing gear (using tubes) that are so popular in otherwise all-digital recording facilities.

Still, the CD can't be beat for its compact size, ruggedness and convenience. If only there was a way to "marry" the CD format to analog recording.

Well dear readers, now there is. It's the Emile Berliner Analog Disk Gramophone CD Recorder from Gakken Enterprises of Japan.

The folks at Gakken have created a fine product from plastic, a sewing needle, a paper cup and a simple DC motor.

Nary a transistor

The Disk Gramophone is an ingenious product that combines the utility of the CD with the audio quality of analog recording. Not only does the unit make analog recordings on any compact disc, it does so without any active electronics in the signal path, producing absolute sonic accuracy that's sure to please even the most golden-eared audiophile.

Borrowing some technology from the products namesake, Emile Berliner (the man who invented the flat record, a major improvement over Edison's cylinder), Gakken's Berliner Gramophone utilizes acoustic-powered recording and playback; nary a transistor, IC nor vacuum tube is present in the machine. In fact, the only electrical circuitry consists of a simple DC motor that drives the turntable, powered from a pair of "D" batteries.

Gakken calls the product "Otona no Kagaku," which means "The Sophisticated Science Kit Series for Adults." The Gramophone is a kit, and must be assembled before use. A clearly written and illustrated manual (in English) is included. It took this reviewer about 2 hours to build the kit.

The unit is similar in appearance to acoustic gramophones of the early 1900s, and is fabricated largely from plastic. The turntable is the same size as a CD, and has a rubbery coating to prevent the disc from slipping. A simple slide switch controls the turntable motor, which drives the turntable via a rubber belt.

Audiophiles have known for many years that a belt-driven turntable produces superior audio, and the Berliner Gramophone spared no expense in this aspect of its design.

Professional disc recording lathes use a precision feed screw mechanism to advance the cutting head across the disc while recording, thus producing evenly spaced grooves. This is an area of the machine's design that produced some head-scratching.

The Gramophone does utilize a feed screw, which is driven by the main motor through a reduction gear train. This would allow for even groove spacing, except that the recording head is able to pivot and swing freely, negating the effect of the precision feed screw mechanism.

After deep thought, some calculus and the application of a quadratic equation, a solution was found. The unit was modified with the addition of a 1/8-inch hole drilled into the cutting head's pivot. A 1/2-inch #4-40 screw inserted in the hole would essentially "lock" the cutting head in place during recording; removing the screw would restore its ability to pivot during playback. Problem solved.

High SPL

Once the Gramophone was assembled and modified, audio testing began. The unit was set up on the test bench, with the recording head's paper cup microphone facing a standard 4-inch paging speaker. The speaker was connected to a 50-watt amplifier that could be fed with either test tones or program audio.

The supplied sewing needle was inserted into the hollow "stylus holder" tube, which is affixed to the acoustic recording/playback diaphragm. The movable weight on the cutting head that allows setting the proper stylus pressure ("high" for recording, and "low" for playback) was set to record.

With a blank CD on the turntable, the motor was started and recording of some test signals began. We started with a frequency sweep from 100 Hz to 10 kHz. Next, some program audio was played from the speaker, and recorded to disc. (The average power to the paging speaker was about 25 watts, producing rather high SPLs in the lab.)

The unit recorded at a fixed pitch of about 90 LPI (lines per inch), cutting a groove starting from the outside edge of the CD (contrary to a CD, which is recorded beginning at the inner diameter). The Gramophone uses Constant-Angular-Velocity (CAV) recording, with the CD spinning at a constant 80 RPM. This yielded about 2 minutes of recording time on one side, nearly equivalent to the time limit of a 45 RPM record.

Once a few test recordings were made, the unit was configured for playback: the tracking weight was moved to "low," to reduce groove wear when playing the disc. The paging speaker was replaced with a Shure SM-7 studio mic, connected to the inputs of a Hewlett-Packard model 339A Distortion Measurement Set for accurate measurement of playback audio.

First the frequency response was measured. It was within 18dB from about 1 kHz to 2.3 kHz, with virtually no response outside of those band edges. Distortion was generally under 60 percent, depending upon where the stylus was on the disc. Inner-diameter grooves produced slightly higher distortion readings. The noise level was about 10-12 dB below peak signal level, with some audible "flutter."

We suspected that the turntable drive belt may have had a few flat spots, due to being packed for several months in a small plastic bag.

Appropriate uses

After static tone tests, several music tracks were played back. The Emile Gramophone did best with musical passages that weren't overly compressed or processed, e.g., solo instruments with little accompaniment. Tunes that were heavily layered with numerous instruments and vocals were more difficult to reproduce.

In many cases, it was actually possible to determine the title of the song being played. In other instances, the listener had to be told what had been recorded to assist in picking out the melody.

The Gramophone did a fine job within its limits, but Phil Specter "wall-of-sound" mixes should be avoided.

The unit played several CDs with very little groove-skipping. The turntable speed remained steady; dozens of discs were recorded and played without any sign of battery failure.

Because the Gramophone is self-contained (no microphones or mixer needed), it would be ideal for on-location recording of any sound source that's compatible with the input sensitivity of the acoustic recording head (e.g., jack hammer, jet aircraft engine, Rolling Stones concert).

The folks at Gakken have created a fine product from plastic, a sewing needle, a paper cup and a simple DC motor. The machine has even received the ultimate endorsement: kudos from Mr. Oliver Berliner, the grandson of Emile Berliner himself. The Emile Berliner CD Gramophone would be an excellent addition to any collection professional audio recording gear. They are available for about $75 from various eBay sellers.

Jack Cheese, former owner of KCHZ(FM) ("K-Cheese"), has been in broadcasting since 1964 when he built his first Knight Kit AM broadcast transmitter at age 12. It still works, and so does he.

PS If you find a Berliner CD Gramophone on eBay, be sure to let us know.

World Radio History

Omnia – Top FM Processor for HD Radio

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TASCAM

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World Radio History

The Three Rings of Service Support

Can the Broadcast IT Facility Rise to the Management Level of a Well-Run Circus?

by Bill Eldridge

In the March 1 issue, the author presented the third in a multi-part series on IT Service Management. The series continues here. Readers can review the series at www.rwonline.com. *Click on the tab IT Service Management.*

Over the years I've heard (and occasionally referred to) the workplace as a "three-ring circus."

Having seen a few circuses lately with my kids, enjoying the well-coordinated changes between acts, the fluid choreography between performers and support crew alike, the attention to detail and the perfection that comes with practice, I've come to look at three-ring circuses with much more respect.

At a minimum, the tightrope is kept in good repair, the lions are always fed and the trapeze artists discuss changes before they go on — a sense of priorities that may not be matched in a broadcast facility.

In this installment on IT Service Management (ITSM), we look at three rings of Service Support — Configuration, Change and Release Management — to see if the broadcast facility can rise to the level of a well-run circus.

Haphazard

The introduction of IT equipment and services into broadcasting is often a haphazard process — old-style tape decks exist side by side with new digital consoles, analog processes painfully replaced by digital ones.

Even where new facilities are created from scratch, inventories may soon be out-of-date, or tracking systems may not be geared towards what is useful.

In keeping with the business focus of ITSM, Configuration Management — tracking the infrastructure, processes and capabilities in the facility — should first address the business case and planning of an organization.

This takes several angles — long-term capabilities and maintenance, financial planning, emergency recovery, and daily production — but the information concerning these needs to be available. But if configuration chaos rules and there are no obvious shared qualities across systems, it's hard to plan.

Unfortunately, IT systems contain an illusory bit of cross-compatibility. Whereas hardware-based broadcast systems contained relatively true-to-self model numbers, the differences between "similar" x86 PCs and Windows versions are substantial.

Not only might replacement parts be different between models, changes in software drivers for network cards or USB devices might break audio software in the process. Changing from Windows 98 or 2000 to XP is even more drastic, and with normal office desktop functions mixed in with broadcast systems, it's easy to reach the point where any change at all is a scary step into the unknown. Even black box equipment can contain different chip versions on the same model, while digital disk or tape formats go obsolete much faster than analog tape.

The first step to handling this chaos is to get a grip on what matters — detailing and managing the facility's Configuration.

Subsystems

Equipment needs to be catalogued not only with respect to model, parts and purchase date, but also in regards to performance and function. IT and network systems are typically not stand-alone — they interact as subsystems, such that the ways and formats in which they communicate need to be noted. Do not ignore human factors. Appropriate noise levels, ease of usage and availability at peak times in the day are just some of the elements.

As usage of IT and the Web grows in broadcast, they frequently have their own departments — with an increased lack of communication with broadcast and production. Improved documentation and process understanding become crucial to effective cooperation.

If problems or observations cannot be addressed right away, they should still be noted so that later facility enhancements take them into account. It is unlikely that

See CIRCUS, page 27 ▶

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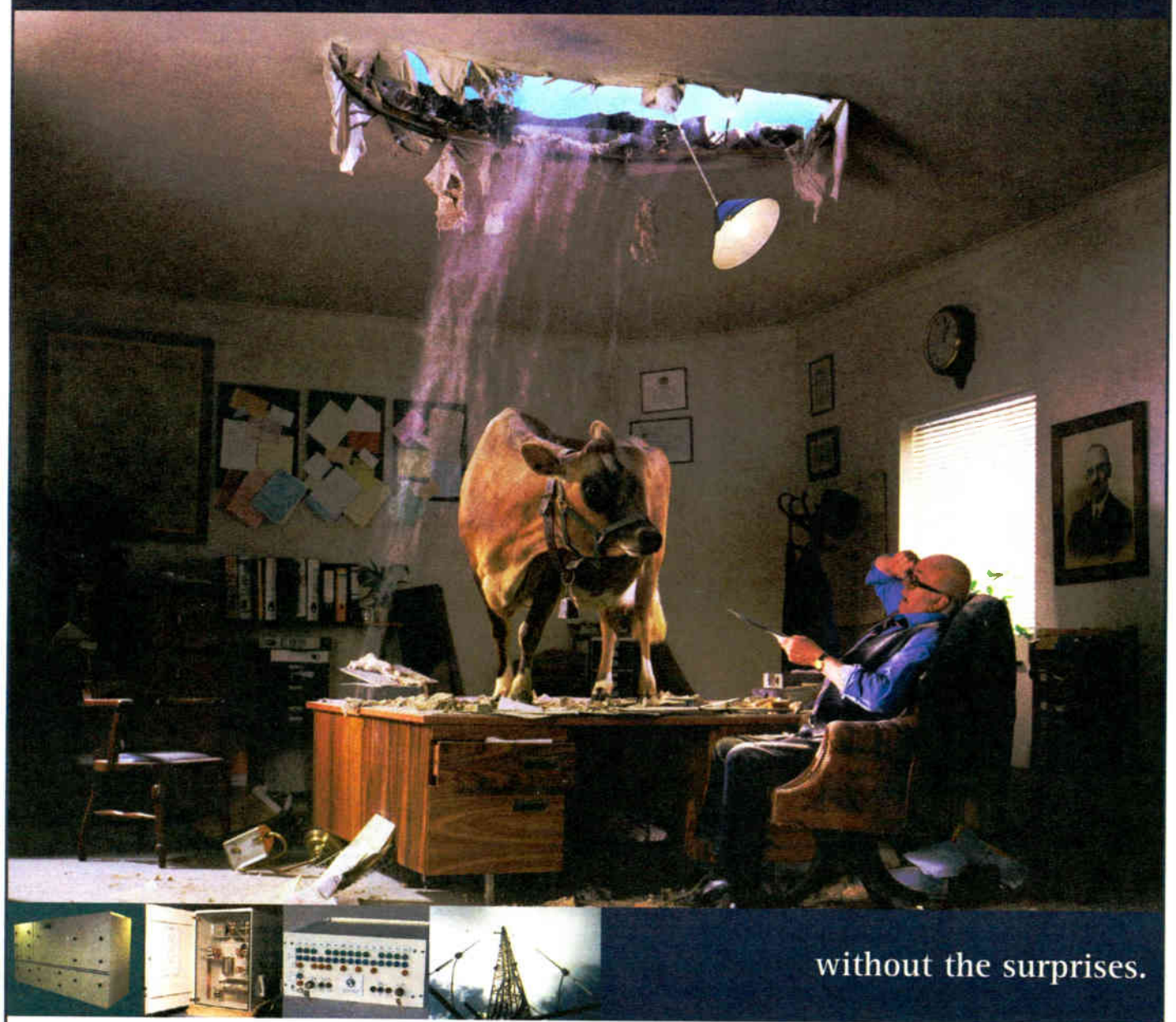

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Circus

▶ Continued from page 26

anyone sane would catalog equipment to the chip level, but when you note problems, make sure to jot down the affected parts while you have the box open.

A shared maintenance record can do wonders for non-obvious relations between problems — a computer that has first recording difficulties and later network dropouts might turn out to have bad memory as the root cause. It's hard to see performance changes if there aren't initial measurements, and some problems creep up slowly enough to be confused with unrelated changes in the meantime.

At the same time, when a computer vendor frequently updates drivers, keeping your own local copy is a waste — maintain lists of direct links to the vendor's update sites instead. (Some sites such as *www.oldversion.com* keep earlier versions if you need to downgrade.)

While getting the Finance Department to plan three to five years down the road might be nigh on impossible, a technical plan that addresses obsolescence and upkeep makes it easier. Track staff time and maintenance costs; the practice may help to highlight the fallacy of stocking too many brands of equipment or the illusory cost savings of going to the lowest bidder. A bad lot of hard drives or memory in an order of 100 machines can cost weeks of maintenance and catastrophic failure.

Unfortunately, IT systems contain an illusory bit of cross-compatibility. The differences between 'similar' x86 PCs and Windows versions are substantial.

Inventory emergency backup equipment as well. Flag any cannibalization before it affects the facility's business plan and survival itself. Maintain emergency and standard processes across staff changes, noting not only the appropriate training levels but any associated equipment and resources.

Scope

Tracking software licensing is one of the more obvious new IT functions. This can be a source of liability or an unacceptable risk if discontinued or used improperly. Poor upkeep of virus software endangers office and broadcast systems.

In a broadcast facility, "configuration" might extend to program and news material, video or audio libraries, storage, licensing, tracking of on-air programs and commercial spots, rights management, theft protection and other less tangible but critical functions. The rules for Web delivery of radio and TV differ significantly from traditional broadcast, while mobile phone streaming provides yet another playing field to track.

It is not usually the responsibility of Configuration Management to conduct training, but the database system used should make it obvious to the affected parties what areas are deficient. Similarly, Configuration may not fix performance problems, but baselining and assessing changes in systems performance are two of its hats.

The good news is you can choose from a number of affordable, off-the-shelf packages to track computer and network performance. Scripting languages such as Python and Perl, and Windows-specific WSH, ADSI, WMI and VBScript ease automation of broadcasting tasks without heavy programming.

Other ITSM areas impacting Configuration include Availability, Capacity and Continuity Management, as well as Service Level Agreements. In reality, all functions of ITSM have a strong need for effective Configuration Management, and unfortunately its typical implementation is usually little more than asset tracking.

While putting a facility's configuration in a single database may be impractical, try to consolidate systems into reasonably complete areas.

Managing change

The facility's configuration relies heavily on Change and Release Management, two sides of a similar coin.

Obviously daily operations produce changes, whether the date on a log or the occasional replacement of defective equipment. More important are substantial changes involving types of equipment used, procedures and processes altered or job tasks.

Changes that seriously alter the workplace, business plan or risk assessment need to be evaluated before adoption. Specify them in a Request for Chance (RFC), whether via a small note or a full-blown plan. The configuration record should then be updated while you inform affected staff, management and other interested parties.

More than one ITSM function can be handled by the same person, but specifics of each role should be carried out with some independence — one hat at a time.

For broad scale compatibility and functionality, Release Management typically is employed. Here, hardware or software of a particular type might be replaced throughout a facility or org at one time, such as a new digital console

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Circus

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or audio software version.

The multiple roles and inter-relatedness of PCs, software, network functions and other IT factors may require simultaneous release changes of several subsystems, more often than that in old-style broadcast facilities. While pre-planning usually goes into major Release upgrades — with lab systems, real-life prototypes and test run-throughs — sadly Change Management is often handled haphazardly (or to be precise, not managed at all).

Plan, prototype and practice are three important factors in predictive change, yet time, equipment and budget constraints often preclude giving them more than lip service.

Isolated changes should be evaluated — even if only quickly — as to priority and impact, with possible effects on financial, technical and business concerns. The combined effects of incremental Change in components or subsystems can strain the resources of an organization where a larger, more structured Release would serve better. It is easier to get the full attention of management, users and other stakeholders with infrequent broad changes than with continuous tinkering and alteration.

Change is a political process as well, and requires time to initiate buy-in and understanding. There is also the danger that with frequent unplanned Change, important issues won't be noted in the Configuration record.

Advisory board

Facility Security is one multi-faceted concern that's easy to compromise. Between increasing risk, accidentally allowing unauthorized access, increasing system instability and lowering availability, forgetting to tune performance, and ignoring tie-ins with emergency procedures, a "simple" change has multiple ways to go wrong.

Create a small Change Advisory Board to decrease the temptation to skip steps. The Board provides some formality to the system, decreases the temptation to skip steps, as well as lowers the chance that one pair of eyes will miss something. The Board can make recommendations on the timing of the Change or Release, set standards for evaluating success or failure, and provide a backup plan where implementation fails.

Since these changes are typically carried out as a Project, and Projects tend to be temporary in scope, side effects of a change may not be felt until the system is online for some time past the Project's life. Schedule follow-up evaluations under Problem Management or as a special task force.

Don't forget to coordinate and evaluate changes with external parties such as service providers. As you add more data to Internet connections or leased lines, or introduce more call-ins for a radio show, you may introduce unforeseen problems. Similarly, changing vendors always requires care.

One area of frequent neglect is training, thanks to cost, time, difficulty in scheduling and lack of expertise. Setting up effective training systems is tough, and talented staff members are not necessarily talented trainers or available for training. Combine this with an extensive Release that needs different types of training, and it's understandable but unfortunate why this step is often skipped.

It is unreasonable to expect every broadcast organization to implement a full ITSM structure. The reality is that there are plenty of tiny low-budget stations just as there are one-ring travelling circuses that still manage to entertain.

ITSM is an iterative process; early simple savings build to more difficult improvement later. As in a circus, planning and coordination are essential, and some tasks are critical.

The end goal of broadcast ITSM is not just a robust facility, it's the successful delivery of a flawless show. Too often, the backstage crew forgets to have fun too. But even in the best of circuses, things can go wrong. Next time we take up Incident and Problem Management.

Bill Eldridge is a musician and engineer who has worked in studios, the Internet and radio broadcast for 20 years. He lives in Prague and is involved with mobile phone video streaming and project management. Write to him at dcbill@volny.cz.

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Greater Media Gets With The Buzz

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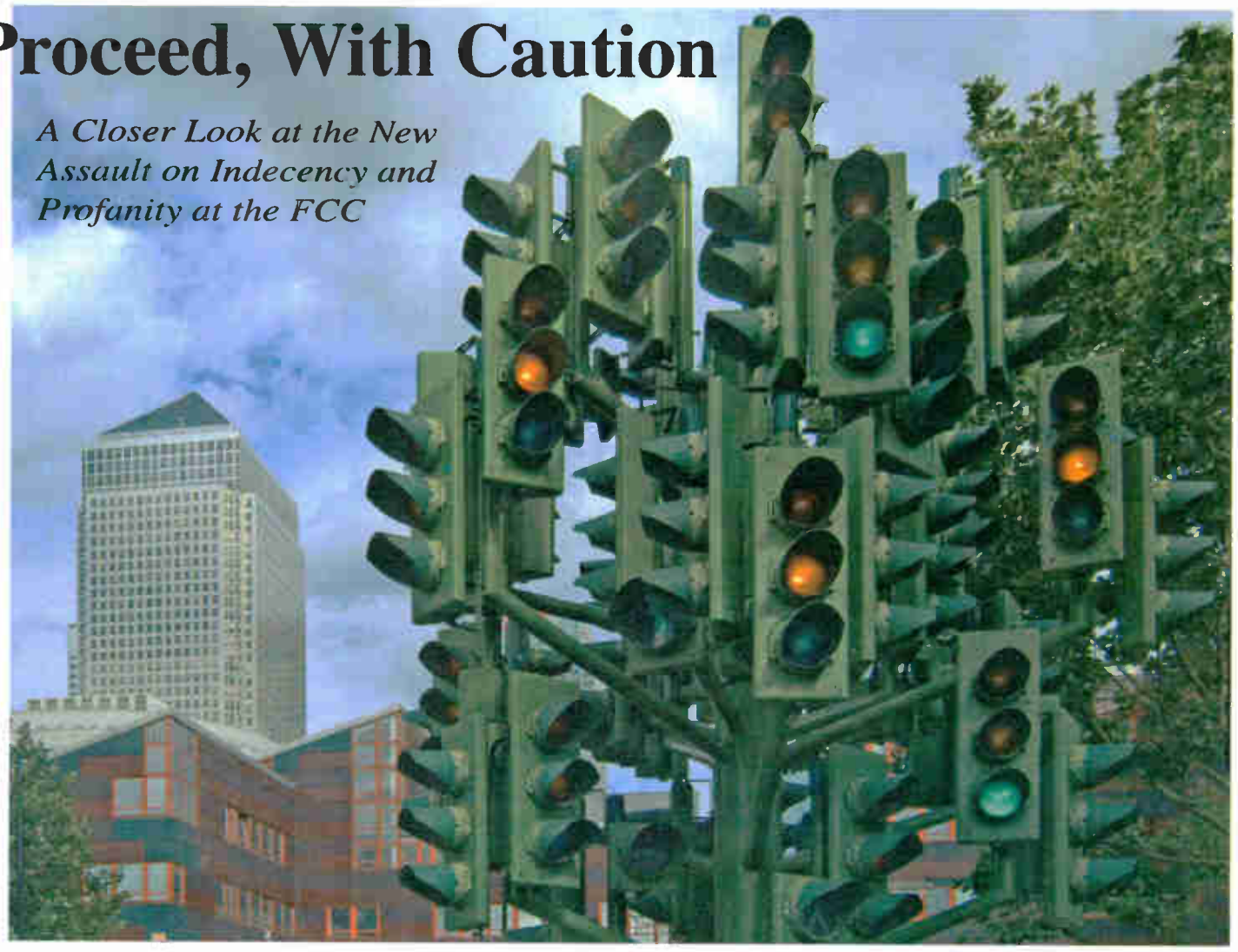
Indecency: Proceed, With Caution

A Closer Look at the New Assault on Indecency and Profanity at the FCC



Proceed, with caution: Broadcasters are scrutinizing the latest indecency rulings for an idea of where enforcement is headed.

by David H. Solomon

This article discusses language that some readers may find offensive.

After a year of inaction regarding indecency and profanity, on a single day in March the FCC decided indecency and profanity complaints involving a record 51 different program episodes or advertisements and took a record $4.5 million in enforcement action. While the decisions involved television, they are worthy of close attention by radio broadcasters, particularly as they relate to how the commission approaches the use of expletives.

Despite the commission's apparent intent to provide broadcasters with more meaningful guidance regarding indecency and profanity, the law in this area remains difficult to interpret and apply. Perhaps when the commission issues a number of new radio decisions as well, things will be clearer for radio broadcasters. To a significant extent, though, whether the commission finds a program to be indecent or profane depends on the subjective judgment of the commissioners, and this is not likely to change any time soon.

What Did the FCC Decide?

The commission issued three decisions.

First, it issued an omnibus order addressing 49 program episodes or advertisements. That order contained: (a) six Notices of Apparent Liability for Forfeiture (NALs) regarding nine program episodes totaling $350,000, two of which involved the "F-Word" or the "S-Word"; (b) decisions that 12 program episodes were indecent and profane for using the "F-Word" or the "S-Word" or variations thereof such as "bullshit" but not actionable because they occurred before the commission tightened the law regarding fleeting use of expletives in its 2004 *Golden Globe* decision; and (c) decisions that 28 other program episodes or advertisements were not indecent or profane.

Second, the commission proposed forfeitures totaling more than $3.6 million against CBS owned and operated and affiliated stations that broadcast an episode of "Without a Trace" that involved a depiction (with no nudity) of "teenage boys and girls participating in a sexual orgy" that the commission found to be "highly sexually charged and explicit." The $3.6 million figure is higher than any other indecency enforcement action — or any broadcast enforcement action — in the history of the commission.

Third, the commission imposed a $550,000 forfeiture against CBS for its broadcast (on O&O stations) of the Super Bowl half-time show involving the brief exposure of Janet Jackson's naked breast, including her nipple. This is the same amount proposed by the commission in its 2004 NAL.

What Standards Did the Commission Use?

Indecency. The commission continued to use the same general standard for

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Indecency

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deciding indecency cases. The commission first looks to whether the material depicts or describes sexual or excretory organs or activities. If the answer is yes, it then looks at whether the broadcast is "patently offensive as measured by contemporary community standards for the broadcast medium."

In applying the second prong of its standard, the "full context" of the material is "critically important." The commission looks at three "principal" factors in this regard: (1) the explicit or graphic nature of the material; (2) whether the material dwells on or repeats at length descriptions of sexual or excretory organs or activities; and (3) whether the material panders to, titillates or shocks the audience.

Profanity. In its 2004 *Golden Globe* decision, the commission redefined profanity as language "denoting certain of those personally reviling epithets naturally tending to provoke violent resentment or denoting language so grossly offensive to members of the public who actually hear it as to amount to a nuisance."

The commission further refined that standard in its March 15 decisions. First, it explained that because broadcast programs will not likely provoke immediate violence, as a general matter it will only use the second part of the definition, whether the language is "so grossly offensive as to constitute a nuisance." Second, the commission said that, in light of First Amendment implications, it will limit its regulation of profane language to "the universe of words that are sexual and excretory in nature or are derived from such terms." Thus, the commission indicated that racial and religious epithets are not profane.

In its recent decisions, the commission created a new category for its analysis: words that are presumptively profane. This category includes "the most offensive words in the English language, the broadcast of which are likely to shock the viewer and disturb the peace of the home."

The commission had previously said that broadcast of the phrase "fucking brilliant" by Bono in accepting an award was profane in context. It now held that use of the "F-Word" is presumptively profane. It also held that the use of the "S-Word," including "bullshit," is presumptively profane. Presumptively profane language will be found not to be profane only in "rare cases" where "it is demonstrably essential to the nature of an artistic or educational work or essential to informing viewers on a matter of public importance." This exception will be applicable only in "unusual circumstances."

How Did the Commission Treat Expletives?

Impermissible Expletives. As noted, the "F-Word" and "S-Word" and variations thereof such as "bullshit" are now presumptively profane. They are also likely to be found indecent in almost all contexts, including where used fleetingly and unintentionally.

Thus, the commission found that the following broadcasts were all indecent and profane: (1) the live broadcast on a morning news interview show of an interviewee's single reference to someone as a "bullshitter"; (2) the live broadcast of a performer saying "fuck 'em" on an awards show, as well as the live broadcast of a performer saying "shit" and "fucking simple" on another awards show; (3) Detective Sipowitz's single use of "bullshit" on episodes of "NYPD Blue"; (4) multiple uses of the "F-Word" and "S-Word" (and variations thereof) by interviewees on a PBS/Martin Scorsese documentary of the history of the blues; and (5) repeated use of the words "shit," "bullshit" and "owl shit" in a feature movie.

The commission recognized one key exception: the movie "Saving Private Ryan." It reiterated that the repeated use of the "F-Word" and the "S-Word" (and variations thereof) in "Saving Private Ryan" was not indecent or profane because the words are essential to the artistic integrity of the work. In contrast, the commission said with respect to the use of "bullshit" on "NYPD Blue" that "[w]hile we recognize that the expletives may have made some contribution to the authentic feel of the program, we believe that the purpose could have been fulfilled and all viewpoints expressed without the broadcast of expletives."

Similar to its treatment of "NYPD Blue" and also in contrast to "Saving Private Ryan," in connection with the PBS blues documentary, the commission said that "[w]hile we recognize here that the documentary had an educational purpose, we believe that purpose could have been fulfilled and all viewpoints expressed without the repeated broadcast of expletives." The commission also relied (somewhat inexplicably) on the fact that not all of the expletives came from blues performers, but rather some were from a former label owner and record producer and some were from hip-hop artists.

The persuasiveness of these distinctions is not overwhelming and it will not be easy for broadcasters to figure out which uses of the "F-Word" or "S-Word" fall into the "Saving Private Ryan" exception. The safest course remains to avoid all uses of these words.

Permissible Expletives. The commission held that the following words or phrases were not indecent or profane in the contexts at issue (and also not presumptively profane): "poop," "kick-ass," "sex with a dog," "singers that suck," "a lot of crap," "my ass," "you suck," "dick," "dickhead," "hell," "damn," "bitch," "pissed off," "up yours," "ass," "for Christ's sake," "kiss my ass," "fire

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Indecency

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his ass," "ass is huge," "wiping his ass," "sucked" and "sit their asses down."

In reaching its decisions, the commission noted that "ass" was "used in a non-sexual sense to denigrate or insult the speaker or another character" and that "piss" was "used as part of a slang expression that means 'angry.'" It is not clear why the same sort of analysis could not have been used in evaluating use of the word "bullshit" or calling someone a "bullshitter."

The commission cautioned that in other (e.g., sexual) contexts, some of these words or phrases could be found to be indecent or profane.

No Free Pass for News and Public Affairs Programming

In describing its contextual approach to indecency, the commission said that it recognized the need for "caution" in dealing with complaints "implicating the editorial judgment of broadcast licensees in presenting news and public affairs programming ... "

In this regard, in finding that a "Today Show" brief broadcast of a penis in the context of a news report of a rescue attempt during a natural disaster was not indecent, the commission relied in part on the fact that a news broadcast was involved.

In its recent decisions, commission created a new category for its analysis: words that are presumptively profane.

Nevertheless, despite the commission's asserted sensitivity to the First Amendment issues involving news and public affairs programming, as noted above, it found that the single use of the word "bullshitter" by an interviewee on a live morning interview show was both indecent and profane. In addition, the commission repeatedly referred to its 2004 *Young Broadcasting* NAL and its finding that the brief broadcast of a penis was apparently indecent in the context of that news interview program.

Advertisements Not Exempt

Two of the programs found not to be indecent were advertisements. This serves as a useful reminder that broadcasters must review advertisements as well as other programming for content.

Use of Delay Devices

Where a station used a five-second delay, caught one expletive and missed another, the commission found the broadcast indecent and profane and said the station could have used a longer delay to make sure it caught all the expletives.

Live programming continues to be an area with significant exposure where licensees should consider the use of delay devices. One unanswered question is whether the commission could somehow find that even "bleeping" expletives is not enough. In this regard, the commission again found that pixilated nudity in a television show was indecent because it was clear that there was a naked female breast under the pixilation. By reason of analogy, could the commission conclude that bleeped expletives are indecent or profane because it is clear that the bleeped word was an impermissible expletive? Let's hope the commission never goes that far.

Who Got Penalized And for How Much?

Willfulness. In the Super Bowl case, after a detailed factual analysis, the commission concluded that CBS' broadcast of Janet Jackson's breast was willful (and therefore could be the subject of an NAL) regardless of whether it intended to broadcast nudity. In this regard, the commission stressed that CBS consciously and deliberately broadcast the show, consciously and deliberately failed to take reasonable precautions to prevent the indecent material from airing and was responsible for the actions of Jackson, Justin Timberlake and Jackson's choreographer because they were acting as CBS's agents.

By reason of analogy, could the commission conclude that bleeped expletives are indecent or profane because it is clear that the bleeped word was an impermissible expletive?

Affiliates. The commission reiterated that it did not propose a forfeiture against network affiliates in the Super Bowl case because there was no evidence they played a role in the selection, planning or approval of the half-time show or that they could have reasonably anticipated that the half-time show would have included partial nudity. Where network programming was taped ("Without a Trace"), the commission held affiliates liable because they could have edited or declined the content prior to broadcast. This does not mean, however that affiliates will necessarily not be found liable for a live network broadcast, particularly if they could have anticipated potential problems. The reasoning of these cases could apply not only to radio networks, but also to syndicated radio programs.

Stations Not the Subject of a Complaint. The commission changed course and held that it would no longer take enforcement action against stations not specifically named in a complaint, even if the commission knew they broadcast the same program.

Thus, for example, it did not include all CBS affiliates in the "Without a Trace" NAL, but rather only those mentioned in the complaints. On the one hand, this is a good thing because it could limit broadcasters' potential exposure. On the other hand, it seems to leave the issue of who gets penalized largely in the hands of advocacy groups that generate complaints and could result in more complaints being filed against individual broadcasters.

Amount. In general, the commission imposed or proposed the statutory maximum (previously $27,500 per violation, $32,500 per violation for broadcasts after Sept. 7, 2004). Indeed, the commission proposed or imposed an amount less than the statutory maximum in only two cases.

First, the commission proposed a forfeiture of $220,000 rather than the $385,000 maximum for 14 apparently indecent broadcasts of four Spanish language videos because it concluded that $385,000 would be excessive punishment in light of the fact that the licensee owned only two stations and had no prior indecency violations.

Second, the commission proposed a forfeiture of $15,000 rather than the $27,500 maximum for the PBS/Martin Scorsese documentary on the history of the blues because the indecent and profane language was contained in a documentary and the licensee may have been under the good-faith belief that the use of the expletives served a legitimate informational purpose, as well as the fact that the licensee runs a small, community station that airs college-level educational courses for most of the day.

Neither of these cases provides any hope that the commission will depart often from the statutory maximum. In effect, the statutory maximum has become the base forfeiture amount for indecency violations. The amounts may get even higher if Congress enacts pending indecency legislation.

What Comes Next?

Ever since the commission began its latest indecency crackdown in 2003, there have been predictions by some that ultimately the commission will get shot down in court on First Amendment grounds. But court review still may not

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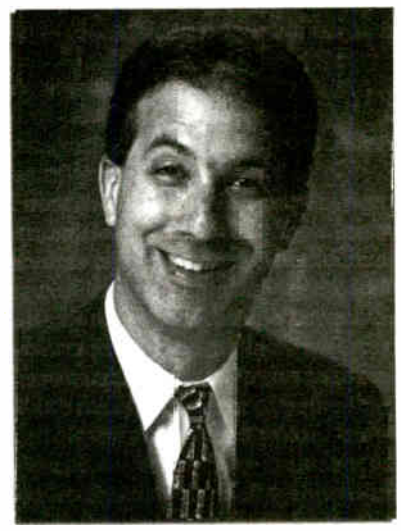

by Mark Lapidus

Blood was pouring from the listener's forehead. He couldn't believe it. All he'd been doing was trying to catch a prize! How could such a stupid thing happen?

Here's how: The promotion director had brought a lot of promotion assistants to the holiday concert to maximize the station's presence. Initially, the 10 part-timers walked around the concourse handing out key chains and balloons. When the station's morning show team came out to introduce the first band for the show, they were standing at the ready all around the concert hall.

The usual concert buzz was in the air; people were excited to be there. The morning crew was telling the audience that the station had special prizes and that staffers would be handing them out at that moment. That's when the promotion assistants randomly began throwing free CDs — packaged in hard plastic jewel cases — into the air.

Two minutes later my mobile phone rang and a panicked voice asked me to come to the first-aid area.

Remarkably, there had been only one injury. A CD had struck squarely above a concertgoer's eyes.

As he was being cleaned and bandaged, he vented his outrage to me. What could I do? I listened and agreed. I begged his forgiveness. I offered free seats to an upcoming sold-out concert.

Luckily, he was not seriously injured and was placated easily. Whew — no lawsuit!

Never put your staff in a position where they're being asked to act as security.

Tips

Lesson learned: Don't throw CDs at your listeners. Here are other safety issues to consider about your event planning.

Talk to your part-timers about driving your station cars.

It's common for stations to have large flashy vehicles, some of which are expensive. Perhaps you hand young people, often part-timers, the keys without discussion or training.

When you hire part-timers, ask about their driving record. Sure, they may lie, but most will tell you if they've had more than a few accidents or have been cited for other traffic violations. Explain that when driving the radio station cars, they are representing the station to the public. If they speed, run stop signs or drive aggressively, people will notice them.

Make sure the drivers know *they* will be responsible for payment of any fines — moving violations as well as measly little parking tickets they got because they "just had to park there for a second" — exactly as they would be if they were driving their own cars.

If they're not accustomed to driving large vehicles, they need a few practice runs in areas without a lot of traffic. They should practice parking, too.

If they're driving trucks with telescoping antenna masts on top — a special kind of broadcast vehicle situation — hold a van training session.

For instance, a driver could be seriously injured or even killed if he forgets to lower the antenna before driving off. This really does happen! I had a kid attempt to park a truck in an underground garage with the antenna halfway up. He was lucky; when the antenna hit the entrance and was then released, the metal bounced off the hood of the truck and didn't come through the windshield.

Operation of ENG trucks and remote masts involves a range of special skill sets. It's imperative that your staff be trained in how to avoid electrocution, which can result from an oversight as simple as raising the mast when the vehicle is parked with only two wheels on a curb. Your engineering staff can help you find online training resources such as those by Mark

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Greater Media Gets With the Buzz

Multicast Programming Is Part of the Job Description for Buzz Knight

by Scott Fybush

"It's been an interesting time."

That may be the understatement of the year, but it's also how Buzz Knight, Greater Media's newly named vice president of program development, summarizes his first few weeks on the job.

On Jan. 9, Knight, a four-year Greater Media veteran who was already operations manager for Greater Media's WBOS(FM) and WROR(FM) in Boston and WMMR(FM) and WMGK(FM) in Philadelphia, added duties that include developing new talent, enhancing the company's current formats and developing HD-2 multicast programming.

Just over a week later, Greater Media joined the other members of the industry's HD Digital Radio Alliance in unveiling an ambitious set of multicast formats for its five FM stations in Boston and its three FMs in Philadelphia.

'Breeding ground'

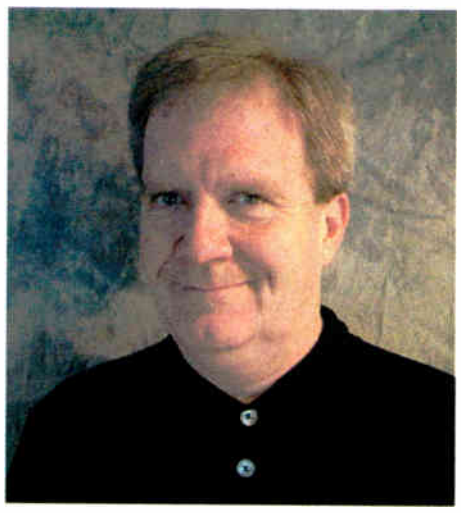
Greater Media came to the alliance with early experience in multicasting, thanks to its cluster of three FM stations in Detroit, which launched HD-2 multicast programming last July.

"Detroit has really been our leader in this area," Knight said. "They've been ahead of everyone in our industry and our company," with formats that include soft adult contemporary "More Magic" complementing AC "Magic" WMGC(FM), and alternative rock "Riff 2" complementing mainstream rocker WRIF(FM).

As with most of the early HD multicasts, the new formats are offered to listeners as Webcasts as well as HD Radio subchannels.

"Riff 2, in particular, has been a breeding ground for certain musical things that have already made it to 'Riff 1,'" the main WRIF channel Knight said.

With the formation of the alliance, Knight's first big challenge was to choose multicast formats in Greater Media's other large markets. In Philadelphia, those formats include rhythmic "Club Ben" to complement variety hits "Ben FM" on WBEN(FM) and "WMMaRchives," drawing on the long rock history at WMMR(FM). In Boston, formats on the five multicasts will range from "Classical 2.0" on talker WTKK(FM) to acoustic "Coffeehouse" on AAA WBOS(FM) to an all-comedy channel on classic hits WROR(FM).



Knight says working as part of the new digital radio alliance was 'a really fantastic process ... the spirit of cooperation is so bubbling over with enthusiasm that it's contagious.'

"We're all going into it with some of that wild-eyed enthusiasm with which we first got started in the business," Knight said of the varied formats debuting in the first phase of multicasting.

Starting from scratch

With no revenue coming from those subchannels in their first (commercial-free) 18 months on the air, Knight acknowledges that building programming in the HD-2 universe is "a process that's going to start out slow," with most programming being automated at the beginning.

As the new channels build an audience, though, "the hope would be that you start adding those touches that become the heart and soul of the radio station," Knight said.

Even without spot revenue from the subchannels, Knight says Greater Media is looking for other ways to put creative content there at affordable costs.

"We may have to look in some situations and realize that if a certain spot barter deal helps us out on WROR-1, for instance, and gives us content on our side channel, we need to be open to that," Knight said.

With HD Radio receivers still almost nonexistent in the field, Knight says Webcasting will be critical to expose the new programming to a wider audience at first.

"A lot of it goes through the Web presence," Knight said, "so a lot depends on the way the portals are organized."

At Detroit's WRIF, for instance, the front page of the station's Web site contains a prominent "HD Radio" section that includes details on receiver availability, a trade-in offer for HD Radio receivers and a link to the "Riff 2" multicast.

As the importance of the multicast grows, Knight says Greater Media expects to begin using external promotions more aggressively to build awareness of the HD-2 channels.

Knight says the support for HD Radio within Greater Media, from President/CEO Peter Smyth down the executive chain, has been unwavering.

The satellite competition

With all the attention that satellite radio has garnered in recent months, Knight says the timing of the HD-2 announcements was not a response to Sirius' big Howard Stern promotional blitz in December and January.

"Greater Media has been working on this initiative for years, and they're finally bearing fruit now," he said. "It has nothing to do with the satellite timing."

Knight believes that HD Radio's fate won't be tied to that of satellite radio — and that it has the potential to bring about a renaissance of traditional radio.

"Just like those age-old stories where a category grows because of a new competitor, there's the hope that this category will grow as well."

In the meantime, Knight's portfolio includes not only the uncharted terrain of HD-2 but also the responsibility to continue building the programming on Greater Media's established stations. He continues to serve as operations manager in Philadelphia and Boston.

"I think prioritization ends up being an important part of the task moving forward," he said. "We have these other major properties to advance and grow ratings for."

Knight hopes that the development of the multicasts will bring back more of a sense of risk-taking throughout the company, including on the main channels.

"We have allowed a lot of the things around us to take away our creative strut," he said.

For himself, Knight said the process of coordinating multicast formats through the alliance brought back some of that strut.

"The alliance was a really fantastic process," he said. "I was right in the midst of it, and the ease of working with everybody, the spirit of cooperation is so bubbling over with enthusiasm that it's contagious."

Knight, whose career included three years on the air at WNEW(FM) New York and stops in Norfolk and Columbus, says the alliance negotiations gave him a chance to renew some old acquaintances, including that of his former Columbus Infinity competitor Dave Robbins, now CBS Radio's director of digital programming.

"Everyone is on the same page and enthused, challenged by it," Knight said.

Scott Fybush, a frequent RW contributor, says he is waiting for HD Radio multicasting to launch in his home base of Rochester, N.Y. so he can justify buying a receiver.

How is your organization planning to use multicasting, if at all? Tell us at radioworld@imaspub.com.

Building programming in the HD-2 universe is 'a process that's going to start out slow,' he says, with most programming automated at first.

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Indecency

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be forthcoming in the immediate future.

The ripest case for judicial review is the Super Bowl/Janet Jackson forfeiture order. CBS has a choice under the law; it can pay within 30 days and appeal or it can do nothing and wait until the Department of Justice seeks to collect the forfeiture in district court. Under the Communications Act, any such collection action would be a trial *de novo*, with no weight given to the FCC's findings and the burden of proof on the government.

The cases in which the commission issued NALs cannot get to court until after any forfeiture order. The cases in which the commission found broadcasts to be indecent or profane but proposed no forfeiture because the broadcasts were before the commission changed the law in *Golden Globe* could in theory be appealed now. Because there has not yet been an opportunity for those licensees to present their full legal defense to the commission, the more likely scenario, however, is that the licensees will first file petitions for reconsideration with the commission in order to ensure that they are not in the position of raising arguments in court that they have not first raised with the commission. NBC filed such a petition for reconsideration of the *Golden Globe* decision. (The commission has not yet acted on that petition, filed two years ago.)

While broadcasters challenging FCC indecency/profanity actions doubtlessly will raise constitutional issues, a reviewing court may never reach those issues in any particular case. A court would likely first analyze whether the material at issue falls within the statutory indecency and profanity standards and whether the FCC's decision was arbitrary and capricious. If it ruled against the FCC on these grounds, it might well never address the constitutional issues.

FCC indecency and profanity enforcement is thus not likely to go away soon. After its recent group of television decisions, the commission may turn again to radio complaints soon. Whatever it does next, however, as its recent orders make clear, the standards are likely to remain murky and subjective for some time to come.

The author is a partner in the Washington law firm of Wilkinson Barker Knauer LLP and a regular contributor to Radio World. From 1999 to 2005 he was the first chief of the FCC Enforcement Bureau; prior to that he was FCC deputy general counsel. Reach him at dsolomon@wbklaw.com.

Write to RW

Radio World welcomes your point of view on any topic related to the U.S. radio broadcast industry.

Send letters via e-mail to *radioworld@imaspub.com*, with "Letter to the Editor" in the subject field; fax to (703) 820-3245; or mail to Reader's Forum, Radio World, P.O. Box 1214, Falls Church, VA 22041.

Include your name, address and contact information, as well as your job title and company if appropriate.

Accidents

▶ Continued from page 33

Bell at *www.engsafety.com*.

Do your drivers know whom to notify in case of accident? Are they instructed to call for an ambulance immediately if necessary? Do you put registration and insurance info in every vehicle?

As odd as it may sound, are your assistants smart enough not to blast the radio in the car so loud that they can't hear traffic noise or someone yelling at them to look out or stop? Or to hear a police car behind them?

Accidents and injury are among the risks of holding an event at a bar or concert promotion.

Never put your staff in a position where they're asked to act as security. If a club or venue needs a stage secured, it needs to hire a company that's trained and bonded. Not only is it horrible public relations to let anyone from your station play the heavy, but it's downright dangerous if your staffers don't know what they're doing, especially if many people in the audience are intoxicated.

Door duty

For shows in small venues, do your people know where the emergency exits are and that they're operational? If your station is going take the credit for packing a show with a standing-room audience, you could also get the blame if there's — heaven forbid — a fire or a crowd-trampling incident. There's no question that the owner is responsible for the safety of the audience; but not all owners are as law-abiding or conscientious about the public good as they should be.

Also, stunt guys on morning shows often believe they are invincible. It's incredible how just being on the radio can turn a normal person into Superman. Sometimes a program director has to be the grown-up and actually question a stunt guy about a proposed activity that sounds a bit too off the wall.

While you can't possibly cover every safety issue — watch out for that falling ice off your tower! — having brief discussions with staff before major events can help keep your people safe.

The author is president of Lapidus Media. E-mail marklapidus@yahoo.com.

World Radio History

Lee Keeps Small Gulf Station Going

by Ken R.

It's hard enough to run a stand-alone AM station under the best of circumstances.

But what do you do when Hurricane Katrina rips off your roof, knocks out your power, sends your employees packing for higher ground and puts one-third of your advertisers out of business?

Add to those formidable challenges the lack of a backup generator, no Internet and intermittent phone service.

In the immediate aftermath of the storm, Tim Lee briefly considered just handing the license for WPMP(AM), Pascagoula, Miss., back to the FCC.

"But then I realized that I had a job to do and a community to serve," said Lee. After Katrina, he acted not only as owner but station general manager, program director, talk show host, accountant, newsman, salesman and occasionally engineer.

Lee's company had purchased the station in May of 2005 and took over the billing July 1. Katrina came along at the end of August. Welcome to station ownership, Mr. Lee.

Before the storm, the station had five other staff, including two part-time morning talent, two part-time board operators and a full-time salesperson.

Today it's not literally a one-man station, but it's pretty close.

"We've had one person who has come back," Lee told RW six months after Katrina. "She's a part-time board op who works my local sports games and helps out with logs, billing, public file, etc.

"I hired another salesperson in November, but based on lack of advertisers he left in January to work in another part of the country. So it's back to me as the only full-time person."

Lee said the station's mission "is to serve Jackson County with immediate information, especially in times of emergency. Newspapers can't do that and TV sure can't do it. And the big cluster in nearby Biloxi isn't serving our town either."

So in the wake of Katrina, Lee had few options for staying on the air. He got creative.

Tim Lee broadcasting from the LaFont Inn in Pascagoula, Miss., not far from his station.

Want fries with that mic?

"There was one local restaurant/hotel down here that didn't get entirely wiped out," he said. "It's called the LaFont Inn, and they serve food to about 500 people a day. They were one of my local advertisers. I asked them if I could broadcast from their place. They loved the idea."

The restaurant gave WPMP two tables in the back. Lee set up and went on the air, with the programming also heard over the public address system in the restaurant. He was on six or seven hours a day in the first week after Katrina.

"I lost all my staff," he said. "They were wonderful folks who were all part-time or volunteers who had other full-time jobs."

WPMP is an affiliate of USA Radio Network, for which Lee is a sales person. The station also has access to Supertalk Mississippi, a network that supplies some regional programming. Local news and talk is inserted into the broadcast day whenever possible.

The station is a low-budget operation. Lee takes no salary, relying on his network job to support himself. The former owner, Kevin Grady, already was helping out with logs and some commercial production via the Internet from his home in Kentucky. Now he's doing the bulk of production work, an arrangement that has helped keep expenses down.

A Broadcast Software International WaveStation automation system is used to run spots and switch between network and live shows. The station is 5 kW by day, 50 watts at night.

Lee doesn't use a full-time engineer.

"My contract engineer was a former Clear Channel chief who moved to Birmingham several months before Katrina. I have had some help from several different guys since Katrina, but haven't really had the need yet for anything other than small tasks that I can complete."

Adversity breeds opportunity, Lee said. "I have a positive outlook and believe that over the next few years economic development will increase. But meanwhile, we are serving the small advertisers who can't afford to be in the newspaper."

Taking care of business

WPMP enjoys support from those local merchants still in business — "A couple of my advertisers asked me, 'What can we do to keep you on the air?' And some of them doubled their schedules until I can get back on my feet" — and he cooperates with government officials.

"We partnered with the local civil defense office and broadcast live from their command center," said Lee. "If they need to be on the air right away, we are there for them."

Lee said some 40 stations can be heard in the area, but says few do "local" radio. Seven are licensed to Jackson County, Miss., which had a population before Katrina of 130,000.

"Of those seven, only two still maintain a studio presence in the county; and those are the only two that ever cover more than just passing information about the county and its residents," Lee said.

"Many of our residents feel it's as if some of the other top-rated stations in the market consider the line for Harrison-Jackson Counties as the end point of their coverage area. That coverage decision by general managers and program directors of those stations factors heavily into why I think we have a chance of survival. It also won't be soon forgotten by many folks who felt abandoned or ignored by stations that claim to be a part of our communities and are even licensed here."

WPMP's building was one of the few structures in Pascagoula that didn't suffer a watery storm surge. Winds took their toll, however. This photo shows the station with its new roof.

Katrina, he says, has affected his own business in several ways.

"First, a number of my advertisers no longer exist. My profit margin is just about nil as a result of that. In addition, I'm working an awful lot more now than before Katrina because of lack of help.

"The amazing thing about what has happened since the storm is the legitimacy this station now has in the marketplace as a result of our coverage and response after the storm. There have been several instances where advertisers I have never been able to convince of the benefit of radio or AM now are regular advertisers and some of my most vocal supporters.

"I'm more convinced than ever, by what I've seen and lived through, that AM radio can be just as competitive as FM. After Katrina, I don't have nearly the problems of getting people to consider me on an advertising buy, or getting mayors and guests to stop by for a visit."

The station's situation is getting better month by month, he said. "We are back in our building and have been operating here since the day after Thanksgiving. ... Advertisers are slowly coming back, and we seem to be coming out of the woods as far as our viability.

"We are trying to clean up and get back to as much regular programming as possible. We are using the morning show for our local opportunity to disseminate information to the public. In addition, we now air six hours daily of programming from SuperTalk Mississippi, part of the Mississippi Network. I consider that local, and they are focusing lots of time on the recovery efforts here on the coast."

Building back

Lee is trying to determine the best course of action to renovate, repair or maybe build a new studio and transmitter facility, but for now he's making best use of the current facility.

"There's such a need for housing and housing repair for our residents that I don't want to tie up a contractor who could be working on getting someone back into their home," he said.

"Our revenue is increasing, but for now I'm not sure we have the credit facility or cash flow to take on a major renovation or rebuild. Those things will come in time."

Tim Lee has seen a lot of neighbors helping each other through this disaster. Some people he knows lost everything except the clothes they were wearing when the storm hit. But he remains positive about his community and its citizens.

"I don't love hurricanes, but I love local broadcasting," said Lee. "I feel strongly that we as broadcasters have to serve the public trust. And that's what we are doing right now."

Although 9,000 Jackson County families were living in FEMA trailers as he spoke, Lee states flatly that the Mississippi Gulf Coast will rebuild.

"I see few people here with a total sense of despair. If you've lived here for any length of time, you resign yourself to the fact that hurricanes are a part of this culture; and while Katrina kicked us on our tail, we will get up, dust ourselves off and build back better and stronger than we were before. It's just going to take a while."

World Radio History

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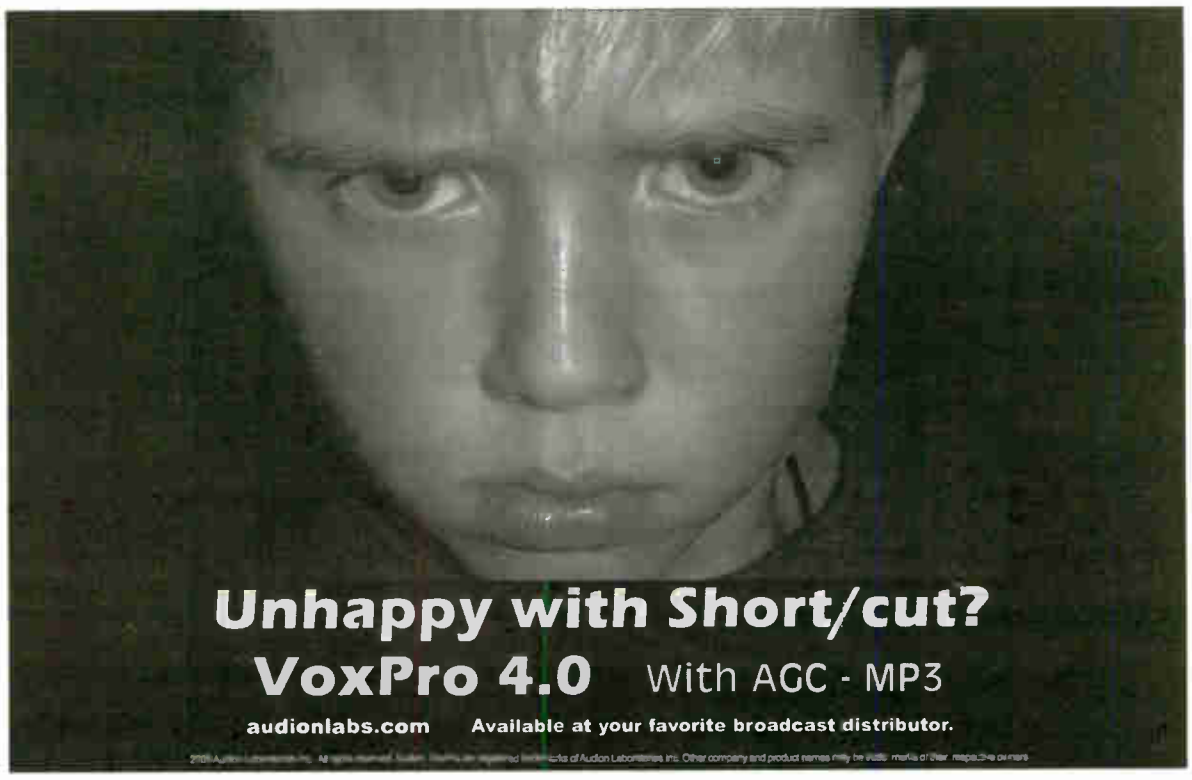

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World Radio History

Improv Can Improve Your Commercials

by Jeffrey Hedquist

With the success of "Whose Line Is It Anyway?" and "Curb Your Enthusiasm," we're becoming more familiar with improvisational theater.

The techniques of improv also can improve your radio writing. My experience doing and teaching improv has convinced me that these techniques can yield great rewards for our clients and us. Study them, take an improv class, join a troupe, practice and get on stage if you want; but use the techniques of improv. They'll give your right brain strength and agility.

Recommended reading:
"Improvisation for the Theater," by Viola Spolin
"Truth In Comedy: The Manual of Improvisation," by Del Close, Charna Halpern & Kim Johnson
"Impro," by Keith Johnstone
"Interactive Acting," by Jeff Wirth
"Improv Comedy," by Andy Goldberg

Recommended listening:
Nichols & May
Bob & Ray
The National Lampoon Radio Hour
Two CDs that come with the book The Second City by Sheldon Patinkin
www.liquidradioplayers.com/

Web lists of improv games:
www.staircase.org
www.accessone.com/~up/playbook/
www.lowrent.net/super/improv/games.html
www.humanpingpongball.com/gm.html
www.learnimprov.com/
www.fuzzyco.com/improv/games.html

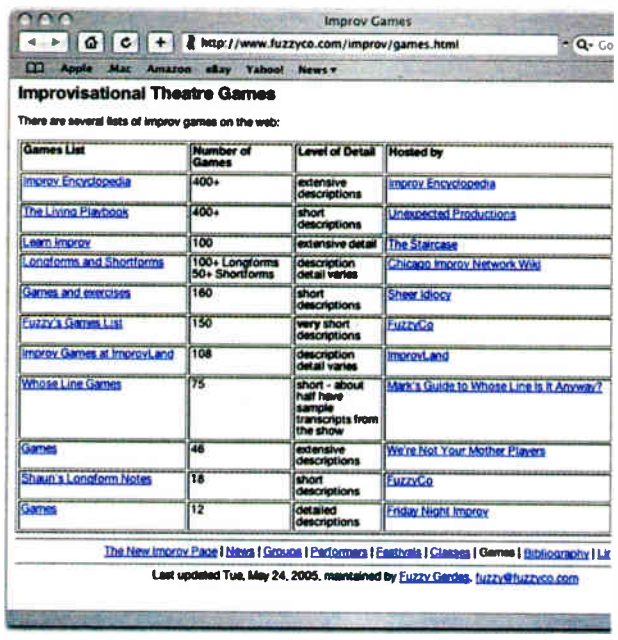
Techniques of improv can improve your radio writing.

Brainstorm

I can't say enough about using improv to improve your brainstorming. Actually I can, and will, in a separate detailed discussion. For now, you should know that the principle of "yes, and ..." is a foundation for improv — accepting that whatever is said, whatever happens is a gift, and it's supposed to happen. Participants then can build on it. The principle of "yes, and ..." allows you to keep going no matter what suggestions are offered, because you never stop accepting what has happened and taking it to the next level.

For example, let's say your group is brainstorming ideas for a travel agent campaign. Someone suggests a scene with two people stuck in traffic. Your initial reaction is that the suggestion is lame, unworkable, off-track or stupid.

However, under the rule of "yes, and ..." you say, "OK! Where does it go from there?"



The Internet offers many resources to help you develop your improv skills.

With that encouragement, everyone starts to pour out ideas, one of which might be a campaign about people stuck in frustrating situations — waiting in line, sitting through a boring meeting or stuck in traffic, each one of whom is fantasizing about being somewhere else on their ideal vacation, one that has been arranged by the ideal travel consultant, your client.

Squash the initial suggestion with your immediate negative reaction and you would have killed a potentially good idea.

A basis of unconditional acceptance and support for the suggestions of your fellow brainstormers will yield a constant flow of ideas for commercials.

Foreign Lecturer

Here's a game from the world of improv to spice up your radio writing.

One voice speaks a foreign language. This can be gibberish, actual foreign language copy or, perhaps best, a combination of foreign language with enough "Americanized" expressions interspersed to emphasize the copy points in a humorous way.

The second voice "translates" what the foreign voice is saying.

Perhaps for the first voice you'll use a child (especially if unintelligible); or someone emotionally involved in promoting or denigrating the advertiser; or someone who is demographically, psychographically, emotionally, geographically or in any other way very different from the usual target market for the advertiser.

The voice of a competitor might rave on about how unfair the advertiser is, while the advertiser's spokesperson or an "unbiased" observer calmly explains the benefits to the customer. A stern mother could lecture about what a waste of time a video game, club, activity, amusement park, music store or movie is, while a kid explains why it's so cool.

A wildly ecstatic customer can barely contain herself, while the voice of reason lists a customer benefit to match each explosive outburst. A techno-geek lists in detailed acronym-speak the features of a computer system, while the translator tells the audience what each will do for them, and how easy it is to use. A voice is distorted because they're underwater, inside the clothes dryer, speaking from outer space, stuck in a traffic jam, lost in a cave, etc., while an announcer explains what the voice is trying to tell us about the advertiser.

The contrast can lead to an interesting spot that lends itself to repeated listening — and results.

Sportscasters

Here's another.

A play-by-play announcer and a color commentator describe an ordinary activity as if it were the game of the week.

SFX: Flipping through TV channels (Voices have to speak up to be heard over the background)

1: Looks like another thrilling Saturday night here at Bob's apartment. He's hunkered down in front of the TV ... reaches for the remote ...

2: Doesn't he know that The Lizard Lounge has two live bands tonight?

1: Guess not. He flips from one channel to another ... this IS exciting

2: And that drinks are half-price?

1: I can't believe it! Bob's going for a second helping of popcorn!

2: He could be meeting someone magical tonight at the Lizard ...

You can use this approach for a movie review, documentary, game show, soap opera or newscast. Contrast the quality of life with and without the advertiser's products and services, or make an ordinary activity larger than life (better, more exciting, healthier, more fun) because of the benefits the advertiser provides.

SFX: Thunder
Music: Dramatic, anticipatory, mysterious

Anncr: You feel the rumbling from deep within. The fiery pangs of hunger that only one thing can quench. You stumble to the refrigerator, open it...
(Music: huge crescendo)
Anncr: And behold your salvation: the Pepperoni Avalanche Deluxe from Jerry's Kitchens — the take-home pizza that won't leave you wanting ... more.

Inside Story

This game is similar to the previous one, but with a twist. Again, it works because the audience is eavesdropping on a conversation and given special insights of which the characters may be unaware.

Write a dialogue spot. The two characters interact, but their "real" thoughts are spoken by their own voices filtered and/or echoed, or by one or two other voices playing the "inside" voice(s). Each time a main character speaks, the "inside" voice says what the character is "really" thinking.

Focus: create contrast between what the main characters say and what the "inside" voices tell us, e.g. if the two main characters are in conflict, the "inside" voices might make them secretly attracted to each other, or visa versa. The advertiser's product or service can change or improve the relationship.

For example, if a couple were about to kiss, the inside voices might be desperately wishing that both would ingest a breath mint. At any point in the dialogue, the main characters can "get" the message the "inside" voices were expressing and change their attitudes.

An omniscient narrator can also be letting listeners in on the "truth" of what is being said, increasing their involvement with the commercial and hopefully, with the advertiser.

Worse Off/Better Off

"Worse Off" is a version of the "When I was your age ..." stories older members of your family would recite. In this game, each character tries to elicit sympathy from the others by exaggerating reminiscences of how much worse they had it.

A classic example of this is Monty Python's "The Four Yorkshiremen" (sample: "*We* never used to have a cup. We used to have to drink out of a rolled-up newspaper." "The best *we* could manage was to suck on a piece of damp cloth.") Listen to it or read the script, readily available on the Web.

For commercials you could develop a scenario with a dad or grandpa who starts one of those stories while a relative from a younger generation constantly interrupts with ways the advertiser could eliminate having to endure the pain or trouble of more primitive times. The older person finally sees the light, then delivers a zinger to the younger one.

Or reverse the roles so the kid complains about how hard his or her life is and the older person shows how easy it can be by using what the advertiser offers. This would work especially well for technology advertisers.

"Better Off" is a game of one-upmanship. Your spot could be populated with friends, neighbors, relatives or co-workers — any group whose interactions could generate conflict. One or more participants try to outdo the others with real or exaggerated claims of proficiency, intelligence, specialized skill, strength, agility, wealth, beauty, accumulation or any of a number of other qualities associated with the advertiser.

The humor comes as the actors attempt to be subtle and work their one-upmanship into normal conversation.

Jeffrey Hedquist says he loves improv almost as much as he loves radio. He also offers free subscriptions to his newsletter; contact him via Web site www.hedquist.com.

World Radio History

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The SS 16.16 provides audio routing of 16 stereo inputs to 16 stereo outputs. This type of routing allows any one stereo input to be assigned to any/or all stereo outputs. The SS 16.16 may be controlled via front panel encoder controls and/or a multi-drop RS-232 serial port. A 40 x 4 LCD back lit display provides for input descriptions and macro setup Additional features: headphone amplifier with front panel jack and level control, front panel monitor speaker with mute switch and level control, internal audio activity/silence sensor with a front panel ACT indicator and rear panel open collector, and a 16 GPIO port. FREE Windows NetSwitch remote control software, which supports Serial, USB and Ethernet with the optional ESS-1 Ethernet to serial converter, is available for download. Installation is simplified with plug-in euroblock screw terminals.

SS 16.4

The 16.4 provides matrix audio switching of 16 stereo inputs to 4 stereo plus 4 monaural outputs. Matrix switching allows any/or all inputs to be assigned to any/or all outputs. The SS 16.4 may be controlled via front panel switches, contact closures, 5-volt TTL/CMOS logic and/or the multi-drop RS-232 or RS-485 serial port along with 24 GPIO's and input expansion port. Installation is simplified with plug-in euroblock screw terminals.

ACS 8.2

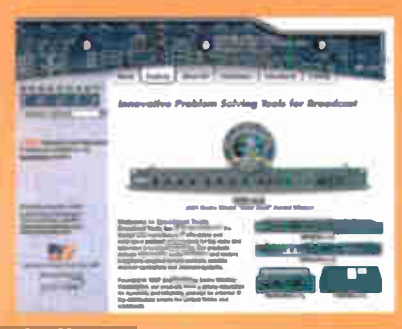
The ACS 8.2 provides matrix audio switching of 8 stereo inputs to 2 stereo plus 2 mono outputs. Any input assigned to output one has fading capabilities. Matrix switching allows any/or all inputs to be assigned to any/or all outputs. The ACS 8.2 may be controlled via front panel switches, contact closures, 5-volt TTL/CMOS logic and/or the multi-drop RS-232 serial port along with 16 GPI's, eight relays, eight open collector outputs, and input expansion port. Installation is simplified with plug-in euroblock screw terminals.

SS 4.2

The SS 4.2 provides matrix audio switching of 4 stereo inputs to 2 stereo plus 2 mono outputs. Matrix switching allows any/or all inputs to be assigned to any/or all outputs. The SS 4.2 may be controlled via front panel switches, contact closures, 5-volt TTL/CMOS logic and/or the multi-drop RS-232 serial port along with 16 GPI's, eight GPO's, and input expansion port. Installation is simplified with plug-in euroblock screw terminals.

SS 8.2

The SS 8.2 provides crosspoint switching/routing with 8 stereo inputs, 2 stereo plus 2 mono outputs. 3 switching modes, I/O trimmers, internal silence sensor, selectable headphone and powered speaker level controls and outputs. LED VU meters, 16 GPI's, eight relays and eight open collector outputs. Multi-drop RS-232 and RS-485 serial ports, plug-in euroblock screw terminals and input expansion port .



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BUSINESS NEWS

Study Supports Live Traffic Ads

Almost three-quarters of radio traffic listeners pay more attention to commercials read live by the announcer of a traffic or news report than they do to pre-recorded commercials.

So says Edison Media Research, which did a traffic study for Westwood One, which offers Metro Networks traffic services.

Other findings:

• 78 percent of commuters requiring traffic information for suburban roadways gained this traffic information from their regular local traffic stations.

• Traffic reports demonstrated an ability to pull people away from CD players, MP3 players and satellite radio. "One in four respondents indicated that they listened to something other than radio in their cars, but then switched back to AM/FM radio specifically to hear traffic reports," the research firm stated. "Those with exceptionally long commutes reported an even greater propensity to switch to AM/FM radio for traffic reports, as nearly half of those listeners indicated they listen to CDs or MP3s, but switch to hear traffic."

• More than 90 percent of radio traffic listeners pay close attention to traffic reports.

The Edison Metro Traffic Study was conducted by random telephone sampling in February of adults 25–54 in the non-metro counties in 10 of the top 20 DMAs. Respondents were required to have at least a part-time job, work primarily outside of the home, and spend at least 30 minutes commuting one-way to their workplace via a personal vehicle.

IN THE STUDIO

Hagman, Eden Visit ABC

Jeannie and Maj. Nelson stopped by ABC News Radio in New York recently.

Actors Barbara Eden and Larry Hagman visited as part of a promotion of a DVD release of the first season of their TV series "I Dream of Jeannie," which originally aired from 1965 to 1970.

ABC News Radio Entertainment Correspondent Bill Diehl is at left.

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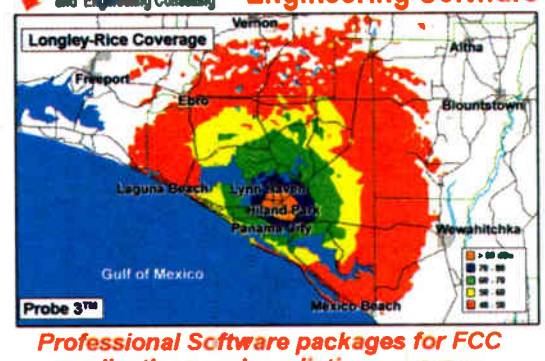

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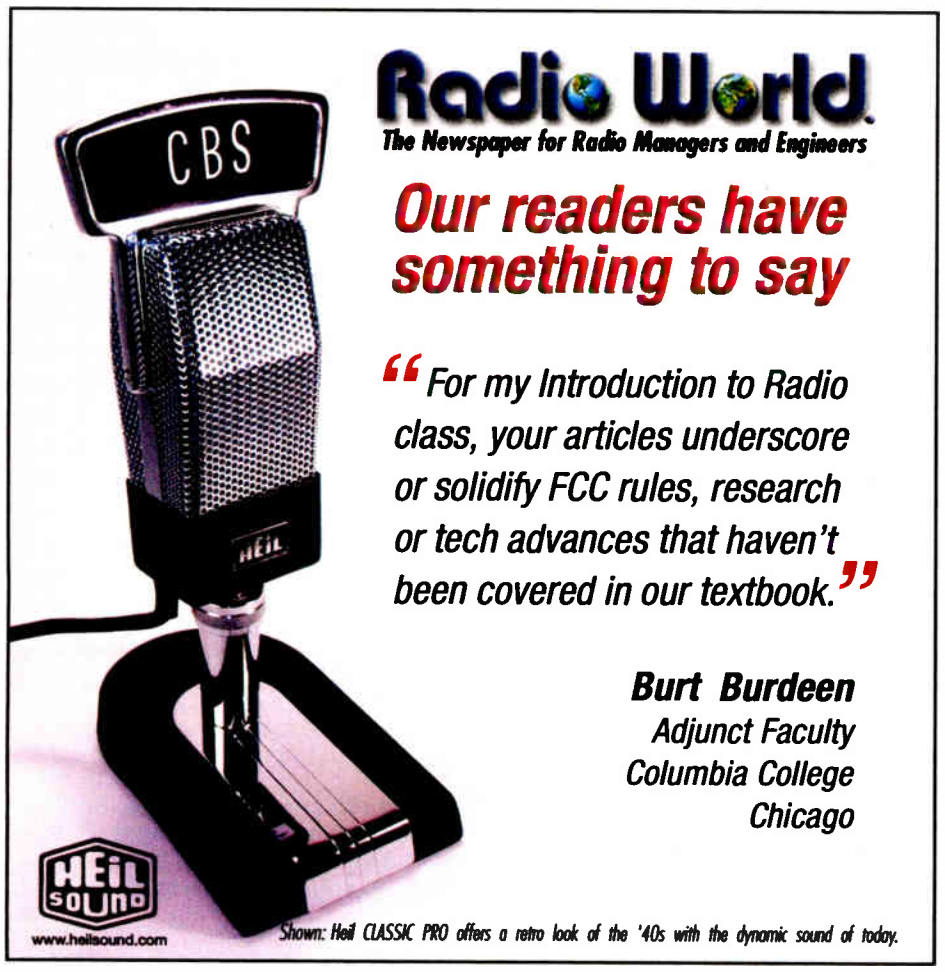

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Our readers have something to say

"For my Introduction to Radio class, your articles underscore or solidify FCC rules, research or tech advances that haven't been covered in our textbook."

Burt Burdeen
Adjunct Faculty
Columbia College
Chicago

Shown: Heil CLASSIC PRO offers a retro look of the '40s with the dynamic sound of today.

READER'S FORUM

Internet Music Licensing Laws

Skip Pizzi, thanks for your article regarding the RIAA ("IBOC: The Next Copyright Battlefield," Feb. 1). As an Internet radio broadcaster and consultant, I sure would appreciate if you could bring into perspective what is happening right now concerning Internet music licensing.

The new laws that may be coming seem extremely stiff — I have heard RIAA would want something like 37 percent of gross earnings before expenses. If that is true, [it] makes one wonder how companies will be able to stay in business. There is a lack of information out there from anyone that can put this in perspective.

I also heard the new rules may stack as high as 6 feet. Are these things true or false? [I don't see] a lot of talk about this. Radio World is my number one source for broadcast information because the articles are communicated well to broadcasters. Stories on what is currently happening as it relates to Internet radio music licensing and the RIAA would be highly appreciated. Are there any planned?

Thanks for all you do.

Ron Maxwell
Fort Myers, Fla.

Skip Pizzi replies: Thanks for your message and kind words. Yes, this is an important issue, which we are tracking closely. Negotiations are still underway on this, so it's hard to know how it will play out.

We assume this topic is of interest to both OTA and Internet radio operators, but it's good to hear your specific concerns. It will keep the issue high on our radar. Rest assured, as soon as we have something stable and definitive to report, we will do so.

Young Engineer Seeks Small Market

I want to thank everyone involved in the article "Young Engineers, Please Stand Up (Feb. 1)" by Ken R. While I was featured nowhere in it, I appreciate the showcase of wonderful young talent coming up in the radio ranks. I agree we have a shortage of engineers, and if the younger set isn't taught RF and engineering practices we're all going to be in trouble soon.

Paul Walker Jr.

I'm 22 years old and have mainly stayed with the on-air side of radio but would love to learn some more RF- and IT-related work, as I think it's becoming something that's a great asset to a young person wanting to work in a small market, like me.

We have a shortage of engineers and if the younger set isn't taught RF and engineering practices we're all going to be in trouble soon.

— Paul Walker Jr.

I'd like to let your readers know I'm available for on-air work at a small station. Visit *www.walkerbroadcasting.com* or contact me at *walkerbroadcasting@gmail.com*.

Paul B. Walker Jr.
Decatur, Ala.

Dated Information

Although the article "GPS and AM Field Strength" by W.C. Alexander is dated Feb. 15, 2006, the information is only current as of a few years back.

Errors include, "For one, dithering is applied to GPS signals to deliberately limit the accuracy to civil users to 100 meters." Not for some time now — it's typically 10 M horizontal or better, subject to selective availability.

Also: "Some high-end GPS receivers can receive and utilize WAAS and DGPS signals to correct GPS positional information." WAAS correction is now available in consumer devices costing less than $100, but is actually not required except for aviation use where the improved vertical accuracy is required.

One gets the impression the article was written a couple of years ago.

Mel Martin
Montreal, Quebec

Cris Alexander replies: Thank you for taking the time to respond to the GPS/FI article. I wrote it recently (December), but evidently the information I had on dithering is out of date. I believe I sourced it from a DoD Web site.

Nevertheless, at the time we researched and purchased the GPS units we tested and used (August 2005), we were able to find the WAAS/DGPS features only on high-end handheld GPS devices. Ten-meter horizontal accuracy is not sufficient for close-in field strength measurement work and as such, the higher accuracy afforded by WAAS and DGPS is needed. At greater distances, 10-meter resolution is entirely sufficient.

World Radio History

GUEST COMMENTARY

Has Anyone Thought This Through?

Economic and Political Considerations Can Trump Technical Ones at the FCC

by Jack Hannold

Paul McLane's interview with Ed De La Hunt ("De La Hunt Troubled by HD Radio," Feb. 1) elicited quite a response. The March 29 *Reader's Forum* featured four favorable letters — all of them as critical of IBOC as they were supportive of Ed De La Hunt — while a fifth letter, unconnected with the interview, also criticized the Ibiquity system.

But only one of the four letters also mentioned De La Hunt's comments on the AM stereo mess of the 1980s, and that's too bad.

Why? Because the FCC showed the same kind of poor judgment in choosing Motorola's C-Quam system over Leonard Kahn's independent sideband (ISB) system as they showed in choosing Ibiquity digital technology over Kahn's Cam-D for AM and over Digital Radio Express's FMeXtra for FM. And they made a similar mistake with analog FM stereo 45 years ago.

Abandonment issues

Consider Walt Lowery's apparently tongue-in-cheek letter (Feb. 1). He opened by expressing surprise that one Salt Lake City broadcaster, which had recently begun simulcasting an AM news format on an FM station, had not turned off the stereo generator, and ended by suggesting that once a majority of listeners are able to receive "HD Radio," all stations should abandon analog stereo.

I'll return to that point, but let's consider the merit of this presumably facetious proposal.

Lowery pointed out there's a significant difference between the signal strength necessary for good "quieting" for reception of stereo and that required for equally noise-free reception of a mono FM signal; high-end FM tuners have published specs with differences ranging from 20.8 to 26 dB, depending on the quality of the circuitry. Of course, the difference can be even greater in a boombox. And 20 dB is a power factor of 100, while 26 dB is a factor of 400.

As he said, imagine cutting your transmitter power that much. Maybe mono has something to recommend it not only for FM news and talk stations, but also for adult standards and "real oldies" stations that play a lot of mono music.

But there's one other important thing to consider: In the stereo mode, the L+R modulation level is held to 45 percent. And remember the frequency swing corresponds to the audio signal voltage, not to power. So the power output at the detector is only slightly over one-fifth (0.2025) of that from a mono signal of equal strength, or –6.94 dB. (And it's even worse with SCAs, where it's –7.85 dB.) So there's a coverage advantage even on mono receivers that ignores the stereo difference and pilot.

Crosby, signals and hash

In retrospect, we should have adopted Murray Crosby's all-FM system in April 1961. With an FM subcarrier system and a receiver with good limiting in the subchannel, the stereo S/N ratio would be much better on all but the weakest signals. But there were two reasons the FCC went with the GE-Zenith 19-kHz pilot system we're still using.

First, that was the vacuum tube era — though the first solid-state FM tuners would appear by the end of the year — and the additional tubes for an all-FM system would have increased the size, weight, cost of and heat generated by each tuner or receiver.

Second, and this was probably the clincher, the Crosby system would have ended SCA services. Many FM stations lost money on their primary service, but kept solvent by leasing their SCA subcarriers. And the biggest SCA customer in those days was Muzak. In fact, many FM owners also were Muzak franchisees that used their own stations' subcarriers, and a few of them were in a position to exert real influence on the FCC; for example, then-Vice President Lyndon Johnson.

As De La Hunt said, the FCC erred again in the 1980s by adopting Motorola's C-Quam system for AM stereo. I remember the tests of Leonard Kahn's independent sideband (ISB) system in the late 1970s. I could get AM stereo reception not only from WFIL (560) in nearby Philadelphia, but also from the ground wave of what was then WNBC (660) 90 miles away in New York.

The audio quality was better than I expected. It really didn't sound any worse than some over-processed FM CHRs that were putting all their records on less-than-hi-fi NAB carts. And the best part was that, unlike C-Quam, Kahn's ISB system didn't make the station any wider.

Of course, De La Hunt also was right about the proposed 5 kHz limit on analog bandwidth. There's no reason to limit bandwidth during daylight hours, and there'd be no need to with Cam-D.

But while AM IBOC's appropriation of five channels is outrageous, FM IBOC's use of half of each adjoining, or "first-adjacent," channel is hardly innocuous.

Since Philadelphia lost its full-time classical station, I'd like to be able to hear WQXR (96.3) from New York. Until recently, that might have been possible.

But what good would the best possible tuner and antenna be when Beasley's CHR Rhythmic WRDW(FM) 96.5 in Philadelphia is running IBOC, with its lower side channel effectively jamming the upper half of WQXR (FM)'s weak 96.3 analog signal from New York?

And that's not the only problem with "HD FM." When two second-adjacent stations both use IBOC, each taking up half of the channel between them, they become in effect first-adjacents, at least with respect to their digital signals.

Want concrete examples?

WSTW(FM) 93.7 in Wilmington, Del., is a second-adjacent to both WMMR(FM) 93.3 and WYSP(FM) 94.1 in Philadelphia, both of which are running IBOC. IBOC signals from WSTW wreak havoc on those two Philadelphia stations' IBOC signals south of the city. And what about WPST(FM) 94.5 in Trenton, N.J.? That one would interfere with WYSP's IBOC north of Philadelphia, too. There are dozens of such situations around the country.

If nobody's noticed the problem yet, that's only because IBOC receivers automatically default to analog whenever the digital signal is too weak for adequate reception, provided there is an analog signal. Of course, once the stations pull the plug on analog to add more digital program streams — or switch their analog service to mono to extend their useable coverage area, as per Walt's suggestion — the problem will become immediately obvious.

Hasn't anybody thought this thing through? And whose idea of progress is this anyway? It's all too obvious that when technologies compete, economic and political considerations can trump technical ones at the FCC.

Jack Hannold is a freelance writer and former broadcaster. He resides in Clayton, N.J. Reach him at jackhannold@yahoo.com.

While AM IBOC's appropriation of five channels is outrageous, FM IBOC's use of half of each adjoining, or 'first-adjacent,' channel is hardly innocuous.

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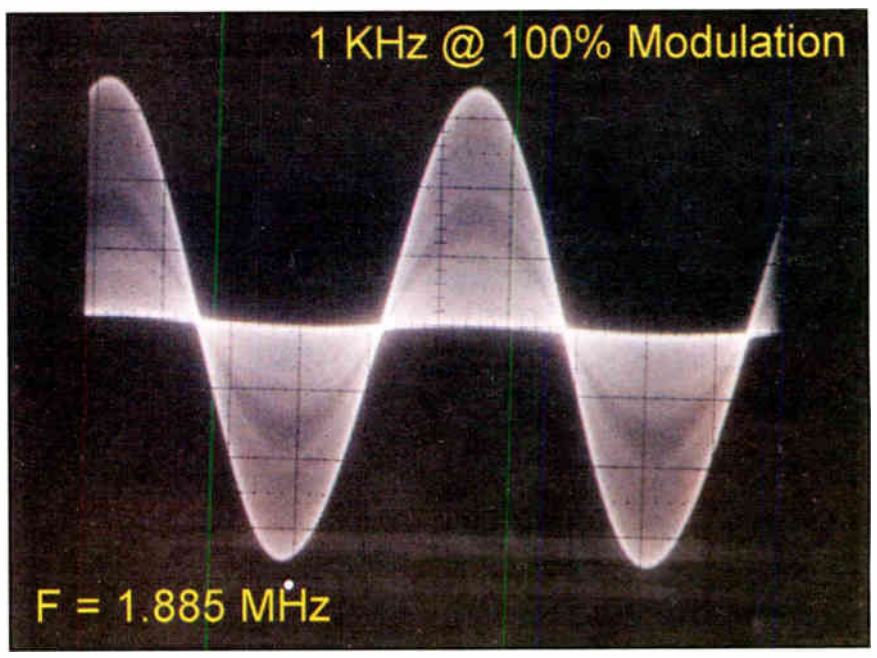

This oscillogram was referenced in the text for "How's This for a Houseguest?" (Nov. 9, 2005), but was never published. It shows the sine wave of the RF carrier modulated to nearly the carrier pinch off point (100 percent AM modulation) with no distortion evident.

World Radio History

GUEST COMMENTARY

Full Digital Is the Way to Go

by Edward "Ted" Schober

There has been much teeth gnashing over IBOC and adjacent-channel interference. I believe everyone has completely missed the point. The hybrid IBOC system is a nasty compromise designed to bridge the gap from analog to digital and was never intended as a permanent solution.

Full digital medium-wave broadcasting, without hybrid analog compatibility, whether HD Radio or Digital Radio Mondiale, fits easily in the +/- 5 kHz channel we have in the United States, and also can fit in the +/- 4.5 kHz European channel. Only the hybrid system is troublesome; the full digital modes of HD Radio and all modes of Digital Radio Mondiale are excellent neighbors to first-adjacent-channel stations.

Adjacent-channel interference between non-hybrid digital stations is negligible, and between a non-hybrid digital station and an analog AM station is low — lower than analog-to-analog. Interference from IBOC hybrid digital signals results from the fact that you cannot squeeze the digital carriers under the analog AM signal; you have to put them on your neighbor's turf.

The bottom line is the transition to non-hybrid digital must be accomplished in the shortest time possible. Hybrid digital operation is only a stopgap measure, with no improvement in coverage and troublesome adjacent-channel interference.

I propose we overcome the poor interference performance of the hybrid system by leapfrogging to full digital medium-wave broadcasting.

There are two strategies that can make this come to pass.

Road to conversion

The first strategy requires that radio broadcasters look further than the next rating period. Economically, it is reasonable that large group owners with multiple AM stations in a market would duplicate their top-performing AM station on their weakest station in non-hybrid digital. The digital-only coverage of a station is easily twice the service area of an analog AM station at the same average power. This means the group operator will have good digital and a good analog signal in the market while eliminating much of the operating expense of the "dog."

As digital receivers enter the market, it becomes economically viable to convert the next-poorest performer to digital and put on a new format, or duplicate the next-best analog AM station. Eventually, and the sooner the better, there will be no reason to broadcast in analog AM, and the broadcaster will have its channels back in glorious digital with giant service areas and crisp noise-free audio.

Governmental policy decisions could dramatically hasten the conversion to all-digital medium-wave broadcasting. If the FCC ruled that no new analog stations would be authorized in the medium-wave band, all-new authorizations would be for digital-only stations. Opening an auction window for digital-only stations, especially if it included the expanded band, would provide the opportunity for many new digital stations to drive the manufacture and sale of digital medium-wave radios.

The FCC also could require that long-form applications for new stations from the recent auction window specify digital-only operation, or as an alternative give a large bidding credit for those applicants who specify they will operate digital-only. The implementation of 500 to 1,000 new digital-only medium-wave stations would generate demand for digital receivers. The FCC also should waive regulatory fees for five years for stations that converted to digital-only operation.

A question we all have to face: How long can AM analog radio survive the competition of satellite radio and improved FM service? Conversion to all-digital will eliminate the "poor relative" status of analog AM and foster the return of medium-wave broadcasting to its halcyon days. It will provide a noise-free service of slightly better audio quality than regular FM.

Full digital medium-wave promises a larger service area and far better consistency in mountainous terrain and urban canyons than either FM or IBOC VHF broadcasting. Why do we want to hang on to a sound that was barely okay in the 1920s, when medium-wave digital service promises great sound and vastly improved coverage?

How fast can we make the transition? AM broadcasters are now in the position of the FM broadcaster in 1964. The FM broadcasters were bold and installed stereo generators and formed the NAFMB to promote their case. Look what happened. Each group AM broadcaster should be bold and convert one station in each market now, and promote the new service widely.

If we implement only the half-measure of hybrid IBOC, we will eventually lose much of the present audience to the newly improved FM and satellite services. Why will consumers buy medium-wave digital radios? They will if there is something new to hear, or if the signal doesn't drop out in the urban canyons and in the mountains.

IBOC further despoils the quality of AM analog radio with interference while it fails to encourage the manufacture and sales of digital medium-wave radios. The switch to full digital is the way to go.

Ted Schober, PE is a consulting engineer for Radiotechniques Engineering LLC in Haddon Heights, N.J.

Why do we want to hang on to a sound that was barely okay in the 1920s, when medium-wave digital service promises great sound and vastly improved coverage?

Are Your Towers Green?

There are more than 170,000 towers in the United States providing coverage for broadcast, cellular, paging and other services, with about 7,000 added every year.

Sadly, many of these pose serious hazards to migrating birds. The American Bird Conservancy estimates that up to 50 million birds are killed at tower sites annually. The structures' flashing red beacons disorient birds, which use light as a migratory cue. Many collide with tower structures and guy wires while circling the lights; others expire from exhaustion.

The topic of tower bird kills has appeared in these pages and is not without controversy. Critics of U.S. Fish and Wildlife Service guidelines for bird-friendly towers charged that the research was inadequate, samples were too small and research methods were not standardized. Others accused environmentalists of exaggerating the numbers of birds killed.

Recent research has shed more light on the topic; and a memorandum from the FAA reflects these findings.

The study by Avatar Environmental LLC, completed for the FCC in September of 2004, provided substantial documentation of bird kills and supported the use of strobe lights to reduce avian mortality. The report concluded that "reducing the attraction of birds to towers is a critical factor in minimizing bird deaths at towers ... the sum of the available scientific evidence indicates that mortality would be greatly reduced by using only strobe lights at towers."

Separately, Dr. Joelle Gehring of Central Michigan University and the Michigan Natural Features Inventory is conducting research in Michigan. Her results, yet to be published, provide strong evidence of increased mortality caused by guyed towers compared to unguyed towers of the same height and lighting systems. During spring and fall 20-day survey periods in 2004, guyed towers killed close to 10 times as many birds as unguyed towers.

Gehring's research also suggests a strong correlation between tower lighting schemes and bird kill, with red flashing combined with non-flashing lights resulting in the highest number of avian mortalities, and white strobe lights causing the least.

These studies support many of the original recommendations of the USFWS, notably:

- Collocate antennas on existing towers, or in antenna farms whenever possible;
- Construct new towers without guy wires when possible;
- Replace solid red and flashing red lights with white strobe lighting, and use white strobes on new tower construction.

A memorandum dated April 6, 2004 from the FAA to Air Traffic Division managers cites the recommendations of the American Bird Conservancy; it calls on managers, "in cases in which safety would not be derogated, to consider and recommend the use of white lights for nighttime conspicuity instead of red lights."

As long as there are man-made structures, birds will die. But careful consideration of the findings of Avatar Environmental and Gehring, along with the recommendations of the U.S. Fish and Wildlife Guidelines and the FAA, would go a long way in reducing the numbers.

— RW

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