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$2.50 The Newspaper for Radio Managers and Engineers April 23, 2008

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NEWS ANALYSIS

Now It's the Commission's Turn

Lobbyists Focus on FCC as It Decides What Constitutes the Relevant Satellite Market

by Leslie Stimson

WASHINGTON Industry eyes are on the FCC, waiting to see what the agency decides regarding the satellite radio merger.

The commission can block the all-stock deal — now valued by the principals at $5 billion — approve the transaction as it's structured or approve a merger but with conditions.

The FCC also must determine what to do about its rule that the companies cannot combine, which was intended to maintain competition in the satellite radio market. A proceeding on that question remains pending.

Analysts disagreed on the likely timing of a commission decision. Some believe it could make a decision by the end of this month while others think a decision is likely to be more complicated than that made by the Justice Department and take longer.

The anticipation comes in the wake of a controversial decision by the Department of Justice to approve the merger with no conditions. The Antitrust Division in March said it found no evidence this deal would hurt consumers or competition.

Act 'relatively quickly'

Now the FCC will decide if the deal is in the public interest. It declined to comment on the timing of a decision, but analysts said the agency tends to follow Justice's lead.

"The FCC has never, to our knowledge, rejected a merger approved by the DOJ. We don't believe this one is likely to be

See MERGER, page 8 ▶

NEWS MAKER

Tom Silliman: NAB Honors Do-It-All Engineer

by Randy J. Stine

CHANDLER, Ind. Tom Silliman says he didn't choose radio; radio chose him.

That is to be expected of someone born the son of Robert Silliman, a well-known consulting broadcast engineer, and who grew up with a fully functioning broadcast test lab in his home basement.

See SILLIMAN, page 10 ▶

Photos by Jeannie Embry, ERI

ERI President/CEO Tom Silliman, P.E.

World Radio History

◆ NEWSWATCH ◆

Arbitron Diary Processing Gets Makeover

NEW YORK The new Arbitron diary processing building, layout and equipment — all designed by Arbitron staff — will enhance productivity, efficiency and accuracy for diary processing, the company said.

Arbitron diary packages sent to the public can have 60 different treatment configurations tailored to individual respondent requirements. In 2007, the diary processing team assembled over one million diary packages.

In 2000, Arbitron automated its process by creating "Lucy," a machine designed to automatically assemble diary boxes and package all diaries intended for respondents in those boxes. Lucy is named for the episode of "I Love Lucy" when Lucy and Ethel worked on the assembly line in a chocolate factory. Arbitron used to send out diaries in boxes and envelopes and noticed more people returned the boxed diaries, hence the creation of "Lucy."

In addition to improvements made to Lucy, the new facility includes a high-tech inserter machine that improves package assembly and efficiency and a new printer. Arbitron said the new machines will allow the diary processing team to adapt to new diary treatments more efficiently and allows them to send additional communications to respondents, bringing the printing and mailing entirely in-house.

Supremes to Hear 'Fleeting Expletives'

WASHINGTON This fall, the Supreme Court will hear a broadcast indecency case — the first for the high court in 30 years.

It concerns the FCC's defense of its indecency order, which involved the decision to punish so-called fleeting expletives. Experts say the outcome of the case could overturn the agency's authority to regulate indecency content — or further solidify that authority.

Fox Broadcasting Co., along with ABC, CBS and NBC, challenged the new policy after the commission said broadcasts of entertainment awards shows in 2002 and 2003 were indecent because of short utterances by Bono, Cher and Nicole Richie. A federal appeals court said the new policy was invalid and could violate the First Amendment.

The FCC appealed to the Supreme Court after a lower court nullified enforcement of the rule saying the agency had not adequately explained why it changed the policy on fleeting expletives.

Chairman Kevin Martin was pleased, saying he continues to believe the FCC has an obligation to enforce laws restricting indecent language on television and radio when children are in the audience.

Commissioner Michael Copps hoped the court review would bring clarity to citizens and broadcasters.

NAB, meanwhile, welcomed the news of judicial review. The association's Dennis Wharton said justices would provide "badly needed clarity to both broadcasters and policymakers on this critically-important First Amendment case."

Clear Channel Deal Threatened

In a filing with the Securities and Exchange Commission at the end of

See NEWSWATCH, page 12 ▶

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World Radio History

FIRST PERSON

It's About ... Time

Many Broadcasters Set Their Clocks By WWV and WWVB

by Thomas R. Ray III CPBE

FORT COLLINS, Colo. I had the privilege of visiting a radio station in an unrated market.

This station has had pretty much the same format for at least 35 years. It simulcasts on six different frequencies. It has no ratings but is one of the best-known in the United States. Its programming is used by millions. A great many broadcasters literally set their clocks to them.

Welcome to radio stations WWV and WWVB, Fort Collins, Colo.

It was my privilege to visit them because regular tours of the facility are no longer given due to staffing issues and security concerns. My gratitude goes out to Chief Engineer Matt Deutch and RF Engineering Technician Douglas Sutton for allowing me in to write this article (and my wife for not killing me for dragging her to a radio facility on vacation).

The National Institute of Standards and Technology runs stations WWV and WWVB, located at the northern end of Fort Collins, approximately 30 miles south of the Wyoming border. The site is 390 acres of fairly flat land.

Photos by Tom Ray

The time code generation room at WWV. This is a shielded room that holds the three — primary, secondary and tertiary — time code generators and digital announcers used for the WWV stations.

The soil, being mostly clay, is fairly alkaline and exhibits good ground conductivity. You might not think that a soil of mostly clay would have good conductivity, but the alkalinity makes the soil conductive.

There is not much in the way of "civilization" in this area, which is relatively open prairie, though there are sizeable houses popping up around the WWV and WWVB location.

WWV building

Our tour first took us to the WWV building.

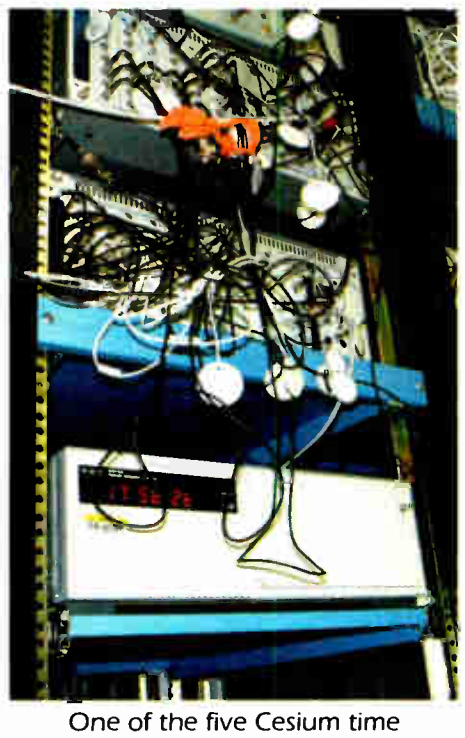
Here, in a copper lined, screened room, is where the Agilent 5071 Cesium Beam Primary Frequency References are located. These units, five in all, do not appear to be special at first glance; they look like desktop computers with time displays on the front.

But it soon becomes apparent that the five units are connected to an elaborate comparator and control system. This system constantly compares the output of each of the five units and detects drift.

The five units are also compared to the U.S. Master Clock located in nearby Boulder.

One second has been defined as 9,192,631,770 cycles of the radiation from a Cesium-133 atom.

The original U.S. Master Clock was developed by NIST in 1949 and was based on ammonia. The ammonia time base, however, proved not to be much more accurate than the time-keeping method of the time, which was based on the movement of the earth.



One of the five Cesium time standards and its comparator system at WWV and WWVB. The Cesium standards are all referenced to the U.S. Master Clock in nearby Boulder, and one will be taken out of service with as little as 5 nanoseconds drift.

In 1955, the U.S. Naval Observatory, in collaboration with the National Physical Laboratory in England, developed the first viable cesium time standard. By 1960, the cesium standards proved stable enough to be incorporated as the official timekeeping system of NIST.

An international consensus in 1967 made the number of cycles of radiation from the cesium atom the official worldwide time standard and definition of the second. Over time, as technology has progressed, the Cesium time standards have become more accurate. According to NIST, the present standard, used since 2002, is accurate to within 30 billionths of a second per year.

Know what's really cool? You can reach out and touch these units, and you can literally touch time. These units are part of what we know as time here in the United States.

Another interesting fact imparted by Douglas Sutton is that the cesium in the Frequency References needs to be replaced approximately every 5–7 years.

Much like the plutonium used in nuclear reactors, cesium will deteriorate and become unstable. The symptom of unstable cesium is frequency drift.

See TIME, page 5 ▶

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World Radio History

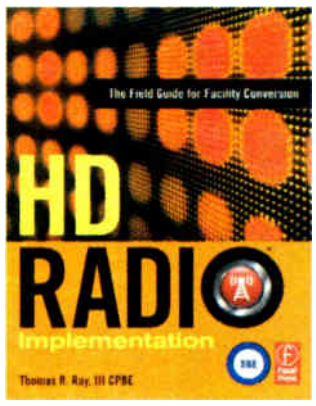
SBE Offers HD Radio 'Field Guide'

You know I can't go long without dipping into the ol' book bag. Here are three titles that caught my eye recently.

★ ★ ★

Tom Ray brings his distinctive voice to the topic of digital radio in his new book "HD Radio Implementation: The Field Guide for Facility Conversion."

Ray gets a lot of attention for his pro-IBOC views, thanks to his ardent advocacy and his employer's use of IBOC at WOR, a prominent AM station in the largest U.S. market. He's also a contributor to Radio World, which was not involved in the book, though he quotes from some of his RW commentaries.



The author's scope is how to put an HD Radio station together and make it work. He talks about studio facility considerations, STLs, audio processing, installing AM HD Radio, installing FM HD Radio and how to make it all work.

This book is appropriate for engineers as well as managers, though if you already have an HD operation or if you read Radio World you will already know a good deal of what's in here. But if you are thinking about HD-R or if you wish to expand your practical understanding of it, the book is definitely a useful read. This is practical content, though it's pricey at $89.95 retail (a problem common to engineering books that publishers feel are likely to have a relatively small, targeted readership).

He writes in a chatty style, or as Tom describes it, as if you were sitting around sharing a beer or coffee with him. It's one experienced engineer talking to fellow engineers and to other technically intelligent managers.

Tom adds an appendix of his personal experiences with HD Radio, providing more practical observations and also sharing the bile he has built up from receiving strong criticism for his pro-IBOC stance. He says he has been insulted, harassed, stalked, threatened and accused of killing AM radio; and he addresses those experiences briefly.

This 214-page hardback is published by Focal Press and the SBE, of which Ray is a board member.

★ ★ ★

The late John M. Eargle was honored this year with a Technical Grammy. An engineer, musician and JBL Professional consultant, he passed away in 2007.

Among his final contributions to the industry is "The JBL Story: 60 Years of Audio Innovation," a 326-page softcover issued in late 2006 by JBL that provides a corporate and engineering history of the company followed by many pages of photos of products and installations.

JBL dates to 1946 and has roots in earlier companies founded by James Bullough Lansing, whose initials it still bears. In nine chapters, Eargle provides great early pix and an easy-to-read chronology from the days when Jim Lansing (which was not his name at birth) launched this important contributor to loudspeaker technology.

The history is strongest when Eargle covers the early years of the company's business growth. Later developments are less well described. Specific products and installations tend to be explored mostly with a photo and a brief description rather than detailed specs. The JBL transducer timelines are interesting. Some of the images are quite large, which is nice in a book like this.

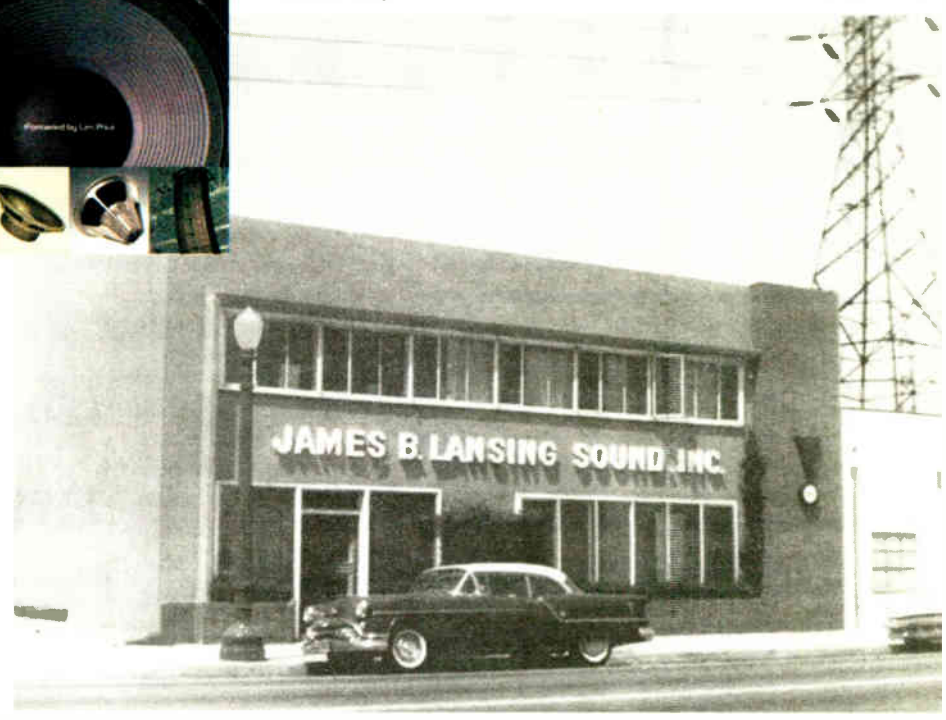
Really the book is half history, half JBL promo piece; but it will appeal to audiophiles and readers interested in the history of amplified sound.

As Eargle wrote in the preface, JBL was founded at the beginning of the high-fidelity era. "Those of you who remember those heady postwar years will recall the enthusiasm and sheer fun of it all. Not many of those early companies exist today, largely because they lacked long-term knowledgeable corporate guidance." He dedicated his book to William Thomas and Sidney Harman, and Les Paul provides the forward.

An author of several earlier titles on recording engineering, microphones and loudspeakers, Eargle worked on the project for a year and wrote the preface six months before he passed away.

Published by JBL Professional, distributed by Hal Leonard Corp. Retail price $29.95.

See BOOKS, page 29 ▶



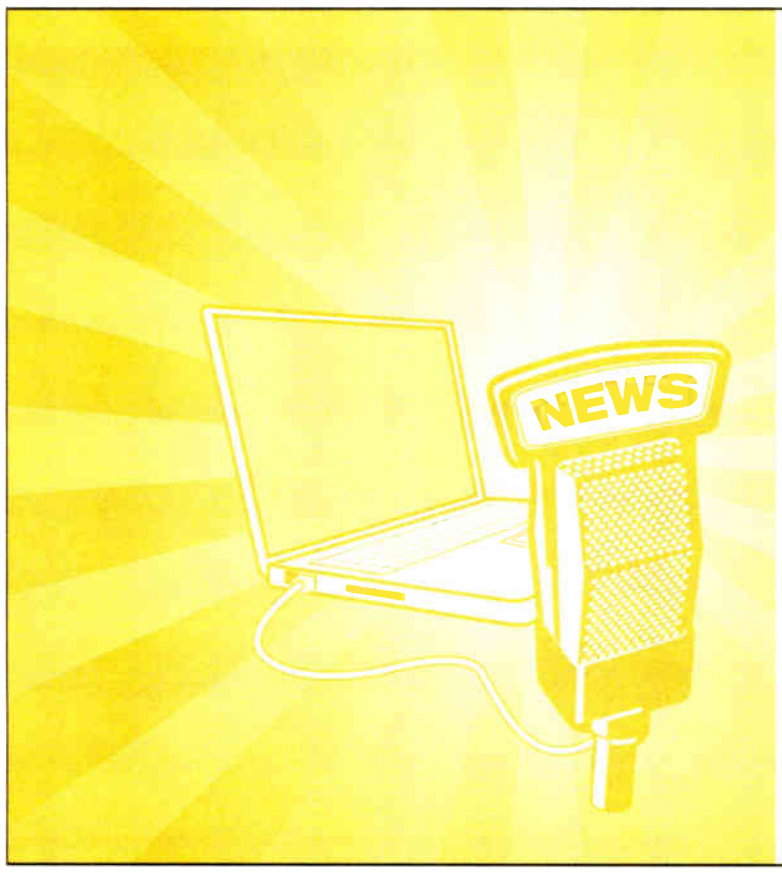
From the JBL archives, a photo of the Fletcher Drive plant in Los Angeles, circa 1955.

From the Editor

Paul J. McLane

NAB SHOW
Where Content Comes to Life™

Here's what's coming up in the next few issues of Radio World. We'll wrap up the NAB Show in news and photos. We'll profile winners of the "Cool Stuff" Award. We'll provide post-show commentary from the industry's leading columnists as well as readers. And we'll provide our summer new product preview and exhibit floor wrapup. All coming in the weeks ahead.



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World Radio History

Time

▶ Continued from page 3

When the system detects that a Frequency Reference is drifting, it will take the unit off-line and inform the staff that there is a problem.

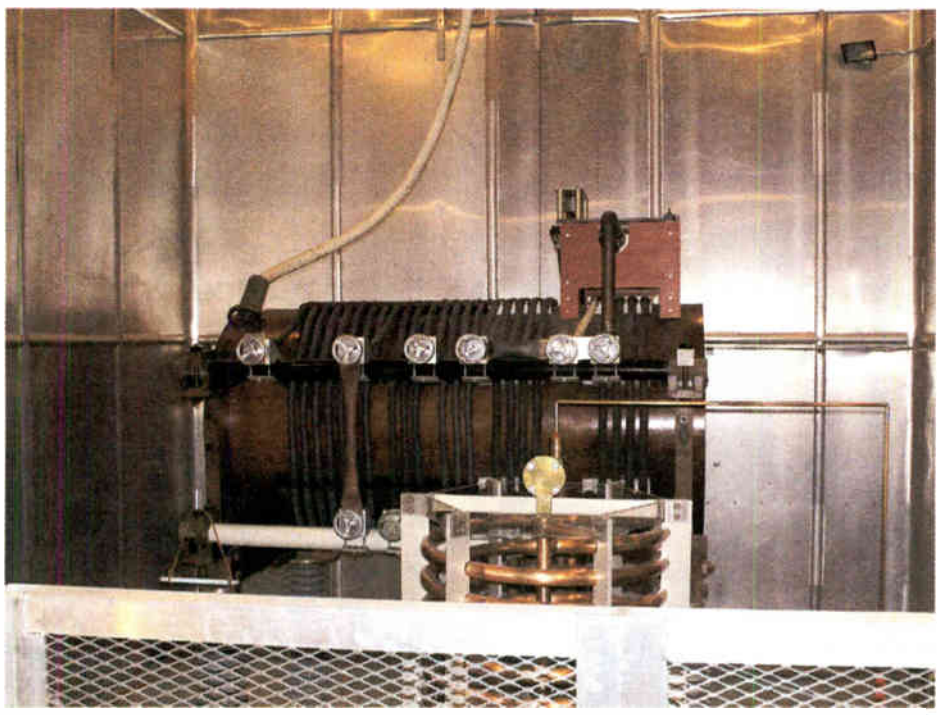
Timing stability is to within two nanoseconds.

'The ticks'

A walk across the hall brings us to another screened room. This room contains the time code generators that drive many functions at station WWV.

First and foremost, they produce the transmitter carrier frequencies of 2.5 MHz, 5 MHz, 10 MHz, 15 MHz and 20 MHz. Yes, you can literally set your frequency counter to these frequencies. They are exact and stable.

The time code generators also produce the ticks heard on the WWV broadcasts; the ticks are five milliseconds of 1000 Hz. You can reproduce this sound using a digital editor.



The variometer in the helix house, the base tuning unit for one of the two identical WWVB antennas. This is a moveable coil within a coil, and automatically adjusts for changes in antenna reactance due to wind and weather. Because the antennas are only a fraction of a wavelength at 60 kHz, the feed point impedance is very low. The cable leaving the top of the variometer carries 300 Amps of RF — for 38 kW of signal.

All the tones heard on the WWV broadcasts, in addition to the time code, which is transmitted on a 100 Hz subcarrier, are produced by the time code generators.

The top-minute tone is exactly 1000 Hertz. WWV also transmits precise 500 Hz, 600 Hz and 440 Hz tones. You can tune your piano to the 440 Hz tone transmitted by WWV — and that was one of the uses when the station signed on in its original location in Virginia.

The time code generators also trigger Racom digital audio storage devices that provide the time announcements on top of every minute of every hour of the day.

WWV has been using digital storage for a long time, even before it was fashionable. Douglas told me that the time code generator room used to be filled with individual audio storage devices, each triggered individually by the time code generators.

There are three time code generators in this room: main, backup and tertiary backup. There is also a homemade control system based on Z80 microprocessors.

This system monitors the time code output and will switch to one of the backups if it detects a failure in the primary. It will also sense the failure of a transmitter and automatically put the backup on the air. The system will page WWV's technicians in the event of a failure.

The transmitters

A short walk though the spotless workshop takes you into a horseshoe-shaped hallway where the transmitters are located, two for each frequency. WWV transmits with 2.5 kW on 2.5 and 20 MHz.

WWV transmits with 10 kW on 5 MHz, 10 MHz and 15 MHz. Primary transmitters are modified CCA AM transmitters; backups are Technical Materiel Corp. and are Navy surplus. The TMC transmitters are military-type transmitters and were installed in the mid-1960s. The CCA transmitters were purchased in 1990.

CCA is out of business; Douglas stated that, if the NIST stations are confronted with the unavailability of a part needed to repair a transmitter, he and the other two electronic technicians that work with him would simply manufacture it in their shop, unless the Navy happens to have the part required in its stock.

These transmitters are well taken care of, are not heavily modulated — though I did spot an Aphex Compellor in the Time Code Generator room — and are in extremely good condition.

Outside, the HF antennas are lined up all in a row. The antennas are half-wave vertical dipoles, with the bottom of the tower grounded with guy wire skirts forming a ground plane, insulators in the middle, and the top half of the tower driven.

The 2.5 MHz antenna is tall enough to require aviation obstruction lighting. I found it quite amusing to see an Austin Ring transformer hanging off the side of the tower to jump and isolate AC over the center insulator.

Up the hill from WWV, we find WWVB, a low-frequency station, operating with 50 kW ERP on 60 kHz. My first question to Matt Deutch was regarding the use of the 60 kHz LF signal.

My guess was that it was used primarily by the military. Matt pointed to the wall and quickly set me straight. The

See TIME, page 6 ▶

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World Radio History

Time

▶ Continued from page 5

60 kHz signal is used primarily by consumers and sets the "atomic" clocks and watches that consumers buy.

At first, this didn't make sense to me. After all, given the size of a typical watch, I would have expected it to be tuned for the HF signals. But the propagation of 60 kHz makes it ideal to reach all parts of the country relatively reliably.

Time code

My kids got me a Casio Waveceptor watch, which receives the official U.S. government time via a time calibration signal from the atomic transmitter in Ft. Collins, Colo. The watch has proven reliable in setting thus far 50 miles north of New York City.

It's interesting to note that there is no audio modulation on the 60 kHz signal. The time code generated is different from the time code on WWV in that it technically CW modulates the transmitter.

It takes 60 seconds to transmit an entire frame of time code, one bit per second. Carrier power is dropped 17 dB to represent a digital "one" exactly at the start of each second, and the time the carrier is low determines whether a mark or space is transmitted.

The station ID is accomplished by phase shifting the WWVB carrier by 45 degrees at 10 minutes past the hour, returning to 0 degrees phase shift at 15 minutes past the hour.

WWVB has three Continental LF transmitters. Two operate at any given time, with the third being a standby. The two operating transmitters each feed a separate antenna with 38 kW.

The WWVB antenna is interesting. One wavelength at 60 kHz is roughly 5,000 meters long. Obviously, it would be impractical to have a quarter-wave antenna 4,100 feet long.

So the antenna consists of a drop wire supported by four 400 foot towers, which also support wires forming a capacitive top hat. There are two identical antennas separated by 2,810 feet, or one-half mile, or 0.17 wavelength.

Each transmitter feeds 38 kW to one antenna each, which feeds each antenna a 1:1 power ratio in phase. This forms a directional antenna system which produces a 50 kW ERP signal that is approximately east/south east for the main lobe.

The short antennas have a very low input resistance, around 0.42 ohms. The tuning houses, called helix houses, contain a relatively normal sized capacitor and loading coil to match to the 50 ohm transmission line, and an extremely large coil, known as a variometer, to cancel the capacitance of the antenna.

The variometer consists of a moveable coil within the very large main coil, and its inductance is constantly varied by an automatic control system which monitors reflected power at the transmitters, as the wind can change the capacitance of the antenna and cause grief. The variometer is huge, as is the cable connecting the variometer to the drop wire. At 38 kW, this wire carries 300A of RF.

That watch of mine has tended to be reliable; there are only a handful of days, usually during the winter, when the watch cannot grab the WWVB signal overnight and synchronize. I live in an area between two mountain ranges, and when a front moves into the area, the weather it brings along will sometimes split and hit north and south of my location, with nothing occurring at home.

I can truly say that I reached out and touched time.

This makes for some interesting signal propagation, particularly at low frequencies. I have noticed, though, that there are places, usually in hotel rooms here on the East Coast, where the watch simply cannot grab the signal.

As Radio World reported in January, the National Institute of Standards and Technology, owners and licensees of WWV and WWVB, are considering putting an East Coast low frequency station on the air. The proposed frequency is 40 kilohertz, and I personally think that this station will greatly improve reception of low frequency time signals on the East Coast.

There is some speculation that station MSF in the U.K. could cause some unintended interference to the WWVB signal, as MSF also operates on 60 kHz, but my feeling is that it is simple physics; New York is a long way from Colorado, and there simply isn't enough signal strength to be fully reliable.

Since my visit to WWV and WWVB, NIST has increased power on WWVB from 50 kW effective radiated power to 70 kW, which will help with East Coast reception, but an East Coast station would work out very well.

Seeing the WWV and WWVB operation has given me a slightly different perspective on the AM broadcast band and the directional antenna at WOR. The facility is interesting, starting with the cesium time standards to seeing an LF operation.

I can truly say that I reached out and touched time.

Tom Ray, CPBE, is vice president/corporate director of engineering, Buckley Broadcasting/WOR Radio in New York City.

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World Radio History

*Above: Rays broadcasters **Andy Freed** (left) and **Dave Wills** (right) interview Rays' star third base prospect **Evan Langoria** on the "The Hot Stove Radio Show."*

*Top: **Larry McCabe**, Tampa Bay Rays Senior Director of Broadcasting and **Rich Herrera**, broadcaster and Director of Radio Operations are shown on the field during spring training.*

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Tampa Bay Rays' Real-World Super Hero Saves the Day!

Fans of the Tampa Bay Rays baseball team are intimately familiar with Dave Wills and Andy Freed, play-by-play announcers and hosts of "The Hot Stove Radio Show." Offering the inside track on all things Rays, the show kicked off its 2008 season with the "Countdown to Opening Day" series. While at a remote from a well-known sports bar, ACCESS showed its true worth. Two minutes before the broadcast, the ISDN line that was supposed to be used for the broadcast failed to connect. Luckily, they had the ACCESS running on Wi-Fi provided by the restaurant. The broadcast got on the air and was flawless for the entire one hour show.

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World Radio History

Merger

▶ Continued from page 1

the first," Blair Levin, an analyst with Stifel Nicolaus and a former FCC staffer, wrote in a note to investors.

"It's very rare that the FCC would have a contradictory ruling," said RBC Capital Markets analyst David Bank in a client note. His sense is the commission would act "relatively quickly" on the transaction.

This case might not fit the usual pattern, though. The commission finds itself under more than a normal amount of pressure — from lawmakers, broadcasters and some consumer groups — to extract concessions from the satellite companies if the deal is approved.

FCC officials have offered conflicting signs on whether the commission would approve the merger.

At a press conference in March, Chairman Kevin Martin said he had asked his staff to start drafting "various options" on the proposed merger, but as yet had not decided what to do about the deal. When questioned by reporters about the merger, Martin has said any approval faced a "high hurdle."

When queried further by Radio World, the chairman said at the heart of the case is how the relevant market is defined.

Martin seems to support an important element of the deal — the creation of so-called a la carte pricing — which would allow customers to choose among packages of programs instead of the full lineup that subscribers must now purchase. He has been supportive of the a la carte system in principle, saying during press conferences and in appearances before lawmakers on Capitol Hill that it may benefit consumers.

Both XM and Sirius declined comment on the decision other than to issue a statement saying they were pleased and that "no existing radio will be made obsolete by the merger." The merged company's 17 million subscribers would be able to receive "select" programming — currently undefined — from the provider they don't already subscribe to on existing radios, the companies said.

A la carte under scrutiny

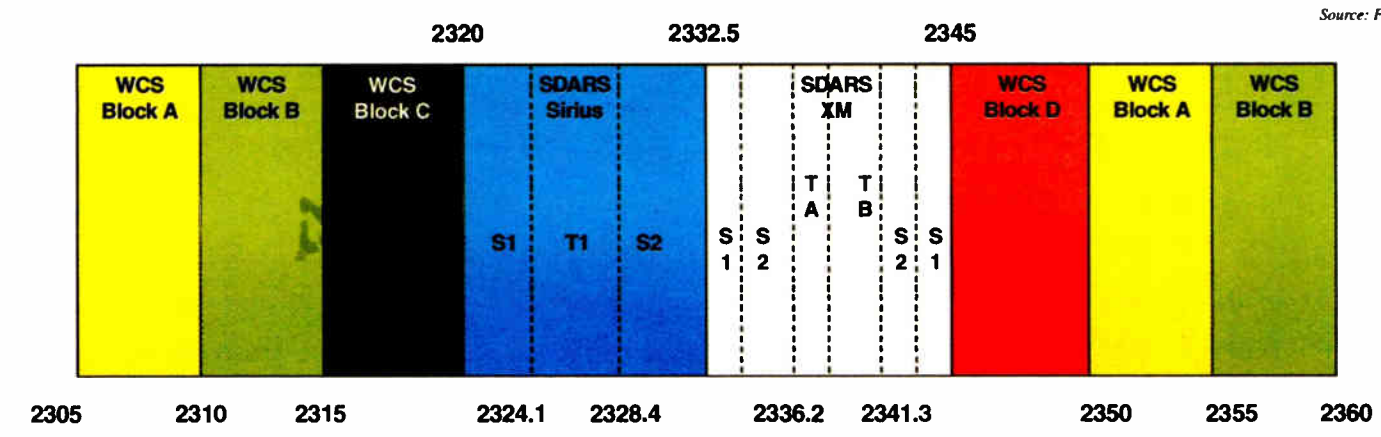
In meetings with FCC officials since the DOJ decision, attorneys for Sirius and XM have reiterated that the companies could save money and pass that onto customers, according to filings.

After the merger, the combined satcasters could broaden their program offerings, they've said. Consumers would have so many options that there would not be an incentive to raise prices, the satcasters have argued, referring to several pricing options announced this summer.

Under the a la carte system, for example, rates would be as low as $6.99 a month for 50 channels with the option of paying on a per-channel basis for additions. Under such a system, customers could receive selections from each service.

XM and Sirius have said they plan to offer eight options that combine the companies' offerings, such as a mostly music package with 65 channels, for $9.99 a month — less than the current flat rate of $12.95. Six of those eight options would be available on existing radios within six months of the deal's approval, we've reported.

The two a la carte packages would require new radios. When the deal was proposed more than a year ago the satcasters estimated the new radios would be available within a year. Now, the timetable for availability is unclear because the deal has been pending for so long.



SDARS services occupy 25 MHz in the S-band of the radiofrequency spectrum. Their portion is divided evenly between Sirius (2320–2332.5 MHz) and XM (2332.5–2345 MHz).

When the companies received their SDARS licenses in 1997, the FCC approved them with a requirement that they design interoperable radios. The satcasters say they have such designs for an interoperable receiver and antenna, but until now it would have been prohibitively expensive to produce and market such radios. Only a merger makes it economically feasible, they've said.

NAB finds that argument particularly galling, with Executive Vice President Dennis Wharton.

"We are astonished that the Justice Department would propose granting a monopoly to two companies that systematically broke FCC rules for more than a decade. To hinge approval of this monopoly on XM and Sirius's refusal to deliver on a promise of interoperable radios is nothing short of breathtaking."

XM and Sirius say they've seen a dip in receiver sales since they announced plans to merge.

The Consumer Electronics Association, hoping to bolster the satellite radio equipment market, applauded the DOJ's decision. "To the extent consumers have been awaiting a decision on this merger to purchase satellite radio systems, they can now move forward with confidence. Now that the DOJ has approved this merger without conditions, we urge the FCC to move quickly to a decision."

Public interest groups, including Public Knowledge and Free Press, have urged the FCC to impose restrictions on the merger, such as capping the prices companies can charge customers.

The Consumer Coalition for Competition in Satellite Radio calls the deal a "merger to monopoly" that should be blocked and in a discussion with FCC staffers underscored the importance of a package with conditions requiring ongoing enforcement, according to an agency filing.

New SDARS entrant?

Media Access Project has urged the agency to "require the merged entity to make the technical specifications of its devices and network open and available to allow device manufacturers to develop, and consumers to use, any device they choose without interference," according to an FCC filing.

In March meetings with commission staffers, Georgetown Partners reiterated that approval of the merger would harm the public interest by allowing a single company to control all 300+ channels and 25 megahertz of SDARS spectrum.

It urged the commission to insist on a new SDARS entrant, according to a filing. Georgetown has lobbied that a lease arrangement for satellite transmission infrastructure and a minimum of 20 percent of the spectrum capacity be in place before Sirius and XM are allowed to close their deal. Media Access Project also supports a return of some portion of the SDARS spectrum. So does Primosphere, one of the original SDARS applicants, as we've reported.

Also, in several March meetings with commissioners and staffers, Ibiquity President/CEO Bob Struble and General Counsel Al Shuldiner reviewed the competitive implications of a merger on the HD Radio rollout.

Ibiquity is concerned that long-term deals with automakers XM and Sirius have locked in, as well as subsidies and incentives, could discourage automakers from including HD-R in the dash. A combined satcaster would have a better economic position to continue that trend, and weaken the IBOC rollout, Ibiquity argued.

On the heels of this decision, the logic for a performance right for terrestrial radio has never been clearer.

— Mitch Bainwol, RIAA

The attorneys general of 11 states wrote the FCC with concerns, saying they were disappointed that the DOJ "would permit this merger to proceed unchallenged or without the imposition of terms and conditions that would reduce the proposed transaction's anticompetitive impact," like a spectrum divestiture, to allow a new entrant into the satellite radio market.

Given that the FCC looks to a broader public interest standard, the AGs urged the commission to address these issues.

The Recording Industry Association of America had a different take on the deal, bringing up the specter of future analog and digital terrestrial radio licensees paying a performance royalty.

RIAA Chairman/CEO Mitch Bainwol said, "On the heels of this decision, the logic for a performance right for terrestrial radio has never been clearer. It's time for that to change and for Congress to provide an economic marketplace where there is parity amongst all delivery platforms."

While satellite and Internet radio pay a performance royalty to singers and musicians, terrestrial radio does not, pointing to the exposure free radio airplay gives new and current artists.

Justification

The Justice Department said in March it found no evidence that subscription prices would go up after the satellite radio companies combined.

Looking at subscriber behavior now, the head of the DOJ's Antitrust Division, Thomas Barnett, said there's little switching between satellite radio services: once someone signs up, they're not likely to switch to the other service, the DOJ found, because the two satcasters long ago locked up long-term auto agreements "that provide incentives to all of the major auto manufacturers to install their radios in new vehicles."

This means there was no evidence that competition between the two companies beyond the auto contracts would affect customer choice, the DOJ said in its decision.

These arguments — and the fact that customers need different equipment, because there are no interoperable radios and won't be soon — led DOJ to decide it "could not support defining a market limited to the two satellite radio firms that would exclude various alternative sources for audio entertainment."

The case hinged on the relevant market definition.

Looking down the road some five years, "There will be more alternatives than there are today," Barnett said. "Some people may view iPods as a particularly good alternative," he said. "They may view HD Radio as an alternative."

He said that much of the programming now available on XM and Sirius might soon be available through wireless broadband connections on the Internet or cell phones. Indeed, shortly after the decision, XM and QuickPlay announced what they said is the first universally available XM Radio Mobile Service for BlackBerry smartphones.

Several congressional Democrats oppose the merger as anticompetitive.

Sen. Herb Kohl, D-Wis. and chairman of an antitrust subcommittee, said the deal would "create a satellite radio monopoly." Sen. Byron Dorgan, D-N.D., said the decision was another example of the DOJ's "blatant disregard for the public interest with regard to media ownership." That the DOJ can disregard the FCC's own rules licensing satellite radio that says there must be two separate companies providing the service "makes no sense."

Barnett said allowing the deal to go through would not create a monopoly because there's "no relevant market limited to just those two providers."

World Radio History

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World Radio History

Silliman

▶ Continued from page 1

During a career driven by a desire for adventure, Tom Silliman has managed to conquer many aspects of life, both professional and personal. From climbing the antenna mast atop the Empire State Building to riding the whitewater in a kayak on a river in Chile, he is a man passionate about work and recreation.

Silliman is president and CEO of Electronics Research Inc., and respected in antenna product engineering, manufacturing, testing and installation. He is an accomplished tower climber. He designed and patented the ERI Rototiller FM antenna, a side-mount FM antenna still considered to be a workhorse antenna in the FM industry, in 1975.

Now he is taking his place among a select group of broadcast engineering greats. Silliman, 63, is the recipient of this year's NAB Radio Engineering Achievement Award, an honor bestowed upon industry leaders for significant contribution to radio engineering.

Tom Silliman with a Rototiller X Series SHPX Model Super High Power Circularly Polarized FM Antenna

"Tom Silliman is often called a renaissance man due to his varied passions, but he is best known for his accomplishments in the field of antenna engineering," stated Lynn Claudy, senior vice president of NAB Science & Technology.

"He's a friend to many broadcasters and is always willing to help solve problems. Tom takes the time to explain complex RF issues to anyone willing to take the time to learn."

Humbled

In winning the honor, Silliman becomes half of the first father/son combo to win the NAB's recognition for achievement in broadcast engineering. Robert won the award in 1993; he passed away in 2001.

"I began my career being born to Robert Silliman," said Tom Silliman. "I've had the chance to work with so many great engineers, including my father. People like Jules Cohen, Ben Dawson, Ron Rackley and John Reiser of the FCC. It is unbelievably humbling to be considered a part of that elite group."

Silliman has designed antenna projects for legendary vertical

Tom Silliman and Keith Unfried at work on Lyon Mountain, N.Y., about 30 miles west of Plattsburg, last fall. ERI installed four concrete anchors and a 400-foot tower in 15 days. The vehicle was being airlifted off the mountain because of a mechanical failure.

real estate holdings, including the Prudential Building in Boston, the Hancock Building in Chicago and Empire in New York. Much of what he has learned through the years goes back to youthful summers spent working for his dad.

"Our basement was full of tube testers to amplifiers to emittence meters. My father would sit me at the workbench with a soldering iron and let me work. I began working at the age of 14 when I would take the bus from my home in Silver Spring, Md., to Jack Moffett's office, [who was] a former partner with my father in Silliman, Moffett and Rohrer. I learned basic trigonometry and what logs were, way back then," Silliman said.

His tower climbing exploits have been well chronicled, even gaining national notoriety after he was featured on ABC TV's "20/20." He began climbing in 1969 and has been "literally on top of the world" on many occasions.

"I just love it still. It's challenging, but it is sure good for business. We have picked up a lot of projects over the years because I'm a climbing engineer," Silliman said. "We have a handful of PEs here at ERI that climb."

Silliman joined ERI after receiving his Bachelor's degree in Electrical Engineering from Cornell University in 1969; he shortly afterwards completed his Master's in Electrical Engineering there as well.

Robert Silliman hired his son part-time to help ERI at the company's test site — then at Newburgh, Ind. — to work on antenna tests and filter design for the Shell Building in downtown Houston.

"I'd been working for my father since I was 14, so Robert Silliman knew what I could do," said Tom Silliman, "and we eventually got that Shell job. To my father's credit, he recognized my skills early on. He never made a major decision without discussing it with me. He was a joy to work with and we became best friends."

ERI

Today, ERI has 250 employees spread among three facilities: corporate headquarters in Chandler, Ind., which totals 165,000

See SILLIMAN, page 12 ▶

Honor Roll

Past winners of the NAB Engineering Achievement Award are listed. Beginning in 1991, radio and TV winners were named; radio winners are shown.

1959	John T. Wilner
1960	T.A.M. Craven
1961	Raymond F. Guy
1962	Ralph N. Harmon
1963	Dr. George R. Town
1964	John H. DeWitt Jr
1965	Edward W. Allen Jr.
1966	Carl J. Meyers
1967	Robert M. Morris
1968	Howard A. Chinn
1969	Jarrett L. Hathaway
1970	Philip Whitney
1971	Benjamin Wolfe
1972	John M. Sherman
1973	A. James Ebel.
1974	Joseph B. Epperson
1975	John D. Silva
1976	Dr. Frank G. Kear
1977	Daniel H. Smith
1978	John A. Moseley
1979	Robert W. Flanders
1980	James D. Parker
1981	Wallace E. Johnson
1982	Julius Barnathan
1983	Joseph Flaherty
1984	Otis S. Freeman
1985	Carl E. Smith
1986	Dr. George Brown
1987	Renville H. McMann
1988	Jules Cohen
1989	William Connolly
1990	Hilmer Swanson
1991	George Marti
1992	Edward Edison & Robert L. Hammett
1993	Robert M. Silliman
1994	Charles T. Morgan
1995	Robert Orban
1996	Ogden Prestholdt
1997	George Jacobs
1998	John Battison
1999	Geoffrey Mendenhall
2000	Michael Dorrough
2001	Arno Meyer
2002	Paul Schafer
2003	John W. Reiser
2004	E. Glynn Walden
2005	Milford Smith
2006	Benjamin Dawson & Ronald Rackley
2007	Louis King

World Radio History

Wireless Broadband Internet Remotes

"The first time out with the Tieline was a brilliantly simple experience for everyone involved. For lack of a better phrase, the codec just worked."

- Christian Vang
Chief Engineer
Clear Channel St. Louis

"The codecs sounded great. My management was very, very impressed with the demos"

- Grady Jeffreys,
Technical Manager,
Mackay Communications

"The remote was a spectacular success, in no small part thanks to the flawless sound which the Tieline G3 provided over the public Internet"

- Mike Rabey
Chief Engineer
Entercom Indianapolis

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World Radio History

Newswatch

▶ Continued from page 2

March, Clear Channel Communications said it couldn't estimate when its $19 billion-plus buyout by two private equity firms might close.

In the document, Clear Channel said the company and its buyers, Thomas H. Lee Partners and Bain Capital, came to a scheduled meeting to close the transaction, but not all the closing conditions under the merger agreement had been met and bank representatives did not attend.

Disputes over the financing terms threatened the transaction days before it was slated to close. The Wall Street Journal reported the banks face a hit of nearly $3 billion if the deal goes through because loan prices have dropped since they agreed to the deal last April.

Prior to the SEC filing, the private equity firms and Clear Channel filed lawsuits against several banks to force the lenders to fund the deal. In suits filed in New York by the private-equity firms, the companies alleged breach of contract and fraud, claiming that the banks — Citigroup, Morgan Stanley, Credit Suisse, the Royal Bank of Scotland, Deutsche Bank and Wachovia — had broken their commitment to fund the deal. The banks countersued, and a May court date was scheduled for the New York suit.

In Texas, Clear Channel filed a suit containing the same allegations.

It later said a judge gave the broadcaster a temporary restraining order in its favor. The banks then asked for the Clear Channel suit to be moved into federal court.

News Roundup

TIBET: U.S. international broadcasters have increased programming transmitted to Tibet. James Glassman, chairman of the Broadcasting Board of Governors, cited the "violent crackdown by Chinese authorities in Tibet." Radio Free Asia and VOA each added two hours of daily programs broadcast to Tibet. VOA also doubled its weekly Tibetan-language television programming to two hours via satellite. The organization said its research via Tibetan refugees in Nepal indicates that VOA and RFA "are among the most well-known foreign broadcasters and an important source of information in a society where word of mouth is the top way to share news."

STATIONS: The number of licensed radio stations — excluding low-power FMs — grew to 13,977 as of Dec. 31, 2007. That compares to 13,837 stations at the end of 2006. There were 831 LPFMS at the end of 2007, 60 more than a year ago, according to the commission. There were 5,904 licensed FM translators and boosters.

ALERT FM: George Mason University in Northern Virginia will install the Global Security Systems Alert FM on its campus, the first university to do so, according to GSS. The FM radio-based alert and messaging system will provide redundancy to the school's emergency communications systems such as SMS and e-mail. Alert FM allows authorized personnel to create and send alerts and messages to groups of first responders, students or campus buildings. Targeted alerts and messages are delivered by satellite to FM transmission facilities and can be received on Alert FM receivers, wall units and other mobile devices including PDAs, cell phones and other receivers equipped with FM chips. The university will be initially covered by WETA(FM) in Washington to ensure distribution over a large geographical footprint, with the potential to reach 30,000 students and faculty at the university. Some 5,000 students live on the GMU campus. GMU also purchased portable Alert FM receivers, USB receivers and wall mount receivers capable of decoding emergency alerts and messages.

TECHNICAL GRAMMY: The late John Eargle was awarded a 2008 Technical Grammy at the Special Merit Awards ceremony in Los Angeles, prior to the 50th Grammy Awards telecast in March. The engineer, musician and longtime JBL Professional consultant passed away in 2007. Eargle was a member of the National Academy of Recording Arts and Sciences; he engineered and/or produced more than 275 albums, including Grammy-winning releases. In 2001, he earned a Grammy for Best Engineered Classical Album for "Dvorák: Requiem, Op. 89; Sym. No. 9, Op. 95 'From the New World.'" During 30-plus years with JBL, the company said, he championed the concept of flat power response in sound reinforcement applications, conceiving the application of bi-radial constant-coverage horns to both studio monitors and cinema systems.

MARKET EXPANSION: Scarborough Research is looking to expand the number of markets it measures for shopping patterns, multimedia use and lifestyle patterns for adults 18+. Now, it measures 81 top-tier and 15 mid-tier markets. Media companies, ad agencies and marketers use Scarborough data when buying ads, as well as for strategy development and for acquiring and retaining customers. Scarborough Research is a joint venture between The Nielsen Company and Arbitron. In meetings with middle- and small-market broadcasters, one of the biggest messages Arbitron hears is the need for expansion of local market qualitative data, it says.

Silliman

▶ Continued from page 10

square feet of manufacturing space, a test range near Booneville, Ind., and a 25,000-square-foot RF component design and manufacturing facility near Portland, Maine. The company also manufactures UHF and VHF television antenna components and sells broadcast structures.

ERI, which purchased the broadcast division and selected assets of Andrew Corp. in 2003, is well positioned to take advantage of the deployment of IBOC digital broadcasting in this country, Silliman said.

"HD Radio is presenting many opportunities for growth. We were involved very early with IBOC and worked closely with Lucent Digital Radio and have put a lot of work into it." Lucent Digital Radio merged with USA Digital Radio to form Ibiquity Digital Corp. in 2000.

ERI has since developed several antenna products for the HD Radio market, including its Lynx Dual-Input Side-Mount Antenna, which is experiencing strong demand, Silliman said. The antenna allows FM stations to implement simulcast operations of both analog and digital broadcasts without the use of high-loss hybrid combiners.

"It is dual-input but yet a very stable antenna," Silliman said.

Despite what he calls massive consolidation within the radio industry, a slower-than-expected rollout of HD Radio and the sour economy in general, Silliman still believes in radio, even if he is not sure what the future may hold for the medium.

"It will be something. I think if the industry is going to experience this digital revolution, that eventually you could see analog go away totally," he said, "but I'm just a servant to the industry and don't make those types of decisions."

Silliman described 2007 as a "difficult year" for ERI as the company geared up for the anticipated rush of television work in the rollout of digital television, a rush that never quite materialized.

This year "is going to be much better. We are seeing a significant jump in business right now for both for TV and radio," Silliman said.

Silliman predicts business for ERI will be very good through at least 2012, as demand for vertical real estate increases.

"The change from analog television is going to severely impact radio operators. With all of the changes in TV there will be pressure on FMs to move. We have seen cases where TV stations have jacked up the tower lease rates where they are collocated with radio," Silliman said.

While Silliman has dedicated himself to his profession, he has had the opportunity to enjoy several hobbies. The fitness buff and one-time avid skier became a world-class kayaker in the 1980s and 1990s, making trips each summer South America to kayak the whitewater in places like Costa Rica and Chile.

The future

More recently, he has taken up horseback riding and practices cutting cattle on a 238-acre ranch he owns near Lynnville, Ind. with Ernie Jones, vice president of structural engineering at ERI. Eventually, he and Jones want to produce grass fed beef and pastured chickens for sale.

"We currently have 54 head of cattle and are hoping to add more. There is a lot more to riding horses than most people understand. I have been thrown off two horses in the last two years, and it can be unpleasant," Silliman said.

He has a distinctively raspy voice, the result of numerous surgeries due to a recurring throat virus. A man with a sense of humor, he also was one of the individuals behind the April Fool's story in Radio World's March 26 issue titled "A New Concept in AM Radiator Design."

Although he may be one of a kind, Silliman said he is honored by the award and feels as if he is part of a special fraternity to which few others belong.

He only wishes there were some women in that exclusive group. "There have been some phenomenal women in our industry and it would just be neat to see a woman on that list," Silliman said.

Silliman is divorced and is now engaged to Sally Rose. He has two adult daughters and lives in Newburgh.

World Radio History

1,000! ~~500~~ studios already?

Time flies when you're having fun!

Hard to believe, but we passed the ~~500~~ 1,000! studio mark recently. We're told that it's a major milestone, but we prefer to call it a good start.

In fact, our clients have made Axia the **fastest growing console company** in radio. To you, we say "thanks" for your trust and enthusiasm. And to those of you who aren't yet clients: we're ready when you are.

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

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World Radio History

Stop VSWR Trips With a Funnel

by John Bisset

Heavy rain can wreak havoc with any AM array.

Harry Bingaman of Sunbury Broadcasting took note of our raindrop picture of the improper Austin Ring installation (*Workbench*, Jan. 2).

Heavy rain or deep snow would drench or bury the spark gaps in his five-tower array, resulting in a VSWR trip. The problem was most common during 10 kW day operation.

To solve the problem Harry inserted an upside-down funnel on each tower end of the spark gap, as seen in Fig. 1. Problem solved!

He recommends a good funnel made out of material that will not be affected by UV. Harry found that a yellow color works best.

Harry tried a clear plastic funnel, but it did not last very long. The only advantage was that the clear version did offer the opportunity to see the bees' nest before they saw you.

Fig. 2 shows how the funnel is held in place by the upper portion of the spark gap, completely shielding the lower portion of the spark gap.

Thanks for your ingenuity, Harry — a great tip, inexpensive to implement, and it solves a problem.

Harry Bingaman can be reached at *kc3qhhmb@aol.com* .

★ ★ ★

Barry Potter is a field service engineer based in Helena, Mont. Reading here about the nesting habits of the white-footed mouse at transmitter sites and antenna tuning units, Barry notes that in Montana and in other western and mountain states, this rodent is notorious for carrying the potentially fatal hantavirus infection.

Fig. 1: An inverted funnel prevents spark gap shorting.

Fig. 2: Insert the funnel over the upper spark gap arm.

The illness is transmitted by handling and inhalation of dust from the nests or any other materials contaminated with infected rodent urine and feces.

Most engineers are more attuned to not touching the HV or an RF line, and think little of sweeping rodent debris with a bare hand or inhaling its dust.

Barry says the local phone company provides a cleanup kit for their technicians. For cleanup, use a chlorine bleach solution in a 10:1 water-to-bleach mixture. Spray the solution on the material and in the area. The solution will help settle the dust and decontaminate the rubbish.

Make sure the power is off — both RF and AC — before attempting this inside an ATU!

Barry adds that rubber gloves and a HEPA respirator are also recommended precautions for use when cleaning up. See *www.cdc.gov/ncidod/diseases/hanta/hps* for details, including other species of rodents known to transmit the disease. Be sure to read the info under "Hantavirus Pulmonary Syndrome: What You Need to Know."

Although Barry does some broadcast engineering in Montana, he's worked on a variety of projects in Africa, installing both TV and radio transmitters. He's seen quite a bit during his travels, but especially remembers a transmitter site in Malawi.

There, an RCA transmitter sat running with a polished brass plate affixed to it. The inscription: "A gift from the people of the United States to the people of Malawi by President John F. Kennedy."

Barry Potter can be reached at *idealser@qwest.net.*

★ ★ ★

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Most broadcast equipment companies

See TECH TIPS, page 16 ▶

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attached a picture in white contact me for more info. big_plans #221542

STEADY SEEKING LADY

I am looking for a male partner (38-50)who is willing to be exclusive with me for a long term relationship. Not asking for marriage. I am of average build, dark hair, brown eyes and am an Indian female. I have a wonderful job and attend some classes a couple of nights a week. I have two kids who stay at home with me. They are very precious to me. And they are not going to be a hindrance to our dating. I have a full and busy life. Therefore, the expectation is to see each other on a steady basis, and at the same time, being flexible. precious_me #331252

I LOVE MUSIC. YOU LOVE ME

I'm an indie/hipster girl who adores music and going to clubs and shows. Some of the bands that I'm into are Interpol, The Arcade Fire, Blonde Redhead, Bauhaus, The Smiths, Morrissey, etc. I'm into indie rock, electronica, punk, pretty much anything. I drink and smoke occasionally. I'm 21, 5'8", light-skin, dark brown hair/eyes. I work, am well-educated, funny, spontaneous, nice. #2215234

299685

HANDSOME RAKE

Out of work leaf raker/bagger seeks whimsical beauty with un-kempt auburn or chestnut hair, cool coarse hands and a penchant for whistling. mellow_mo, 28, #101318

LET'S CONNECT

Radio engineer seeks stable long distance relationship. Need to connect immediately. Everywhere I go, I see broadband internet, but I just never hook-up. I need to meet that special someone that will plug me in so I can be heard. Must be reliable, connect easily, forgive errors and adapt to change. Should come from a good family. easy_going #101352

SIMPLICITY HERE

Simply put, I'm looking for a fun, casual relationship with only one person. That means one person for me and one person for you. :-) Every woman wants to feel safe with a partner, whether it's serious or not. It's key to her feeling comfortable to express her more intimate nature. I don't ask for much other than to hang out, enjoy your time with me and be available to chill.

MR. RIGHT

I'm actually posting this on behalf of a friend. Since she's been single she hasn't found the right guy and I'm doing this in hopes of helping her find Mr.Right. After you and I talk, if you are chosen then you will get to go on a date with her and who knows, it could be the perfect date and start of a new

for women

IN LOVE

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response :

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Hah are yo

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World Radio History

Tech Tips

▶ Continued from page 14

post a large amount of useful information on their sites, and some sponsor forums or e-newsletters to keep customers informed.

Clark Novak of Telos Systems writes in a recent e-newsletter that some improvements have been made to Telos Two, Two-x-12 and Series 2101 hybrids.

It was discovered that some units, serial numbers from 212AQ0800 to 212AT4850 (inclusive), have defective power supplies, and the power supply vendor has released a new version of the supply to correct the problem. For best performance, a procedure to check the supply capacitors can be found at *www.zephyr.com/enews*. You can also subscribe to the e-newsletter at this site.

Clark Novak can be reached at *cnovak@axiaaudio.com*.

★ ★ ★

Michael Barnes, technical director for the Salem Radio Network in Irving, Texas, notes that maintaining security is an increasing problem at remote sites these days. Though a well-lit site is a deterrent to intruders, some may disable your lights so their vandalism or theft cannot be seen.

Michael's tip is to add current sensors on your perimeter and security lighting, similar to the ones you use on your tower lights. Hook the sensors up to your remote control alarms. When the lights get shot out, broken or even just burn out, you will get an alarm.

If you monitor the lights individually, and suddenly get alarms for multiple lights out, it's time to call for backup.

Current sensors are cheap insurance for keeping your site secure.

Michael Barnes can be reached at *mbarnes@smradio.com*.

Speaking of Salem, Fig. 3 was sent in by Scott Horner and Stu Engelke, showing the steps they took at WWDJ(AM), Hackensack, N.J., to thwart vandalism of the station's diplexer and ATU.

Typically the space under the ATU is open — exposing copper strap, coaxial cable and the AC/control wiring. Even if the cables are contained in conduit, the copper strap would still be exposed.

You know that saying "out of sight, out of mind." When you screw painted plywood sheets onto the ATU support legs, a potential thief can't see the cables or strap. Not knowing what's behind the panels, they probably won't spend the time to remove all the screws securing the boards to the legs in order to get inside. Thanks Scott and Stu.

If you have a method of securing your site, share it with the readers of *Workbench*. Such solutions have never been more timely — or important.

Stuart Engelke can be reached at *sae@nycradio.com*. Scott Horner can be reached at *scott.horner@salem.cc*.

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

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

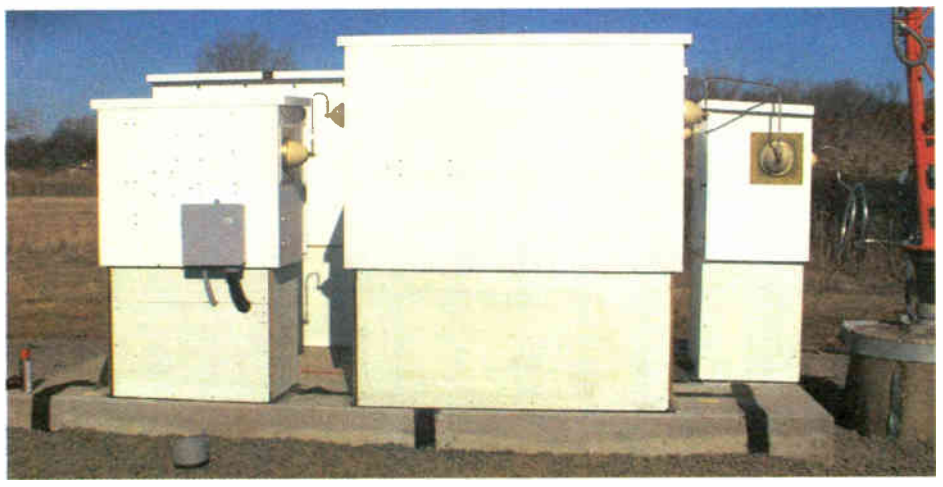

Fig. 3: Painted plywood sheets can add a simple and economical layer of security to tower sites.

SUPPLY SIDE

Burk Adds Installation And Integration

Burk Technology, a supplier of broadcast remote control solutions, is now offering installation and integration services.

RW asked Burk Marketing Manager Nathan Burk about it.

Nathan Burk

RW: Why do you feel customers need such an option?

Burk: Our gear is pretty simple to install, but when it comes to really implementing the system — taking advantage of everything we've built in — a lot of the best capabilities can get overlooked.

So engineers were asking if they could leverage our experience to really get their systems performing at their max.

RW: What kind of install/integration is involved, and what's the impact on your staffing?

Ben Allen

Burk: We're growing in a few different areas and this is one of them. We brought in Ben Allen to be a primary point of contact for this area. He'll be working with engineers on custom user interfaces, more station automation, making alarm reporting more efficient. ...

These are the types of things our users can do today, most of the time with Burk gear they already have. But we can provide the manpower and free up their engineering resources to go on to the next big project.

Now for someone starting from scratch, we can actually go out and do a turnkey install: Put together a wiring a plan, connect our gear to their site equipment, customize it, train them on it ... it really depends on what they need.

RW: Why is this a good move for Burk?

Burk: It's definitely good for us if our gear is accomplishing more for a particular station, or in a group.

We thought this would be a way for stations to jump in to "power user" mode so they can take advantage of everything we've added to the products over time.

RW: How has the remote monitoring/control niche changed in recent years?

Burk: With IP, you can move data around pretty easily. And that plays right into this idea of greater oversight, looking at more sites at once, central control, NOC monitoring.

So what we're concentrating on is making central monitoring work for both oversight and for local control. Because a system that's good for central monitoring also has to be comfortable for the local engineers to use.

It's all about buy-in from the ground up.

RW: How can radio organizations keep their costs down for this kind of infrastructure?

Burk: By really taking a look at all the costs of taking care of a remote site.

What is it costing them to make extra trips to the transmitter? Or to go in at night and reboot an automation PC, vs. putting remote control in the studio? The remote control should mitigate these costs.

But you know, it's more than just keeping costs down. It's letting the engineers go on to take care of other things. Productivity. Making the remote control do more of the work. That's what we're getting at with the installation and integration.

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Web: *www.burk.com*

World Radio History

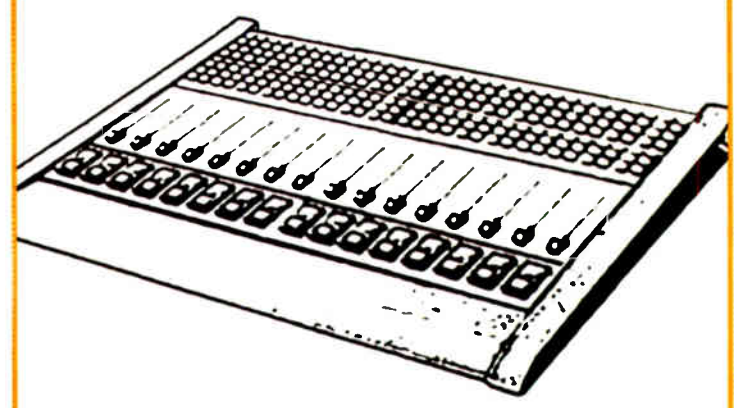
Nobody knows what the future holds.

(But there's a reason our logo is a crystal ball.)

Comdial Executech® PBX phone, *ca.* 1996. Comdial was one of the leading PBX companies in both sales and technology, with a million-square-foot assembly facility and over $7,000,000 in reported earnings. Comdial continued with traditional PBX tech and declining sales until filing for Chapter 11 bankruptcy protection in 2005, when all assets were acquired by **Vertical Communications**, a VoIP company.[1]

Cisco® 7970 IP Phone, *ca.* 2006. Founded in 1984 as a manufacturer of multi-protocol routers, Cisco began, in 1998, to promote VoIP technology to Fortune 500 companies as a more cost-efficient, feature-rich alternative to PBX phone systems. In just 10 years,VoIP effectively killed the traditional PBX; VoIP revenue is projected to reach $48 billion by the end of 2010.[2] Cisco annual revenue reached $35 billion in 2007.[3]

Axia Element broadcast console, *ca.* 2008. Founded in 2003, Axia is a division of Telos Systems, worldwide leaders in broadcast audio equipment. Axia was launched with the mission of bringing proven technology from the computer world – switched Ethernet, audio routing via IP, distributed network architecture – to radio. Using open standards and bulletproof Cisco routing technology, nearly 1000 Axia consoles have been built in just 5 years, making Axia the fastest-growing console brand in radio.



Generic TDM console, *ca.* 200*x*. Some radio consoles and routing systems are still based on Time-Division Multiplexing, developed in 1962. TDM was once the basis of most (if not all) digital PBX telephone systems. Consoles and routers based on TDM employ centralized "card cages" that require all inputs and outputs to be wired to a single location. Like traditional PBXs, TDMs typically rely on closed, proprietary code, and cannot be easily or economically changed or expanded when new operating criteria arise.

Santayana famously noted "Those who cannot learn from history are doomed to repeat it." Some people change when they feel the heat; others when they see the light. With that in mind, a quick comparison of telecom and broadcast technology reveals some common trends that broadcasters are finding hard to ignore.

Nearly 1000 Axia studios are installed around the world — more are added every week. And while our clients probably don't think too much about the technology inside our consoles, they know they won't have to worry about it in the future.

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Technology

World Radio History

Living La Vida Local — Or Not

Terrestrial Radio May Be Squandering Valuable Attributes: Localism & National Aggregation

The Big Picture

Photo: Gary Hayes, BBC

by Skip Pizzi

As the once-exclusive domain of broadcast radio continues to erode, many have pointed out that the medium's strongest remaining attribute is its localism.

Yet broadcasters don't seem to be taking full advantage of this feature — so much so that the FCC is now considering reinstituting mandates in this area.

This seems strange given the quickly growing cadre of competitors, most of which offer little or no localized content. Terrestrial radio should therefore be well positioned to exploit its exclusivity in this respect; but this doesn't seem to be case.

Meanwhile, radio groups have built strong national and regional portfolios of stations, but they don't seem to be using them optimally to defend against growing competition that is also nationally based.

Traditional revenue growth rates, and even their absolute numbers at some commercial stations, have begun to drop. At least some of this trend may be attributable to early signs of new competition's effects.

How should terrestrial radio react?

One way is to learn from history, and for that it need go no farther than to broadcast television.

Look to the telly

Terrestrial broadcast TV once was the only game in town, but then it too was assaulted on multiple fronts. Cable and satellite TV added hundreds of additional channels, while VCR/DVD home video stole additional eyeballs.

Nevertheless, the local terrestrial stations (i.e., broadcast TV network affiliates) are still the ratings leaders in their respective markets, usually by very considerable margins. Yes, the stations' overall audience shares are down from what they once were, but by nowhere near a proportionate drop given the amount of additional new competition, and their revenues have generally not suffered.

Importantly, this has occurred without the regulatory relief allowing ownership consolidation that radio broadcasters have enjoyed.

Sure, there are far fewer TV stations to begin with, but just as in radio, TV's new competition is subject to less regulation, and barriers to entry are otherwise lower for those non-broadcast entities.

One obvious method for TV stations' survival is based on their exclusivity of content as a result of network affiliations. But another is their continuing localism, mostly through news, sports, weather and traffic. This is a costly enterprise, and occupies a minority of most stations' content schedules, but still generally proves worthwhile.

(Note also in this analysis that TV stations are beset by additional regulation and contractual obligations on what dayparts can contain local vs. network content, and what availabilities for local revenue are offered during network-content periods. Radio has far fewer such constraints.)

With all this going against them, TV stations generally have found continued success by operating as the exclusive local outlets of well-established national brands.

In this respect they follow the trend that the U.S. retail industry has strongly embraced in recent years. Decry it as you will, it has clearly proven successful, as any walk through the mall or drive down Main Street will prove: Starbucks, Wal-Mart, McDonalds, Best Buy, Old Navy and on and on — hardly a sector of the physical sales market is not dominated by national brands today, highly promoted and scrupulously maintained through uniform local outlets, either in franchised or wholly-owned arrangements.

With this model in mind, most TV stations have adopted a clever and succinct dual branding that combines their local and national identities, like "NBC-4." In this way they obtain the best of both worlds — the national brand and the local presence.

Most TV stations have also established rich Web sites (with help from their networks' Web departments) to further strengthen their national and local branding, often with on-demand TV content. While this is aimed primarily at the local audience, it is also accessible to expatriate and traveling viewers around the world.

Concurrently, the networks themselves have diversified, producing differentiated content and establishing branded presence in numerous other venues (e.g., cable channels, online portals, podcasts, content deals with online media stores, etc.), all the while trying to steer clear of

See LOCAL?, page 19 ▶

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World Radio History

Local?

▶ Continued from page 18

cannibalization or direct competition with station affiliates in the process.

Radio's lose-lose situation

Terrestrial radio has mostly taken a different approach.

While it has benefited from relaxed ownership rules, allowing it to build national chains with numerous local outlets in many markets, these outlets have not embraced the national branding concept.

The only exceptions to the latter are public radio stations, many of which have benefitted from leveraging the NPR brand as appendages to (or in some cases, predominant over) their local identities.

So, as in the local TV environment, these stations optimize a local-plus-national identity, which fits well to today's mobile lifestyle.

Commercial radio seems to be missing the boat on both ends of this process. Most stations don't generate much local content (some observers note that the only localized content on many radio stations is the advertising). Meanwhile, these stations also don't benefit from any national brand identity or loyalty — even though many are part of large chains having as many outlets as any of the familiar brands above, or more.

So they don't gain traction in the competitive marketplace dominated by national brands, but they still manage to antagonize regulators with their lack of localism. It would seem pretty hard to lose on both those bets at the same time, but radio is managing to do it.

To be fair, there are some significant exceptions where commercial radio stations are working hard to produce lots of local content. Yet these are few, and because they generally don't show any clear and direct revenue boost for this extra effort, their admirable approach is not setting a trend for many others to follow.

Witness the similar fate of Clear Channel's gutsy but ultimately unsuccessful "Less Is More" attempt at reducing ad clutter.

Thus commercial radio largely continues to serve up a type of pseudo-localism, which is now wearing thin on listeners, advertisers and regulators alike. Meanwhile, national or regional station groups do nothing to differentiate themselves from one another, preferring to stick to the old format-based branding alone.

What if Clear Channel had tried a competitive, national-chain based approach with "Less Is More," using heavy rotation at all its stations of on-air announcements like, "We're a Clear Channel station — we run fewer ads"?

Similar national branding campaigns by station groups could stress their commitment to audio quality, high-end talent, credible news, the most up-to-date traffic, broader music selection or other desirable attributes that can apply across multiple content formats.

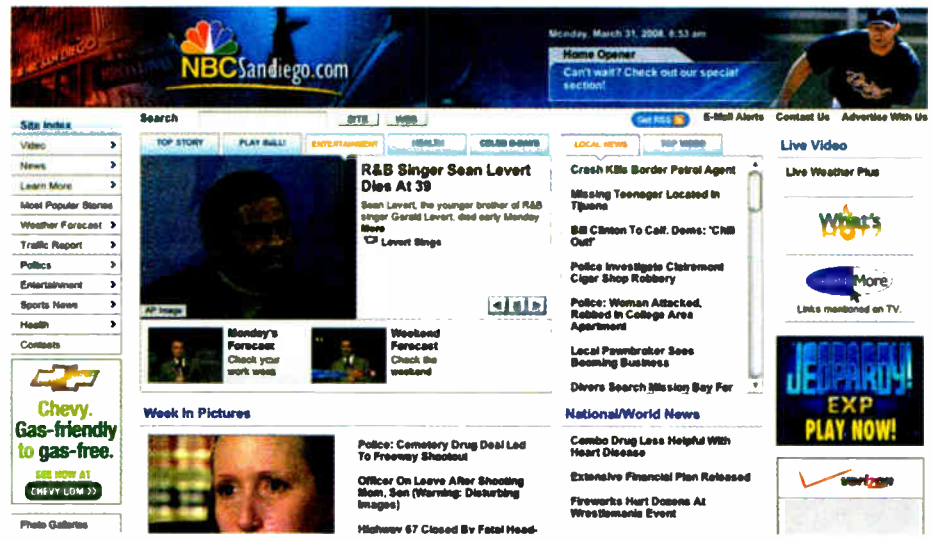
Perhaps it is a fear of re-regulation that keeps radio groups from even acknowledging (let alone extracting any promotional value from) their association with national chains. Or maybe it's in hopes of gaining even more relaxed ownership regulation in the future — as if not mentioning it on the air will make it go away ("If I can't see you, you can't see me …").

Either way, the only ones who really care are some lawmakers and regulators — as opposed to most listeners — and those influentials are already well aware of the numbers whether it's mentioned on air or not.

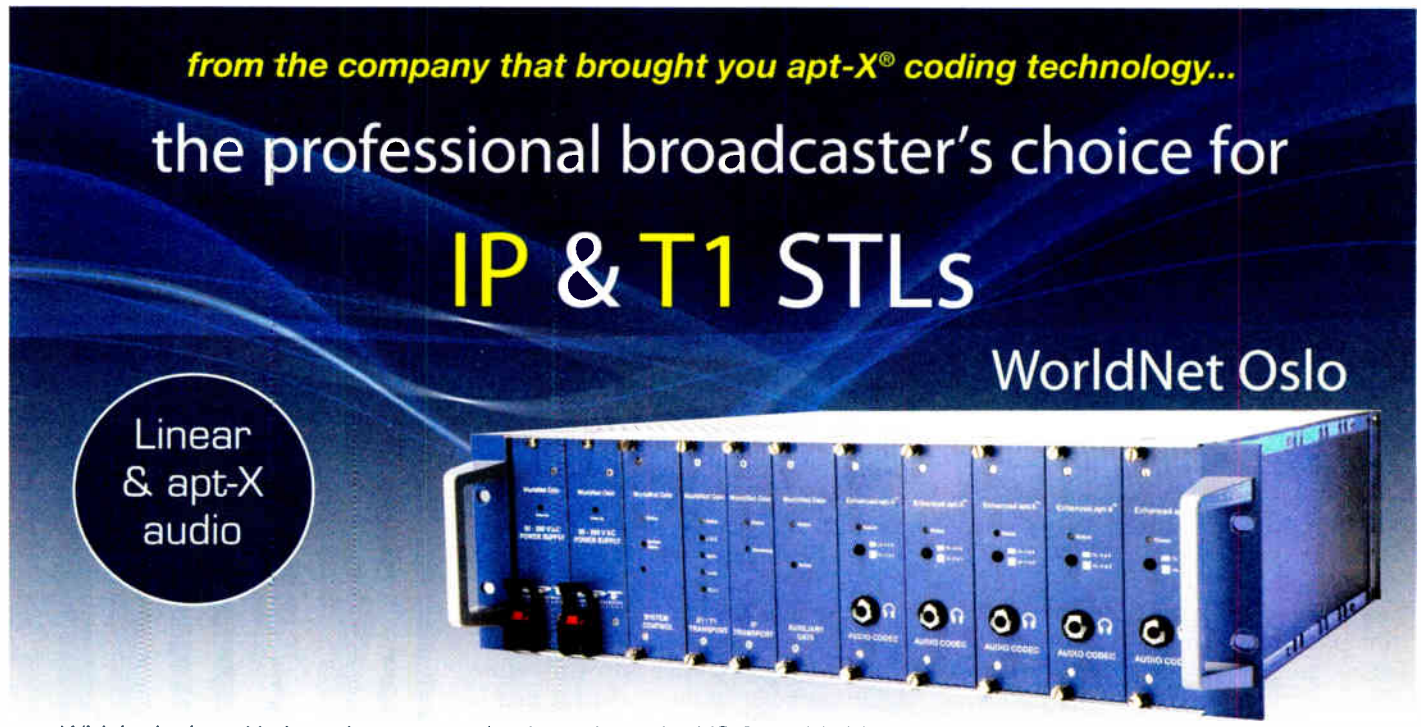
So why not step up to the competition — satellite, Internet and even terrestrial public radio — who are all overtly leveraging their national brands and watching their curves head northward? While doing this, why not also try to increase local content, as only terrestrial radio can do?

If commercial radio chooses instead to continue along its current path, it may soon find itself in an unhappy place where the revenues are low and the regulations are high.

Skip Pizzi is contributing editor of Radio World.



Radio could take a lesson from TV, developing dual branding that combines local and national identities.



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Throw your terminal screwdriver in the trash can!

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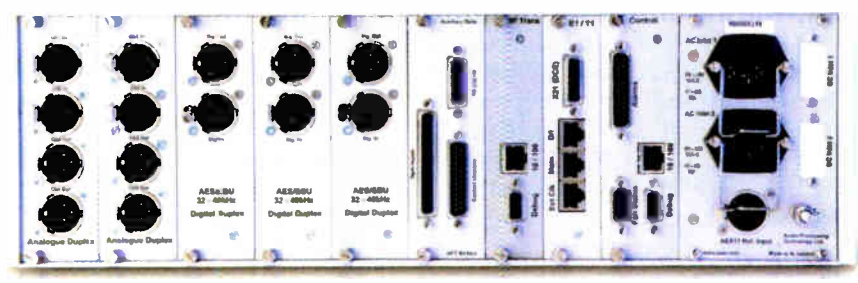

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World Radio History

AMERICAN SHORTWAVE

A Voice Across the Pacific: KWID & KWIX

by Dr. Adrian M. Peterson

It was August 1941, just a few months before the tragic events now known worldwide as Pearl Harbor.

President Roosevelt called a meeting of prominent radio personnel at the White House to establish an international broadcasting network, which has since become the Voice of America.

One of the well-known radio personnel present was Wesley Dumm, who had been successful in medium-wave broadcasting in California for the last decade or so.

During the White House meetings, the president asked Dumm to build two shortwave stations in the San Francisco area for coverage into the Far East.

FDR stated that both NBC and CBS had been invited to install shortwave stations in California, but both had declined due to huge financial losses at their shortwave stations already on the air with programming beamed to Latin America. Congress would not appropriate funding for this new international radio project, the president stated, so he would make payment out of discretionary funds available at the White House.

Pre-war postcard shows the hotel that housed studios for KWID and KWIX for a time during World War II.

American voice

Things began to move quite rapidly.

The government bought the new 100 kW GE transmitter that had recently come into service as W2XAF-WGEO at Schenectady, N.Y. In the meantime, work was underway at Islais Creek, on the Bay Shore a little south of San Francisco, where an extension was constructed to the transmitter building of the medium-wave station, KSFO.

on the air in California at the time, KGEI in nearby Belmont.

Initially, the programming for this new shortwave transmitter was produced and coordinated in a suite of radio studios located on the 17th floor of the Mark Hopkins Hotel at the Nob, overlooking San Francisco and the Pacific.

These temporary studios were in use for the production of programming for the medium-wave unit, KSFO. Four months later, a new studio suite was completed as an annex to the Mark Hopkins, and KSFO moved into this facility.

The studios for the shortwave KWID were then relocated into what was considered to be a bomb-proof location under the hotel in the basement that is now the parking garage. However, at

The purpose for this new station was to act as an American voice across the Pacific, and to supplement the broadcast programming from the first and only other shortwave broadcasting station on the air in California at the time, KGEI.

The antenna farm for the shortwave facility covered a total of 11 acres. In due course the shiny new 100 kW GE unit from the East was installed here, and test broadcasts commenced on May 4, 1942.

Originally, the projected call sign for this unit, which already had been on the air in Schenectady under the call signs W2XAF, WGEU and WGEO, was KABI. Wesley Dumm had earlier initiated a small network of regional medium-wave stations in California as Associated Broadcasters Inc. The new shortwave station would be the international service of this network, hence KABI.

However, before the new shortwave station went on the air, another call sign was chosen, this time the now more familiar KWID. If you look carefully, you will notice that Wesley Innes Dumm's initials were WID.

The purpose for this new shortwave station was to act as an American voice across the Pacific, and to supplement the broadcast programming from the first and only other shortwave broadcasting station

about the same time, the newly formed Office of War Information took over the NBC studios at 111 Sutter Street in San Francisco, and much of the KWID programming was transferred to this location, using the personnel from the shortwave studios in the Mark Hopkins Hotel.

Record-breaking operation

While these other international radio events were transpiring, provision was made for the installation of an additional shortwave transmitter at Islais Creek.

The 100 kW GE KWID transmitter was installed in the extension on the north side of the medium-wave building, and it would appear that a similar extension on the south side of the building housed the subsequent 50 kW RCA unit, which was given the family call sign KWIX. Even though the power outputs were different, the physical size of both transmitters was the same at 68 feet long.

The first broadcasts from the new KWIX were heard in mid-year 1943, a little more than a year after the launching of the earlier KWID. Both units were heard in Asia and the South Pacific with excellent signals, as many monitoring reports indicate.

Soon after the OWI office was opened on Sutter Street, all shortwave programming was produced and coordinated at this location. Initially, the KWID programming also was heard on relay from KRCA and KES in Bolinas, and soon afterwards from the communication transmitters located at Dixon that were identified with the program call signs KWD, KWU, KWV and KWY.

Both Bolinas and Dixon are in California, a little north of San Francisco. In fact, the United Network with KWID at the helm, which comprised all of these shortwave stations in the San Francisco area, even took over the programming on behalf of the illustrious GE station, KGEI.

On one occasion, in March 1943, the programming from the California KWID was heard in Australia on relay over the big gospel station in Ecuador, HCJB, the Voice of the Andes. At the time of the surrender broadcasts from Tokyo Bay on August 14, 1945, the programming from KWID was heard on relay via the Voice of America station, KRHO, in Hawaii.

It is apparent that the shortwave signal from the KWID transmitter propagated widely into the coastal areas of the Pacific; this is demonstrated in many ways in many countries.

Another example of this wide impact: The Chinese ambassador to the United States made a request to the U.S. State Department on July 4, 1943 for the Spanish programming from their own shortwave station, XGOY in Chungking, to be relayed by KWID to Latin America. The United States denied the relay request as a matter of foreign policy at the time.

Nine signs

In July 1950, the call signs of the stations in the VOA shortwave network were consolidated, and KWID became KWID1 and KWIX became KWID2.

The final day of broadcasts from the 100 kW KWID1 and the 50 kW KWID2 was a regular relay from the Voice of America, and it took place exactly three years later on June 30, 1953. VOA was operating twin stations at Dixon and Delano in California, and Islais Creek was no longer needed.

But that was not the end. Three years later, the Far East Broadcasting Co. in the Philippines bought the two transmitters at Islais Creek with the intent of installing them in its new transmitter building on the edge of Manila. As fortune would

See KWID/KWIX, page 23 ▶

World Radio History

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PRODUCT EVALUATION

TuneStudio: Not Just for Rockin' Out

Belkin's Mixer Is for Musicians, But Broadcasters May Like XLR Mic Inputs, Stereo Audio

by James Careless

Designed to work with an iPod, the four-channel Belkin TuneStudio portable mixer is aimed at aspiring rock musicians. But the multiple inputs and options of this versatile device — listed for $249.99 at *www.belkin.com* — open up real possibilities for budget-minded broadcasters.

The Belkin TuneStudio is about the size and shape of a mid-sized hardcover book opened up, lying on its pages so that the cover and spine are exposed. Imagine one side of the cover containing four channels of audio inputs, plus master dials for controlling the overall mix, and a mount for holding the iPod that serves as its recorder. The other cover has the input jacks.

The mixer's four channels are organized vertically, using twist knobs. Each channel has a master level control, pan and controls for adjusting the low (80 Hz), medium (2.5 kHz) and high (12 kHz) frequency ranges of the input. Channels 1 and 2 also have gain adjusters for their XLR/1/4 inch inputs, ranging from +10/-10 to +60/+40. The TuneStudio also can provide 48 volts of phantom power either to XLR 1 or XLR 2.

On the right side of the board are controls for USB audio input, iPod audio playback, compression, Master Level, headphone and monitor levels and an audio-in-mix ratio to balance the input between the USB and iPod feeds. The TuneStudio also offers a three-position button that reduces the mix's dB level by 3, 6 or 12 dB. Finally, the iPod mounting stand has a stereo 12-element (six per channel) recording level indicator, going from –24 dB to +6 dB.

On the back side are the TuneStudio's inputs. Channels 1 and 2 each have one 1/4 inch (balanced or unbalanced) and one XLR (3-pin) female jack. Channel 3 has two 1/4 inch female jacks (balanced or unbalanced), and Channel 4 has a pair of unbalanced RCA female jacks (left and right). There also are a set of stereo (L/R) balanced/unbalanced 1/4 inch female jacks for outputting the mix, and a USB audio port.

"The TuneStudio records the mix to a fifth-generation iPod or a second-generation iPod Nano," said Wannie Park, Belkin's business unit manager of content creation and distribution.

Rendering of the TuneStudio front panel.

"It outputs in uncompressed WAV files [akin to a CD], so the sound quality is pretty good." The unit can be powered by batteries, or AC adaptor.

Broadcast potential

The TuneStudio is relatively new to the market. At this writing Belkin did not know of any broadcasters who had used the device.

Chris Hawkes, a performing musician and audio engineer producer, tested the TuneStudio in Austin, Texas.

"I've used everything from a full studio console on down, and the TuneStudio worked very well for me," Hawkes said. "It had very lifelike audio reproduction, and I didn't hear any discoloration or distortion during the recording process. My only complaint is that this mixer is not widely available yet."

The TuneStudio records the mix to a fifth-generation iPod or a second-generation iPod Nano. It outputs in uncompressed WAV files.

If the DJs were given a laptop computer capable of playing audio tracks, they could theoretically produce an entire broadcast on location.

The TuneStudio's ability to accept two XLR microphone inputs, plus two other channels of stereo audio, could make it highly useful for radio broadcasters.

In live mode, the TuneStudio could be used as an on-site mixer for remote broadcasters. If the DJs were given a laptop computer capable of playing audio tracks, they could theoretically produce an entire broadcast on location. It would be possible to achieve excellent sound quality at minimal cost if fed through a reasonably sized Internet pipe. The TuneStudio also could be used for off-site sports coverage, or news broadcasts from conventions and other such events.

In record mode, stations could use the TuneStudio to record live concerts economically in their communities, then play them back to air afterwards.

At a time when satellite radio and other forms of non-local competition are biting into the market, such features could give local stations an edge in holding onto existing listeners, and attracting new ones. Moreover, the audio also could be streamed on their Web sites.

The bottom line: For $249.99, the Belkin TuneStudio offers an economical solution to the challenges of outside broadcasting and recording for cash-conscious broadcasters.

James Careless is a frequent contributor to Radio World.

How to ...

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MARKET PLACE

Dielectric Highlights FM Isolation With Interleaved Array Design

Dielectric Communications has made what it calls significant improvements to its interleaved arrays for FM radio.

The company said the arrays provide exceptional isolation without the use and added cost of a circulator.

"Dielectric's interleaved solutions now will yield a minimum –40 dB isolation for single-frequency antennas and a minimum –30 dB isolation in dual-frequency applications, regardless of the antenna bay styles," it said.

Company officials said by providing sufficient isolation for both digital-to-analog and analog-to-digital applications, the new antennas will allow broadcasters to increase digital transmitter power without affecting their analog transmission. Dielectric calls this a "clear upgrade path" for broadcasters looking to transition to digital.

The company also touts the "green" benefits of the system because of increased power efficiency compared to 10-dB couplers.

The new interleaved arrays include a DCRC6 interleaved array with an HDRH4 antenna that will provide –41 dB of isolation.

Early users include KRTH(FM) at 101.1 MHz in Los Angeles, where the DCRM4 array is integrated with an HDRM3 dual-frequency antenna. Because this antenna was 3/4-wave spaced, the manufacturer said it was difficult to achieve sufficient isolation. With t new interleaved array design, the antenna measured better than –32 dB at both 94.7 and 101.1 MHz.

For information visit www.dielectric.com.

World Radio History

Champagne and Guinness

APT hosted 30 international distributors from 20 countries at its Belfast headquarters for a four-day forum.

The Distributor Forum included a dinner and champagne and Guinness reception in the Council Chamber at Queen's University — a fitting setting because the company originally was spun out of the small business arm of the university.

The company was formed out of the Queen's University of Belfast in 1989 by QUBIS, a small business startup agency, with funding from Solid State Logic in England. It was set up to bring the apt-X audio compression technology developed by Dr. Stephen Smyth to market.

KWID/KWIX

▶ Continued from page 20

have it, the 100 kW from Schenectady and Islais Creek was instead modified for medium-wave usage and installed as KSBU on the island of Okinawa.

A few years later when Okinawa was handed back to Japan, this transmitter was re-modified back to shortwave usage and installed as the first transmitter at KFBS on the island of Saipan.

The 50 kW RCA unit was indeed installed by FEBC Manila for shortwave coverage into Asia under the call sign DZF. Both of these illustrious transmitters have since been discarded and replaced by more modern units.

In July 1950, the call signs of the stations in the VOA shortwave network were consolidated.

To the credit of the president, he did make payment to Wesley Dumm for the costs of establishing and operating this, the second shortwave station in California. The payment came from the president's discretionary funds in the White House, a bit more than just pocket money.

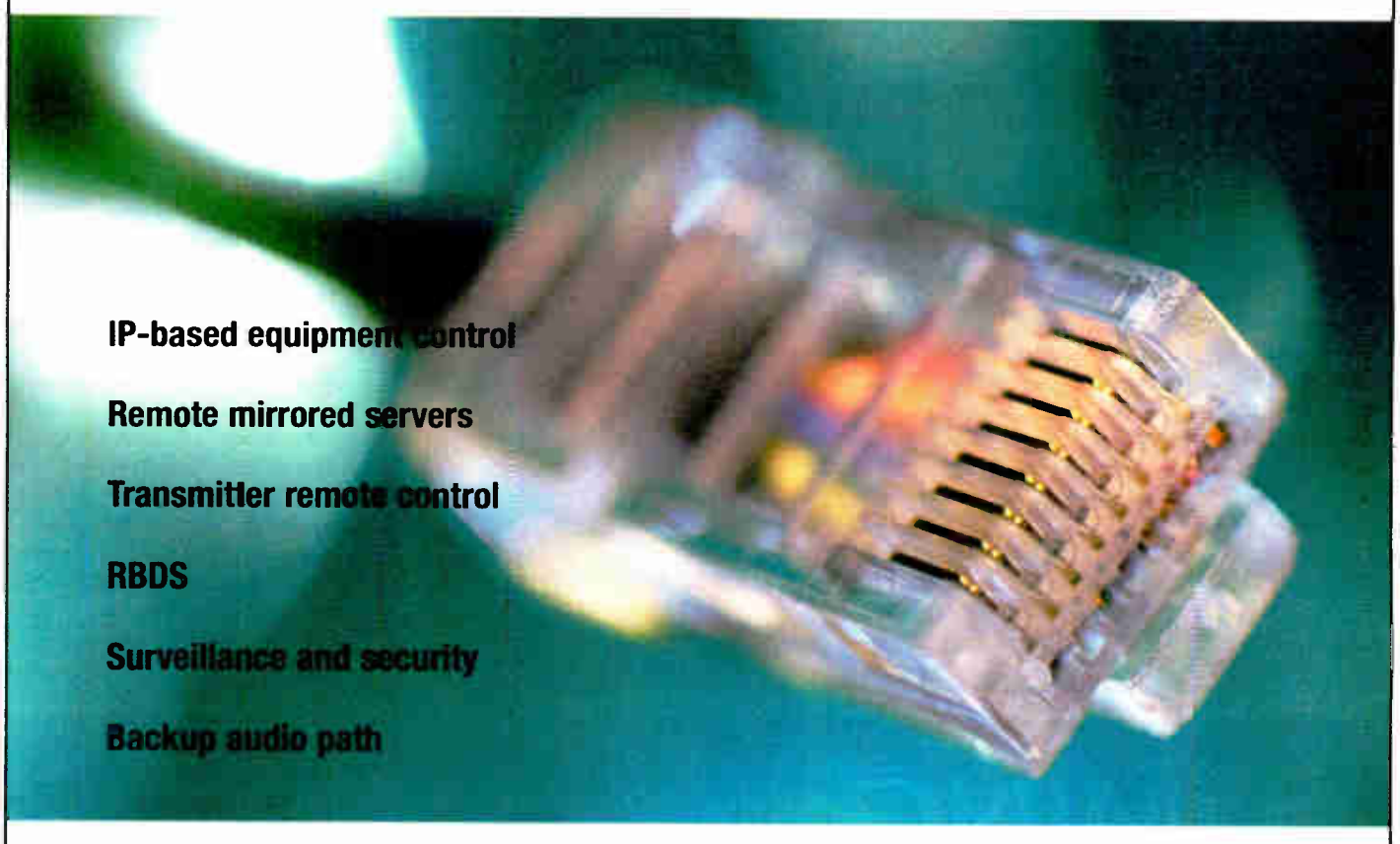
One final note: If the Guinness Book of Records offered such a category, the 100 kW shortwave transmitter would surely take the prize for operation in the most locations under the most call signs. Locations? Four: Schenectady, Islais Creek, Okinawa and Saipan. Call signs? Nine: W2XAF, WGEO, WGEU, WGEO again, projected KABI, KWID, KWID1, KSBU, and finally KFBS.

RW welcomes photos from these stations to share with our readers. E-mail the editors at radioworld@nbmedia.com.

Dr. Adrian M. Peterson is a board member of the National Association of Shortwave Broadcasters. He was born in South Australia in 1931; since 1944 he has since written several thousand articles on radio history, which have been published in 25 languages. He is advisor to the program "Wavescan" and coordinator of international relations for Adventist World Radio.

He wrote "WCAU Used Shortwave in Philadelphia" in the Aug. 15, 2007 issue.

Ethernet path...



to the transmitter site.

Innovative IP-based applications save money, save time and protect valuable station assets. But how to get IP connections at remote transmitter sites?

LanLink HS-900 provides IP Ethernet and RS-232 data where no wires or cables exist. And without licenses, leases or new antennas.

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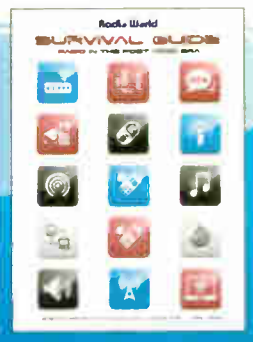
World Radio History

This issue of Radio World features the special theme "Radio in the Post-iPod Era."

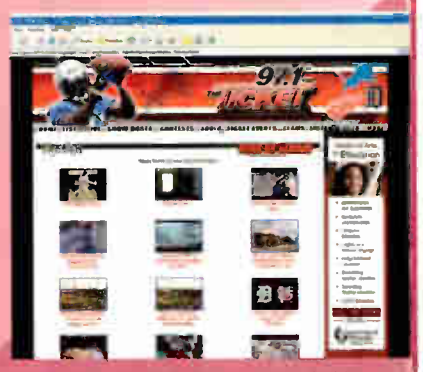
Here and in the accompanying special supplement, RW offers a series of case studies in how radio managers in the United States and elsewhere are embracing new tools and technologies — seeking "*new* traditional revenue" — to reach consumers where they are.

Tell us your own success story about reaching listeners in the post-iPod era. Write to *radioworld@nbmedia.com*.



Search for Anything You Want

CBS Radio Incorporates AOL's Truveo Video Search Into Web sites



A station's Web site can offer station information, streams of live and archived programming, local community information and other fresh content.

CBS Radio has been looking for ways to offer much, much more.

One path down which the search led CBS was a partnership with AOL's Truveo division, which has put together a large index of video on the Internet.

"We become a place to go," said Andy Lindenauer, vice president of operations for CBS Radio Digital Media Group.

"If someone's listening to a music station and wants to see music videos, they will be able to search for anything they want."

The Truveo search engine has not only indexed a selection of high-quality, professionally produced video from media brands such as CBS, ABC, BBC, CNBC, CNN, Disney, Fox, Le Monde, MTV, NBC, NFL.com and Skynews, but also user-generated videos uploaded to sites such as YouTube and DailyMotion. Truveo puts the number of videos in its index at tens of millions.

CBS was able to implement the video search on more that 35 of its Web sites using software tools Truveo supplied. As a site visitor steps through the video search process, signage, branding, advertisements and other material on the page are from the CBS station itself, except for a small "Powered by Truveo" bug on the page.

There is no fee paid to Truveo by CBS, or by others incorporating the search capability into their Web sites. Truveo has stated the company, at this stage, is interested in maintaining its position in the video search space. The arrangement with CBS gives Truveo exposure to an audience that is not yet aware of the company.

'The overall growth of our site is what we measure. We don't attribute the growth to one thing.'

"We know that people are using it," said Lindenauer about the search function on the CBS sites. "[But] the overall growth of our site is what we measure. We don't attribute the growth to one thing."

"On the digital side, we have the whole world opened up to us now. We have more assets than just radio sites and radio streams."

CBS has many irons in its new media fire, and in March announced a deal by which it power AOL's online radio content. CBS Radio will sell ads and provide news, sports and other content to AOL Radio, a popular destination for free streaming audio. According to Dow Jones Newswires, this gives CBS access to AOL Radio's 1.2 million average weekly listeners, based on Arbitron figures.

Multimedia Keeps Company Group Current

Company Group operates four radio stations and three brands Radio Company *(www.company.com)*, Radio 80 *(www.radio80.it)* and Radio Valbeluna *(www.valbelluna.it)* that cover the whole of northeast Italy.

Overall, these regional stations serve an audience of more than 800,000 listeners a month.

General Manager Claudio Rampazzo gives an overview of its multimedia experience.

"FM transmissions are our main channel, the one we use to talk to our listeners every day," he said. "But we realized that you need to go beyond FM."

Company Group is active on another two fronts: events and the World Wide Web.

"By combining the three areas, we have a single, integrated communication system, which makes it possible for us to offer cross-media advertising via three communication channels."

How is this multimedia presence organized?

"For the Web, we do podcasts of some programs, not all of them, just those that involve the listeners directly so that they can listen to themselves when they want. Then, we have programs where the listeners log on and fill in a form with their profile; these profiles allow us to contact listeners on the bases of potential affinities."

The strategy includes not only the Web sites of the three stations but also a newsletter and a selection of content, some of it video, that makes the radio experience truly multimedia.

'We realized that you need to go beyond FM.'

"We get over 3,000 visits every day, an excellent result for a broadcaster of our size."

And what is this multimedia business worth?

"In terms of profit, the multimedia initiatives still give us only a small budget, but new business opportunities are opening up. Radio remains fundamental, however ? it takes us where other media do not go. I have noticed, though, that multimedia has enabled us to keep up audience numbers, or rather to actually improve our position while others, who are not as up-to-date as us, are struggling."

Another key element is that communication with listeners is now almost entirely via text messages, with over 2,000 SMS arriving every day.

A team of managers keeps an eye on innovation at Company Group. "We have a workgroup," said Rampazzo, "made up of management and the commercial and art departments. It is important to work together if you want to get good results."

RW asked Rampazzo what mistakes stations should avoid in developing their multimedia communication.

"The worst thing is to limit itself to a ?showcase? site, which can be expensive but does not create a direct link with the listeners ? it is a waste of money.

"It is important to invest not only in the structure of the site but also in a team that works specifically on it. Otherwise, you also risk damaging the brand. Listeners today are very demanding, and if I give a good image of my station on air, my listeners also expect to find something of the same level online.

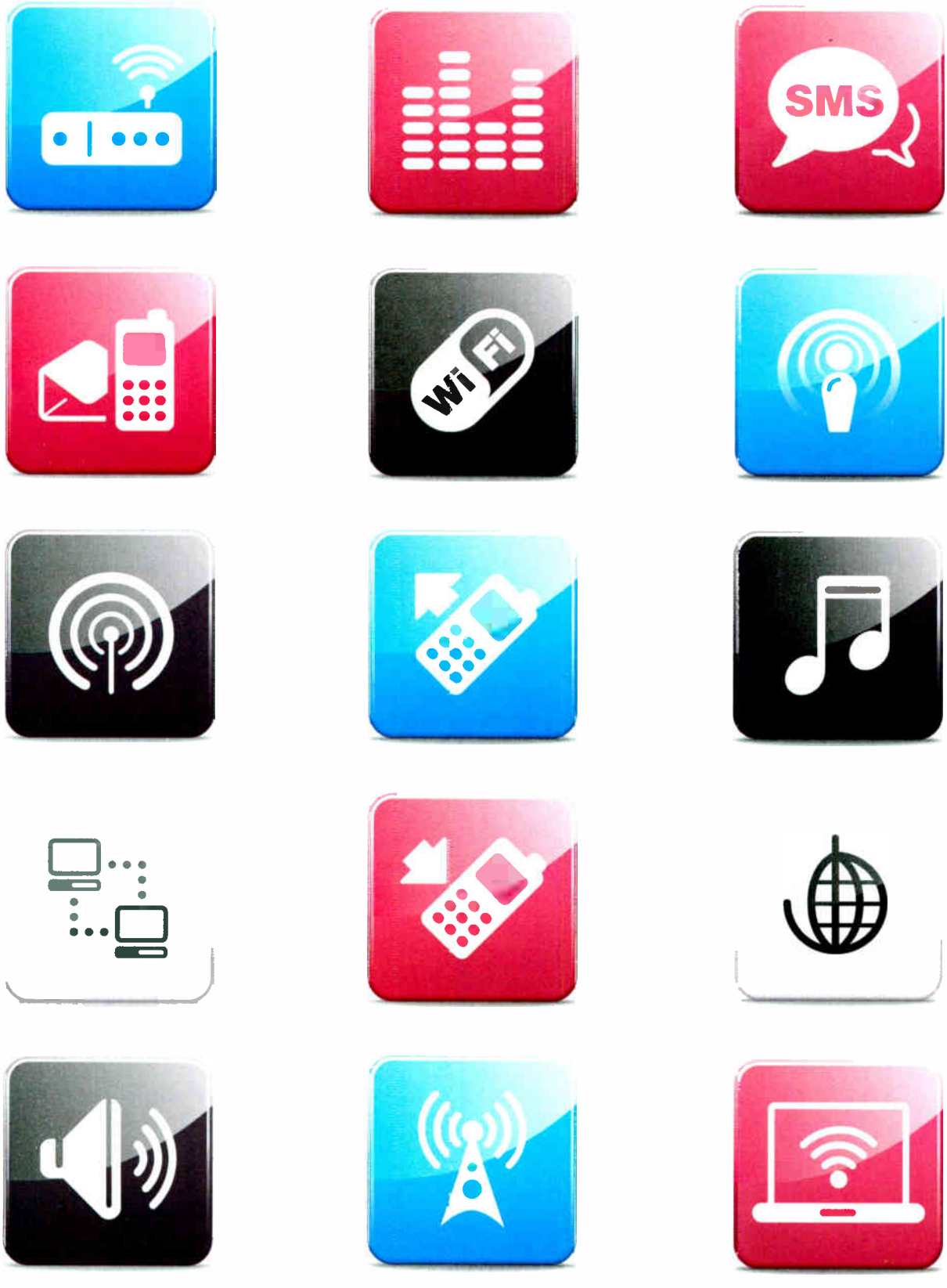
"If I fail to deliver something up to the same standard, I lose my credibility."

World Radio History

Radio World

SURVIVAL GUIDE

RADIO IN THE POST I-POD ERA



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World Radio History

Radio Redefines Delivery In the Post-iPod Era

As New Platforms Emerge, the Very Meaning of the Word 'Radio' Is Challenged

by Skip Pizzi

Broadcasters have some serious adjustments to make in adapting to today's new environment, as do the providers of any traditional media service.

After all, radio has been providing the same kind of service to audiences almost since the medium was invented. The agility required to shift into accommodation of new media modalities is not a natural process to broadcasters.

Tangent's Quattro. 'You're sitting in your living room in Australia, listening to a radio station in Armenia. You think about a switch to a station in America, but decide to listen in on your true favourite from Austria.'

Consider how the oft-cited words of Marshall McLuhan — "the medium is the message" — apply. Although his point was a little different, the phrase and its foundational concepts fit. The technology of radio transmission became the business of broadcasting. While the transmission medium enables a robust, cost-effective, near-ubiquitous, real-time, point-to-multipoint, one-way distribution method, the core of radio is its content — its message.

As new media become viable, it behooves the business to avail itself of these alternative paths to continue the distribution of its message.

Radio (transmission) is but a means to an end. Yes, it happens to be the name of this industry, but radio broadcasters should not let that inhibit them from developing new delivery methods for their well-tested, popular content.

Call them what you want — "radio" or otherwise — but just don't call them late for the party.

A POSITION OF STRENGTH

The pace of today's technological change also takes some getting used to for broadcasters.

While radio has experienced a number of advances in its near-century of operation as a real business, the digital media distribution environment has undergone at least as much change in only its first decade of existence.

This order-of-magnitude difference is akin to driving a dragster vs. piloting a supertanker. They are both methods of transport, but the navigation skills required for each are profoundly dissimilar.

The good news is that both broadcasters and consumers are dealing with these changes, and there are a lot more of the latter, so any transition will take place slowly. Trial and error on both ends of the pipe are an expected part of the process.

Moreover, the transitions faced by U.S. radio broadcasters do not include government mandates, so no forced conversion or hard switchovers will occur. Radio can continue to offer its traditional service while experimenting with and phasing in any new service that seems worthwhile, at each broadcaster's option.

Consumer adoption is also gradual and at their own pace, so a broad range of services will continue to coexist. Although still challenging to manage optimally, broadcasters essentially remain masters of their own destiny.

This is not to say that there can be no losing strategy. New platforms offer significantly lower barriers to entry, so competition is potentially much greater in these spaces. Yet as long as the constrained environment of radio continues to be a dominant platform, broadcasters remain well placed to implement strategies that gradually shift their audiences to new platforms.

STREAMING 2.0

The simulcast streaming of on-air signals is nothing new, and the pioneers in this space have learned a lot about the different economics of online (i.e., pay-per-listener), audience

continues on pg 4

INSIDE

How can stations reach consumers where they are, anytime, anyplace? How can broadcasters grow in the unexplored new Web economy?

Like it or not, radio now competes in the post-iPod era. The young person walking by with ear buds in her ears probably isn't listening to AM or FM. The driver in his car is able to choose from a host of new media and consumer offerings right in the dashboard.

Radio has moved beyond AM, FM and XM. It's not just about the old discussion of "non-traditional" revenue. What are radio's "new traditional" success stories?

A new vocabulary describes these enabling strategies: Searchable video. Podcasting. HD2 multicasts. Tagging. Mobile Internet radio. Radio storefronts for music downloads. Opt-in text-messaging promotions and secure transactions via text. Social networking. Hyperlocal Web.

Contributing Editor Skip Pizzi provides an overview of trends. Then contributors Craig Johnston, James Careless, Michael Hedges, Fabio Carera and Emmanuelle Pautler report on widely divergent commercial and noncom operations, in the U.S. and around the globe, in a series of case studies about how radio decision-makers are extending their brands in the post-iPod era.

World Radio History

What Is Jump2Go?

Jump2Go provides broadcasters with new ways to engage the next generation of listeners, whether they are online, on their mobile phone or on their portable media player.

Jump2Go is a service that synchronizes on air activity with potential commerce opportunities. Enabling iTunes® Tagging for HD Radio™, RT+ for RDS, and iTunes® music stores for station Web sites.

As content plays on the air, the radio station studio equipment communicates with the Jump2Go datacenter, the data center actively associates on-air activity with commerce data, and this data is returned to the station to be inserted into the station FM signal as part of the RDS or HD Radio data stream.

See us at the BE Booth at NAB (N7007).

Contact Jump2Go at (425) 641-9043 or visit www.jump2go.com.

GSS: Emergencies Are Local

Global Security Systems (GSS) presents ALERT FM, an FM-based digital alert and messaging system that allows state and local government and private sector officials to create and send emergency information before, during and after a crisis. This single-to-multi-point radio broadcasting system uses Radio Broadcast Data System (RBDS) technology based on the U.S. nationwide FM broadcasting network. Targeted alerts and messages are delivered by satellite to FM transmission towers and can be received on ALERT FM receivers, wall units and other mobile devices, including PDAs, cell phones and other specialized receivers equipped with FM chips.

Broadcasters receive the RBDS encoder at no cost to the station along with the added ability to transmit non-emergency information — song titles, call letters and slogans — that ultimately allows them to monetize listenership with the MySimBook application.

Contact GSS at (601) 709-4240 or visit www.alertfm.com.

Product information is provided by suppliers

DELIVERY continued from pg 3

measurement metrics (still evolving) and how to optimize, cross-promote and sell different delivery methods for the same content.

The fact that all on-air listeners are local while online listeners can be anywhere is a key factor. Some broadcasters therefore offer one or more online streams featuring content that differs from their on-air signal(s).

Two new wrinkles are poised to further change this environment.

One is the development of Internet radio appliances — small tabletop units that look like radios (and may also include AM/FM tuners) but are actually Internet terminals that connect via WiFi or Ethernet to a Web site that provides the device with a list of online audio streams from which it can select. These units have been around in various forms for several years, and have not been particularly big sellers, but nevertheless are moving Internet radio away from being only receivable on a computer.

The broadcast station — which is the only entity that can provide both on-air and online service — is most advantageously positioned.

Potentially more important along these lines is rapidly emerging wireless broadband Internet access, which provides the ability for properly equipped portable devices to access streaming media sites wherever service is available.

Ultimately this could be the "great equalizer" that makes Internet radio as easily and ubiquitously available as broadcast radio. Once such parity is achieved, Internet radio could move from a novelty or "alternative delivery" format to mainstream media.

It's likely that we may soon consider the era in which Internet radio was only accessible from PCs to be as archaic as the days of the family gathered around the big living room radio.

Hopefully these next-gen handheld devices will also include broadcast radio tuners, but this is by no means assured. It is more likely that they will include the ability to listen to Internet radio than to broadcast radio.

Obviously, broadcasters should have all their streaming services registered and included on any Internet radio aggregation site or recommendation engine. This allows potential listeners searching for new audio content streams with their PCs to easily find your streaming service.

More critically, many of the abovementioned and other future devices will not have full, browser-like access to the Internet, but be constrained to connect only to the "walled garden" or link list arranged by the service provider or device maker. If your stream is not among the listed services, these appliances will have no way to connect to your service.

ON DEMAND

Beyond real-time streaming, the Internet provides broadcasters with the ability to offer programming on demand — when the listener wants to hear it, instead of in real time — when the station decides to plays it.

This is a handy and powerful way to squeeze additional value out of content produced initially for air but which may retain relevance thereafter, and thus still be of interest to listeners who missed its airing, or who may want to hear it again.

(Future radios that include storage for recording of broadcast content may reduce the value of this feature, but an online library of previous programs' archives is and will remain a great listener resource.)

Another application of on-demand delivery allows a station to offer additional ("tell me more") content that for reasons of time or general interest was not included in the on-air version. An announcement can be made that more or related content is available at the station Web site.

This ability to "unlock from the clock" provides new opportunities for broadcasters, including sponsorship revenues.

PODCASTING

A related function is podcasting, which adds to the on-demand playback model the idea of pre-ordering future versions of the show.

Functionally, a podcast is no different than on-demand playback, except that a copy of the file is transferred first to the user's computer, and played back from there instead of from a remote server.

Podcasting further provides listeners the ability to "subscribe" to a feed of the program, meaning that as new episodes are produced or become available, they will be automatically downloaded to the subscriber's PC. It also allows these files to be copied to off-line devices such as handheld audio players.

Most PC podcasting client applications let the listener choose whether previous episodes

continues on pg 6

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AND EVERYTHING IN BETWEEN

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World Radio History

DELIVERY continued from pg 4

are discarded when new ones arrive, or whether all (or a prescribed number) of previous episodes are retained — either on the PC or on associated peripheral(s).

Podcasts can include text, still photography, graphics and full-motion video, for display on screen while the audio is playing. Some podcasts can also include segmentation data, by which a long-form program can be split up into multiple segments that play continuously, but if desired, the listener can skip to the start of the next segment (like a CD), or back to a previous one.

Once again, putting station podcast listings on aggregators' sites is helpful to having listeners around the world discover that your podcast exists through one-stop shopping.

HOW DOES IBOC FIT?

One cannot consider new media in a vacuum, particularly as broadcasters continue to undergo a transition to digital in over-the-air transmission.

Services developed for adjunct streams online can also be offered as HD Radio multicasts, for example. Effective cross-promotion of on-air and online services will also be important for stations.

Some advisors to stations are advising them to concentrate solely on the online world for growth and to shut off their IBOC transmission equipment. While that approach is extreme and probably unwise, in the short term it appears the Internet will be the more fertile field in which stations' new services and audiences will develop.

Podcasting catalog page from the iTunes Store

Over the next few years, listenership will almost certainly continue to quickly grow for new Internet-delivered services that radio stations offer. The ones described here are only those already identified — the future will likely bring more.

While some listeners shift consumption of radio services exclusively to new services, it is likely that most will simply add them to their current on-air listening habits. Thus the broadcast station — the only entity that can provide both on-air and online service — is most advantageously positioned.

The combination of on-air and online can provide astounding synergy, and broadcasters' most important new skill will be learning how to best leverage the respective assets of these domains for mutual benefit, in maximizing listenership to multiple real-time and non-real-time services provided across these several platforms. With such an enviable head start, it's broadcasters' game to lose.

Skip Pizzi is contributing editor of Radio World and author of the column The Big Picture. Read it at radioworld.com.

Omnia A/X: The Power of Omnia on a PC

The biggest problem with streaming audio is its sound: swirling, gritty and muddy. But by controlling dynamics and special balance, a processor placed in the signal chain ahead of the encoder can work wonders to create consistency, enhance clarity and remove audio grunge.

Omnia A/X software for Windows performs all processing calculations natively, within the PC processor, eliminating the expense of special cards or external devices. No need to worry if your target platform can handle it, as Omnia A/X is 100 percent software-driven. A/X provides three bands of Automatic Gain Control plus wideband AGC, a distortion-controlled final limiter, bass enhancement and factory presets to simplify setup. It integrates seamlessly with Windows Media, Real, MP3 streaming encoders and audio production software for full dynamics control of Webcasting, audio production and audio-for-video.

Contact Omnia Audio at (216) 241-7225 or visit www.omniaaudio.com.

Product information is provided by suppliers

Fox Sports Radio Gets Mobile With mSpot

Fox Sports Radio Vice President, General Manager and Executive Producer Andrew Ashwood loves radio. But he's also tech-savvy, which is why Ashwood has put FSR onto mSpot.

Andrew Ashwood

Based in Palo Alto, Calif., mSpot is a "mobile content aggregator." This means mSpot has created a package of 100-plus audio and video channels that cell subscribers can tap into on their mobile phones, for a price.

In turn, broadcasters such as FSR, CBS Radio and Radio Disney get paid by mSpot to share their content over wireless telephones, reaching a potentially new audience.

"In the 21st century, radio has to be medium-agnostic in order to survive," Ashwood told RW.

"There are so many media choices out there that we have to be on as many as possible to maximize our reach. The beauty of mSpot is that this could bring us to a number of people who don't listen to radio anymore, but who still enjoy our sports content."

In terms of its iPod-age strategy, FSR, part of Clear Channel's Premiere Radio Networks, is trying what's out there to see what flies.

"For instance, we have done a deal with BlackBerry where we provide personalized sports content to subscribers in the top 25 U.S. markets. When you wake up in New York or L.A., you can click on your BlackBerry to get the latest sports information from FSR, localized to your market."

FSR is also streaming its content on MSN's FoxSports.com and through XM Satellite Radio.

"We are trying to make ourselves available on as many platforms as possible. We are working with FoxSports.com to start podcasting some of our shows, and are now heard on the Armed Forces Radio and Television Service by our troops worldwide. We even reserve Thursday nights for the troops, so that they can call FSR with their sports-related questions and comments."

'In the 21st century, radio has to be medium-agnostic in order to survive.'

By finding space on new platforms as they emerge, this program provider is ensuring that its content is accessible to potential listeners.

"We have got to stop thinking of ourselves as radio broadcasters, and start thinking as content providers who can serve a range of media, including new ones," said Ashwood. "This is where the future is for radio, as far as we can see."

World Radio History

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WorldNet Oslo

Widely deployed in broadcast networks throughout the US & worldwide, the WorldNet Oslo offers everything you could want from a professional STL including a flexible, upgradeable platform, high quality audio and 24/7/365 reliability.

Flexible, Upgradeable Platform

With a modular approach and a large selection of audio, data and transport options, the WorldNet Oslo can be tailored to the exact requirements of your current network and easily upgraded on-site as these requirements change. Inherent flexibility enables LAN extension, ring networks with drop and insert over T1 and unicast, multicast and multiple unicast configurations over IP.

Uncompromised Audio Quality

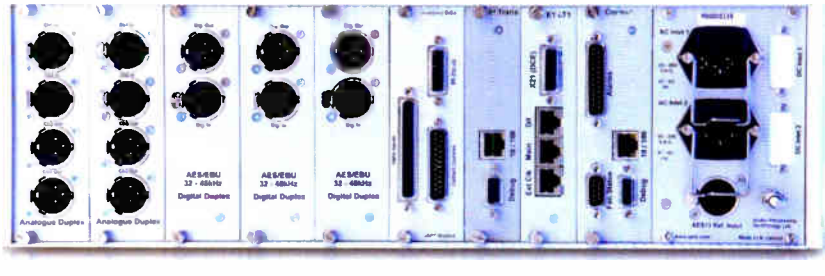
The WorldNet Oslo offers both linear PCM and Enhanced apt-X coding options. Enhanced apt-X will deliver the same audio quality as linear with under 2ms delay and at a fraction of the data rate. Other options include MPEG L2, J.57 and J.41 companding. With four channels of audio per plug-in module, up to seven audio modules per unit, and a choice of over 20 different audio modules, each WorldNet Oslo has the capacity of up to 28 mono channels / 14 stereo pairs.

Rock Solid Reliability

On the WorldNet Oslo, solid dependability comes courtesy of DSP-based architecture, hot-swappable modules, passive backplane, redundant PSUs, automatic back-up switching and a user-configurable suite of audio, link, sync and PSU alarms.

Throw your terminal screwdriver in the trash can!

No Dip Switch settings here - configuration and control of the WorldNet Oslo is straight-forward and simple thanks to APT's powerful and intuitive Codec Management System (CMS). Offering extensive real-time management of multiple codec units, the CMS enables alarm monitoring, logging and performance monitoring as well as configurable user and audio profiles.



APT

For more information, call APT on 800 955 APTX or 617-923-2260

www.aptx.com

World Radio History

Comrex DH42: A Natural Evolution

In recent years, we have seen low-cost Internet telephone services give the traditional telcos a serious run for their money. But finding an elegant way to interface VoIP telephone audio to a broadcast audio console or recording device has been a challenge.

The new DH42 from Comrex represents the natural evolution of the broadcast telephone interface. It is essentially a four-line conferencing telephone hybrid, designed to allow callers to be put on-air with separate send and receive paths, filtering, AGC and control functions. What makes the DH42 special is that it blends the technology of the legacy POTS phone interface with Voice-over-IP technology. The unit can handle up to two POTS lines simultaneously with two SIP-based VoIP channels. The VoIP lines may be served from a low-cost Internet based provider or from an in-house SIP-based VoIP PBX.

Broadcasters have already discovered the advantages of using IP for impossible remotes. The ACCESS Stereo BRIC IP Codec has changed the way broadcasters do remotes and will continue to do so as creative content evolves with the entertainment landscape.

Contact Comrex at (800) 237-1776 or visit www.comrex.com.

Harris Expands ZX Range of Radio Transmitters

Harris has introduced the Harris® ZX5000 transmitter for HD Radio™ and analog FM broadcasters at the 2008 NAB Show.

This is the latest entry in the popular range of ZX™ transmitters, now comprising five models, ranging in power from 500 watts to 5 kW. The Harris® ZX5000 is an extremely space-efficient 5 kW transmitter. It comes in a compact rack-mount form factor to accommodate exciters and signal processing gear, all in a single rack. The ZX5000 supports tri-mode operation with on-the-fly switching between analog FM, HD Radio™ digital-only, or FM/HD Radio™ common amplification broadcasting.

Contact Harris at (800) 622-0022 or visit www.broadcast.harris.com.

Product information is provided by suppliers

Tag, You're It

Greater Media Explores iTunes Tagging

Milford Smith

When they attended last fall's NAB Radio Show, executives of group owner Greater Media already were thinking about implementing Apple's iTunes Tagging.

Tagging enables listeners to tag songs they've just heard on the radio for later purchase from Apple's iTunes Music Store.

"We knew Apple was working on this as Ibiquity was rolling HD Radio out, and that there were going to be some receivers in the field capable of doing this," said Milford Smith, vice president of engineering for the broadcast chain.

At the Radio Show, Greater Media met with Allen Hartle of Jump2Go, which had developed software to integrate the tagging system into an HD Radio operation.

Once the Greater Media contingent saw a way to implement iTunes Tagging, they launched negotiations with Apple for a license and put together a deal with Jump2Go for software. The first of Greater Media stations is due to begin to offer the tagging service as this issue of Radio World arrives in your mailbox. Jump2Go provides the "service" of synchronizing the on-air content — the songs — with iTunes inventory, then injects that information into the HD Radio system.

Though there is a 5 percent commission paid to a station for each song purchase it generates for Apple, "If that were the only reason we were doing this, we probably wouldn't be doing it," said Smith.

Greater Media sees the iTunes Tagging service as a way of building a synergy between hard-to-attract listeners and HD Radio.

"There's a great potential to connect between the younger generation, who are to a great extent MP3 player-concentric, to build a connection between them and HD Radio," said Smith. He said HD could attract MP3 listeners because they could sample new music to decide what to purchase.

That's not to say Greater Media will ignore the commissions Apple pays. "We'd be happy to take any of the revenue that's generated," said Smith.

When the company's iTunes application is implemented throughout the East Coast radio group, it will be available on 25 HD and HD2 streams on a dozen of Greater Media's stations.

Smith sees changes radio is undergoing in reaction to MP3 players as another way radio has reacted to new competition, not that much different from what the medium did when television appeared.

> ***'There's a great potential to connect between the younger generation ... to build a connection between them and HD Radio.'***

He views HD Radio as a valuable weapon on a pair of fronts.

First, in addition to delivering a higher-quality audio signal, HD Radio's ability to deliver more than one channel should spawn more experimental formats on stations' HD2 outlets. "It's a place where you can take more chances than on your main channel," he said.

HD Radio's second opportunity is in its ability to transmit data related or unrelated to the station's actual programming. Where services such as the iTunes Tagging song identification information ties in directly with what's on-air, services such as real-time traffic information can also attract HD Radio listeners.

These services "are additional sources of revenue for a station broadcasting digitally," said Smith.

World Radio History

Connect with Zephyr/IP: The World's Most Advanced IP Codec

The new Zephyr/IP brings an effective package of sophisticated technology to the world of IP audio codecs. Optimized for operation over the public Internet and mobile phone data services, the Z/IP delivers when others can't.

NEW "AAC-ELD" (ADVANCED AUDIO CODING-ENHANCED LOW DELAY) CODEC: Z/IP introduces a new codec technology invented by the experts at Fraunhofer Institute, the people who brought us MP3 and AAC. Optimized for interactive IP applications, AAC-ELD combines features from MPEG AAC-LD and the Spectral Band Replication technology used in AAC-Plus. It's the most powerful audio coding tech on Earth, offering outstanding bitrate efficiency, low delay, and support for packet loss concealment.

NEW TELOS ACT (AGILE CONNECTION TECHNOLOGY): Z/IP brings automatic on-the-fly bitrate adjustment to IP codecs - a first. The Z/IP constantly monitors the network and sets its bitrate to the optimum value. A dynamic adaptive receive buffer also responds automatically to network conditions, minimizing the effects of the varying bandwidth and jitter that occur on real-world networks.

EFFECTIVE PACKET LOSS CONCEALMENT: The Internet usually has packet loss on audio streams, often ranging up to a few percent. The new AAC-ELD codec combined with ACT can conceal this loss, making for smooth audio even with rough network conditions.

TELOS-HOSTED Z/IP SERVER WITH DIRECTORY SERVICES: Enables you to look up, view the status and connect to other Zephyr/IP users worldwide, even through the toughest firewalls.

A STATE OF THE ART USER INTERFACE: And so you don't feel like you are on a blind date, we give you all of the status information you need on a sharp-looking color LCD which shows live network statistics and trace-route maps in an easy-on-the-eyes graphical interface.

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World Radio History

APT: Strong Links

With the increase in sophistication, complexity and number of delivery options from the studio to the end-consumer, broadcasters are under greater pressure than ever to ensure that their STLs and SSLs form the strongest links in their broadcast chain.

APT has partnered with many broadcasters throughout the U.S. and Canada to install robust and innovative new audio networks that deliver broadcast-grade audio and ensure reliable 24/7/365 operation. Our WorldNet and WorldCast codec ranges will link studio and transmitter sites over IP, T1 and ISDN links using either linear, Enhanced apt-X or MPEG coding options.

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MUSICAM USA: Universal Connectivity

CCS MUSICAM USA, the global leader in the development of high-fidelity audio codecs for broadcasting and audio post production, offers a series of high-performance audio codecs for connection over IP, ISDN and digital leased networks.

The Suprima family of codecs offers universal connectivity and compatibility over IP, ISDN and X.21 interface in an all-inclusive package. Coding algorithms include MPEG2 AAC, MPEG4 AAC LD, AAC-HE, MPEG Layer 2, 3 and low-delay APT-X standard and enhanced mode. Settings can be managed remotely via Web browser or with CCS Management Software.

Contact MUSICAM USA at (732) 739-5600 or visit www.musicamusa.com.

Product information is provided by suppliers

Online Radio When Things Get Hot

Knocked Off-Air, KPBS Put Streaming and Social Networking to the Test

San Diego public station KPBS found power to its FM transmitter burned out. That put heat under its coverage of last October's wildfires.

The station had been providing wall-to-wall wildfire coverage via both terrestrial and Internet radio. Even before the transmitter went off the air, members of the community had been inundating KPBS' Web site for information; the site already had been stripped of many of its standard graphics so it could offer text, Google Maps information and audio streams.

When its on-air broadcast was interrupted, the hits to kpbs.com came in a flood.

"I realized that we were probably going to need more streams than we could handle ourselves," said Deanna Mackey, the organization's associate general manager.

Members of the Web team work during the fire coverage. Leng Caloh at the computer; clockwise from left, Susana Tsutsumi, Joe Spurr, Susan Murphy and Heather Despol.

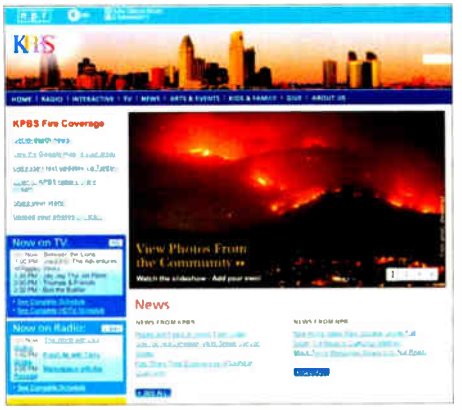
Because of the need to continue to supply fire information to the whole community, the station enlisted StreamGuys, a supplier of streaming media services and tools, to increase Internet listener capacity.

One of the station's Web Team members had been using Google Maps for her own purposes.

"When this happened, she thought people are going to want to know where the burn areas are, where the evacuation centers are, and so on," said Mackey.

Traffic to that offering was so heavy the station had to look to Google itself to serve the maps. Traffic kept increasing and actually crashed the Google servers.

"There was so much information coming in for us to provide on our radio station, around the clock, through the county, emergency services, through all these different agencies that were trying to help," she said.



The KPBS Web site as it appeared on Oct. 25, 2007.

The Web Team had just been readying itself to figure out a way to integrate the Twitter.com free social networking site into kpbs.com when the fires began.

Mackey said adding Twitter to the site allowed them to add messages such as "Evacuation center at QualComm has room for 100 more people," "The fire has reached such-and-such street, Rancho Bernardo" and "Police are requesting people don't drive in this area."

Even after KPBS reached agreement with Lincoln Financial station KBZT(FM) to carry the public station's news content, its site continued to provide audio streams, Google Mapping and the Twitter announcements.

KPBS received hundreds of e-mails of appreciation. And while Mackey admits it wasn't a scientific survey, during its recent membership drive the station found itself up 10 percent from the normal 6 percent year-over-year membership gain.

Mackey said with the small number of news stations in the San Diego market, KPBS sees strong demand for its terrestrial broadcasts; but she predicted demand for more services on the Web will grow.

'We think about the next audience that starts coming into our world, those people who are sampling public radio.'

"[In] the future, we think about the next audience that starts coming into our world, those people who are sampling public radio. They're generally people who are educated, and these are people who are mid-30s and up. As those people start coming into our audience, their expectations online are going to be much, much higher than any before."

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World Radio History

Phoenix Cluster Builds Sites for Clients

Bonneville Boosts Revenue and Advertiser Loyalty

When it comes to the Web and the Phoenix ad market, Bonneville International's attitude can be summed up as, "Why bother to join 'em if you can lead 'em?"

Among the four stations that make up Bonneville's Phoenix radio group, "Our new media revenue is about 3.5 percent of our income as a cluster, which is about 40 percent higher than the industry average of approximately 2 percent," says James Webb, the cluster's new media director.

The stations are KMVP(AM) airing ESPN; KPKX(FM) "The Peak"; KTAR(FM) "NewsRadio 92.3 FM"; and KTAR(AM) "Sports 620."

Webb credits this revenue generation to integration strategies that combine traditional radio with the Web, e-mail and text.

A case in point: "YearEndCarDeals.com is an innovative, custom solution that captured the year-end car buying market and steered it to a specific page on our customer's Web site," he says.

This custom site captured year-end car buying and steered it to a page on the site of a Bonneville customer.

Using a mix of radio and Web-driven promotions, "YearEndCarDeals visitors searched over 23,000 custom vehicle and payment configurations, with search results driving users to the deep-linked search page of Power Dealers.

'Listeners earn points in a number of ways: listening for a word of the day, referring friends, bonus codes, going to events and filling out surveys.'

"The site also generated a significant database of leads, plus one of our lucky listeners won car payments for a year through the site."

The Phoenix group works with mass2one, a firm that specializes in "permission-based" e-mail marketing.

A permission-based e-mail is one sent to a person who has asked to be included on a mailing list, thus avoiding the deadly question of spamming.

"Mass2one is our partner for online and on-air promotions," says Webb. For instance, the two launched Bonneville's "Sports 620 All Star Rewards Program" the day after the Super Bowl.

"We have so far seen very positive results in database growth. Listeners earn points in a number of ways: listening for a word of the day, referring friends, bonus codes, going to events and filling out surveys. They can use the points to enter raffles, buy products or even tickets."

The Bonneville Phoenix New Media division builds custom sites for station advertisers. By doing so, it keeps the money they spend in-house, and motivates the customers to spend even more by connecting the sites to radio and online/e-mail promotion.

"We are always looking for new opportunities to earn revenues in the new media space, and are pretty aggressive about doing so," Webb said. "When a radio station takes advantage of the extra reach the Internet provides, it can discover lots of new ways to earn money."

Telos Zephyr iPort MPEG Gateway

The Zephyr iPort MPEG Gateway is a completely new kind of codec, enabling broadcasters to transport multiple channels of stereo audio across any network with guaranteed QoS such as T1 and T3 connections, MPLS networks and more.

Zephyr iPort contains eight stereo MPEG-AAC

codecs in one box, converting linear PCM IP-Audio into compressed IP-Audio, and back again. With a Zephyr iPort at each end of a T1 connection, stations can share audio between cities as easily as if both stations were in the same building. Imagine: eight stereo channels of CD-quality audio on a single connection! Zephyr iPort features a built-in Livewire interface for single-cable audio, control and data connection to Axia IP-Audio networks. Don't have an IP-Audio network yet? Just connect iPort via Ethernet to an Axia Audio Node for standard AES and analog I/O.

Contact Telos Systems at (216) 241-7225 or visit www.telos-systems.com.

Product information is provided by suppliers

Skyrock Blog: Recipe for a 'Community'

Parisian commercial radio station Skyrock, founded in 1986 by Pierre Bellanger, enjoys a special reputation: The provocative tone of certain presenters, a freedom of expression that is sometimes criticized and well-targeted musical programming much appreciated by its youth audience.

Since 1999, Skyrock has used the Internet, creating specialized sites.

The Skyrock Blog, launched in 2002, has proven to be a veritable online social network.

Bellanger has seized every occasion to develop the station's use of multimedia, with the help of Multimedia Director Frank Cheneau. The blog host opened by Skyrock, targeting 13- to 25-year-olds and benefiting from broadcasts of the station that houses it, became a successful "community" platform — at present the most visited in France — because of the simplicity of its layout and easy-to-use interface.

The free platform, rechristened Skyrock Blog in 2006 (after British Sky Broadcasting sued over the original name, Skyblog), is a Web portal operated by Telefun, the interactive division of the holding company Orbus, the owner of the station.

One of the first European hosting sites, Skyrock Blog boasts more than 9 million active accounts. It reaches out to young Francophones in places such as Canada, North Africa and Senegal as well as in France, Belgium and Switzerland.

The bloggers upload their pictures and thoughts, expressing themselves with sincerity and honesty and creating a forum for exchanging points of views and ideas.

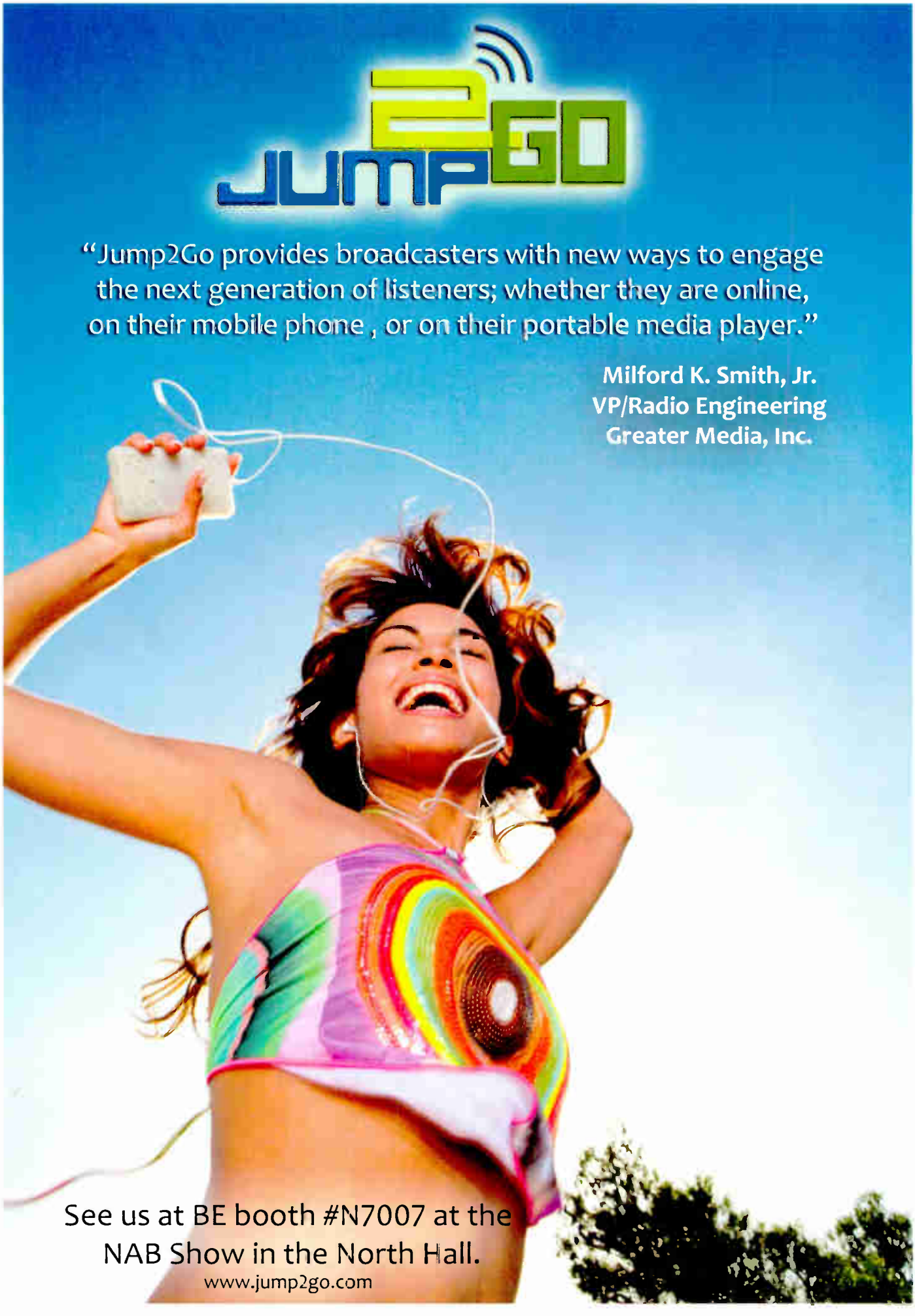
Skyrock Blog follows a precise advertising logic. Skyrégie, the Skyrock saleshouse, integrates a large number of advertisements, both banners and text, in the Skyblogs, as well as commercial initiatives designed to solicit the bloggers' opinions and build word-of-mouth marketing.

While basic blog hosting is free, other Skyrock Blog services carry a fee, such as promotion in a scrolling banner on the portal site or personalization of a voice message on a blog. Other sources of income include WAP- and i-mode-based mobile services.

E-commerce via the Skyrock Blog and the personalization of ringtones and logos on mobile phones via Skymobile are further commercial strategies.

Skyrock Blog boasts a two-fold model that is unique in France: radio community and radio/Web/mobile. Even though the simplicity of the platform and its applications limit the ability for further personalization, RSS feeds, permalinks and referencing tools are likely to help guarantee more success for Skyrock Blog.

World Radio History



World Radio History

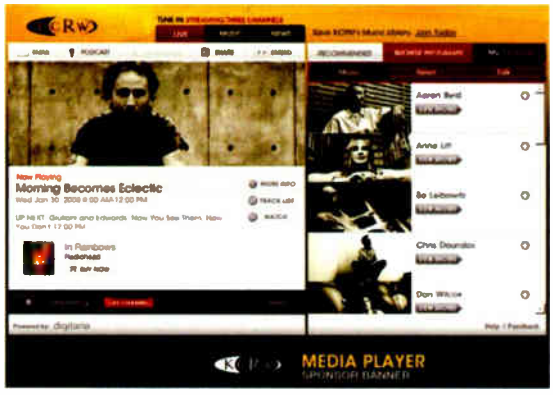
KCRW Creates Own Multi-Function Media Player

NPR affiliate KCRW of Santa Monica, Calif., is best known for its transmissions on 89.9 MHz. However, with over 40 percent of the station's listenership coming from outside California — and 17–18 percent outside the United States — the Web is of vast importance to KCRW.

This is why the station spent the time and money to develop its own online media player, with the help of Digitaria Inc.

It's a player that does much more than just play what's on 89.9 at any given time.

"There really isn't a media player out there that can do what KCRW's media player can," said Anil Dewan, the station's director of new media.



"Besides having the ability to immediately access any one of our three live program streams, the player automatically brings up a link menu of on-demand programs related to whatever the listener is listening to, and the switching between live and archive is so fast, it is seamless.

'There really isn't a media player out there that can do what KCRW's media player can.'

"The media player lets you not only bookmark favorite shows, but you can preschedule them for later listening on your PC," he said. "As well, KCRW's player lets you browse our program schedule and create your own 'Channel' lineup of programs. This means you can go to work, click on your KCRW player, and the lineup of shows you want to hear, in the order you want, will start playing on your desktop."

That's not all; KCRW's player makes it simple for bloggers to embed station content on their third-party sites, so that non-KCRW listeners can be exposed to the station's content.

You can also use the player to send content links to friends by e-mail, or buy CDs/books associated with what's being played.

"We've had really positive feedback from our listeners about the new player," Dewan told RW. "It's the latest in a 12-year push into new media, starting with streaming and podcasting, and now this. Our GM Ruth Seymour has a strong vision of how new media can extend KCRW's reach and impact, attracting new listeners and station supporters in the process."

The success of the strategy can be seen in KCRW's impressive out-of-market listenership. It supports Dewan's advice to other stations to "view technology as a tool and enabler, rather than something to fear."

Radio Hamburg Creates Links

Leading German broadcaster Radio Hamburg has developed Web programming for specialized music.

"Together with four other German radio stations, we offer eight additional programs on the Internet," said Radio Hamburg spokeswoman Martina Müller. Listeners "choose between rock music, '80's, lounge music, top 40, hip hop, movie mania and Jack FM."

Net Project (www.radiohamburg-netproject.de/) was launched in mid-2007. "It's just the beginning," says Müller. The site is designed for users to choose it as their home page and select their favorite live stream.

"Our goal is to open both new listener markets and new advertising markets with Net Project," she said.

The next development of Net Project for Radio Hamburg is "Gewinnspiele" — communities. Radio stations have a unique capacity for attracting people with specific music interests. Add the attraction to social networks, and broadcasters are finding new opportunities. Net Project will soon add response elements like guest books.

Radio Hamburg managers, program managers and the online department participate in developing new media strategies, a collaborative venture. In addition, said Müller, suggestions come from the sales house, Radio Marketing Service, the German broadcasters association, Verband privater Rundfunk und Telemedien (VPRT) and a newly formed radio support group, RadioZentrale.

"Radio Hamburg has been a value-added medium for a long time. Pictures and sounds grow together, which can be seen on our Web site (*www.radiohamburg.de*). We offer photos and videos for almost all messages, concerts, studio guests and activities as they are broadcast. Around the clock there are Webcams and a rain radar with more weather forecast information. We also offer podcasts of all programs, the morning show and the comedies, an online ticket center and radio on mobile phone.

Strategically, Radio Hamburg is first an FM broadcaster. "We believe we will always have radio in the traditional form," Müller said. "Possibly transmission platforms will change, from FM to DVB-H for example, but no medium is faster and more direct than radio. Podcasts and such are perfect additions and will certainly contribute to the stations' success story."

Entering new media projects, cautions Müller, broadcasters "must be prepared."

"Always look at technical and organizational feasibility first. New services frequently fail because the builders underestimate all the costs. And too, don't underestimate the time required."

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World Radio History

*Above: Rays broadcasters **Andy Freed** (left) and **Dave Wills** (right) interview Rays' star third base prospect **Evan Langoria** on the "The Hot Stove Radio Show."*

*Top: **Larry McCabe**, Tampa Bay Rays Senior Director of Broadcasting and **Rich Herrera**, broadcaster and Director of Radio Operations are shown on the field during Spring training.*

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Fans of the Tampa Bay Rays baseball team are intimately familiar with Dave Wills and Andy Freed, play-by-play announcers and hosts of "The Hot Stove Radio Show." Offering the inside track on all things Rays, the show kicked off its 2008 season with the "Countdown to Opening Day" series. While at a remote from a well-known sports bar, ACCESS showed its true worth. Two minutes before the broadcast, the ISDN line that was supposed to be used for the broadcast failed to connect. Luckily, they had the ACCESS running on Wi-Fi provided by the restaurant. The broadcast got on the air and was flawless for the entire one hour show.

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World Radio History

Metromedia's Radio Stations Interact With Listeners

Metromedia, a Bulgarian company owned by the Ireland-based organization Communicorp, is the biggest radio group in Bulgaria. It operates seven radio stations, six with national coverage and one, Radio Nova, that covers the Sofia metropolitan area.

Reaching out to listeners via new tools like SMS is important. But Nikolai Ianchovichin, Metromedia's general manager, said short text messaging by itself is old hat to consumers.

Performer Roger Sanchez and Radio Nova's Nikolai Ianchovichin

"Four years ago a lot of TV stations started to exploit SMS games, voting and all sorts of things, as it is easier for them to scroll on the screen the number to which you need to SMS. So it was exploited very much and now it is not something users want."

Is this scenario different for radio?

"In the past we tried to do all sorts of on-air voting, for example 'Battle of the Songs' on one of our stations, where we played just very short bits of two songs and listeners had to vote which song was the winner." But, he said, such frequent promotions did not work well.

'Being the only station that promotes Bulgarian music and industry, we upload every music video done by Bulgarian artists.'

"What we do now is use SMS for special occasions that have a meaning for our listeners; for example we featured a special campaign that allowed listeners to send a text message to the station with the name of a Bulgarian DJ that they would like to open for the Roger Sanchez show. The station then used the three most popular DJs, based on text message results, to open for Sanchez while he was in the country.

"We use SMS voting for Radio Nova also because it does not have live DJs; and we put SMS promotions in the news, so they stick out and listeners vote. We try to give attractive prizes for loyal listeners, like tickets to Ibiza or the EXIT Festival, to big parties or CDs that are not yet available in Bulgaria."

Radio Nova and the group's other stations are seeking to improve their online presence. BG Radio plays only Bulgarian pop and rock music; it is involved in the biggest music awards ceremony broadcast live on national TV, where the voting for awards is done via Internet site.

"During the show last year, we were uploading videos every 10 minutes on a special site to be watched by users, even [fans] not living in Bulgaria."

The Internet can be a kind of "natural extension" to the limited coverage of a radio station, he said; and the Web is an effective tool to enhance the presence of Bulgarian culture and music.

"Online we also upload the best of the morning show of BG Radio every day so people can listen if they missed. And being the only station that promotes Bulgarian music and industry, we upload every music video done by Bulgarian artists."

Beasley Regionalizes HD2 in Florida

Builds Awareness, Localism Using Digital Channels

There will come a time when more broadcasters will want to monetize their secondary HD Radio channels, but for the present the focus is more on product awareness, says Matt Johnson, director of programming for three of Beasley Broadcast Group's FM stations in southwest Florida.

Beasley is concentrating on staying very local in its HD2 offerings.

"In a few years, you'll be able to get quality Internet radio in your car," he said, which will give commuters access to powerhouse stations from large markets.

"The answer to that is regional programming."

Mark Haney

Two such Fort Myers/Naples, Fla., HD2 channels are Beach 103.9, WXKB(FM), and Haney's Big House 96.1, WRXK(FM).

To design the Beach channel, Johnson said, "We actually went to the beach and asked business owners, 'What kind of music would you play if you were going to make a station just for the beach?' We asked people laying on the beach what they thought."

Haney's Big House channel is the labor of love of WRXK morning co-host Mark Haney, who is also a musician in a blues and southern rock band. Haney's Big House was a Louisiana blues house in the 1940s and '50s, owned by Will Haney, unrelated to Mark.

WRXK's HD2 channel originally programmed classic rock.

'In a few years, you'll be able to get quality Internet radio in your car. The answer to that is regional programming.'

"I went to [Beasley] with a proposal that would regionalize it," said Haney, "and bring to the air different types of music that weren't being heard on the straight radio, and that I thought would be very popular in our particular area."

Haney relies on his own music collection and other recordings he can find, many of them from musicians who never hit the big time.

"The blues genre is littered with people that the mainstream audiences never heard of, and as I've exposed people to, they've loved it. A lot of these people are legends to me."

Caroline Beasley, executive vice president and CFO of Beasley Broadcast Group, said, "Both HD Radio and interactive exemplify new technologies that will ultimately provide additional revenue streams to supplement spot sales for future growth." But she said the immediate challenge is educating listeners.

Referring to the NAB and HD Radio Alliance's "Fully Equipped" campaign, which informs listeners that their car is not fully equipped unless it has an HD radio, Beasley said, "The most obvious way to encourage a listener to become fully equipped is to provide innovative programming."

Johnson thinks Beasley's HD2 channels are well-positioned. "Once [receiver adoption] has reached critical mass and everyone's aware of it, and everyone's using it, we already have a built-in reason for people to tune in."

MARKET PLACE

Comrex Adds AAC-ELD to Access

Comrex signed with Fraunhofer IIS to license the new AAC-ELD (Enhanced Low Delay) coding algorithm for use with its Access line of audio codecs.

It said AAC-ELD combines the best aspects of low-delay audio coding with Spectral Band Replication to reduce bit rate.

"This combination creates a coding algorithm that is uniquely suited to real-time audio transmission over IP circuits," Technical Director Hartnett said in the announcement.

"Combined with BRIC Technology on Access, using AAC-ELD allows full-fidelity, high-quality audio transmission at a data rate that easily fits into satellite and 3G wireless upload channels."

One-way Access transmission delay using AAC-ELD is an "easily managed 50 milliseconds," he said.

The algorithm is offered as part of the AAC Option package for Access codecs and is free to current owners of that option. It is available now for rack systems and is planned for Access Portable.

For information contact Comrex via www.comrex.com *and Fraunhofer at* www.iis.fraunhofer.de/amm.

Audemat Dealers Convene

Audemat hosted its second dealer meeting in Miami in February.

Attendees came from throughout the Americas. The company's Sophie and Christophe Poulain, managers of the regional Audemat subsidiary, noted five years in the United States.

Sessions included training on new Audemat products.

World Radio History

RADIO IT MANAGEMENT

Video Seen as Critical to Web Revenue

The Moving Visual Element Becomes a Much More Significant Part of Radio's New Strategies

by Randy J. Stine

Most professionals within the radio industry will admit we are living in the age of video.

Call it the YouTube effect if you will, but video is quickly becoming the core element of many radio station Web sites. Video also is at the heart of making your station's Web site a revenue generator, some experts say.

"Video for a radio station's Web site not only is a way to increase unique visitor page views but also as a revenue driver," said Thom Callahan, general manager of the Radio Division of the Associated Press Broadcast News Center, whose company provides video content to member radio stations.

"Many of our members have been able to sell ads against video of all kinds, from local video that they shoot to news and entertainment that we provide."

AP provides video services to radio stations as an ad-supported service, and many other suppliers of video content are doing the same, Callahan said, so the initial cost to offer video services is negligible.

Video on the Web has experienced exponential growth since early 2006 when YouTube burst on the scene, Callahan said, and spurred other groups like Google and AOL to begin offering video content.

This proliferation gives radio stations the opportunity to monetize their Web sites by enhancing the radio station experience, said Callahan, who organized a panel discussion on this topic for this month's NAB Show.

"It really gives the audience another reason to listen to the radio station and visit Web sites. It's another way to be interactive with the audience.

"It's a case of the Web site becoming a second integral medium for broadcasters and a chance for people to listen to radio in other places."

HOT video

Emmis/NY uses video on each of the cluster's Web sites, said Dan Halyburton Sr., vice president/market manager for Emmis Communications in New York, including the sites of WRKS(FM), WQHT(FM) and WRXP(FM).

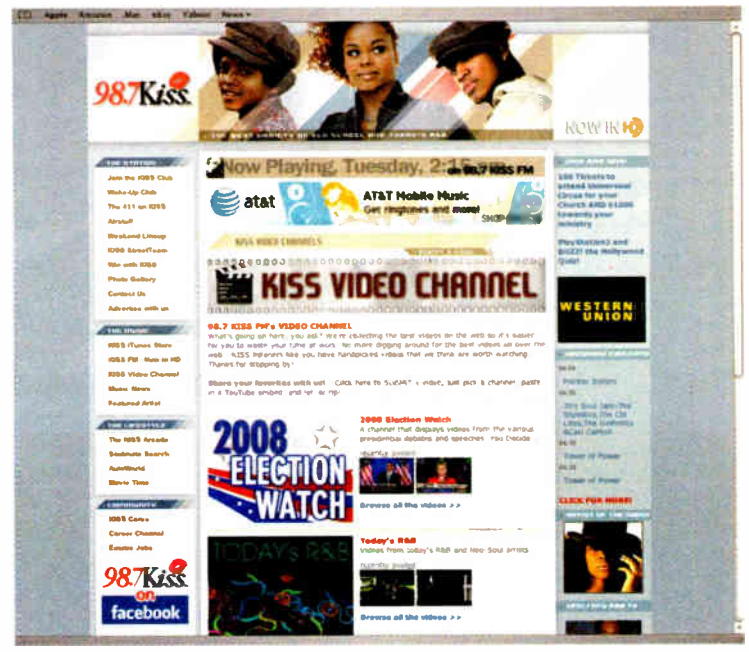
"Video is becoming a core element of our Web sites. Growing bandwidth speeds and better codecs are making video a big part of any site," said Halyburton.

He specifically points to Hot 97 as being at the forefront of the video craze, offering both event and studio video along with listener-generated video.

"Our capital requests have recently included requests for video gear. We think local, local, local. Get the content audio and video on your Web sites. Our strength is local so we exploit that. When Hot 97 sponsors an event, we are there with digital audio recorders and high-quality video cameras," Halyburton said.

Hot 97, which uses AP's video services, even hosted the worldwide premiere of the 50 Cent video "I Get Money" in 2007, which generated "huge online traffic" for the radio station.

"Be careful of copyrighted material. Be sure you have permission to show the video. Don't expose your company to any liability. Make sure to get permission in advance so you don't have to pull it down later," Halyburton added.



'Our capital requests have recently included requests for video gear,' said Dan Halyburton. 'We think local, local, local. Get the content audio and video on your Web sites.'

Brand extension

Entercom/Seattle produces in-house what its Internet Sales Manager Joshua Dirks calls "brand extension video" as a catalyst to drive listeners to its Web sites.

"Additionally, we use a lot of content from YouTube. Our demos here seem interested in unique and out-of-the-box video," Dirks said, "including vlogs (video blogs) and on-demand sections."

The interaction between radio listeners and video content is easily monetized as marketers understand the power of video, Dirks said. He expects video will create nearly $1 million in revenue this year for the Seattle cluster, which includes KKWF(FM), KISW(FM), KMTT(FM) and KNDD(FM).

If your radio station is just beginning to dabble in video, be sure not to dominate your Web site with it, Callahan said.

"It should be an enhancement and another reason to visit the Web site and ultimately listen to the radio station. Look at your online presence as just another channel to program," Callahan said.

This story appeared in slightly modified form on Radio World NAB Show Channel.

In Blacksburg, Dave Hodges Keeps It Moving

Engineer Enjoys Working for a Small Company And Being Entrusted Early With Significant Projects

by Ken Deutsch

One in a series of occasional articles about the next generation of engineers and others who don't fit traditional stereotypes.

When you're 26 years old and share engineering responsibilities for 40 radio stations over nine states with only two other people, you've got plenty to do.

Meet Dave Hodges, an engineer for Positive Alternative Radio and Positive Radio Group, both based in Blacksburg, Va.

"The first company oversees our non-commercial religious stations," said Hodges. "And the second handles our commercial side. The commercial formats are varied, anything from sports to country to news/talk."

While he was getting his B.S. in electrical and computer engineering at Rose-Hulman Institute of Technology, Hodges did a little on-air work at WMHD(FM) on campus.

"The station was in the basement of my freshman dorm and I could watch DJs spinning records and CDs and radio grew on me," he said. "I decided it was what I really wanted to do."

What's in your tool kit?

So much of radio engineering was about RF and knowing how to design studios around (and then service) analog equipment to keep it running. Today's radio station is much more computer-based, so it makes sense that a young engineer is comfortable in the IT world.

Hodges wires a new talk studio at Spirit-FM in Lynchburg, Va.

"There isn't a lot of RF work left in our industry," said Hodges. "No one teaches tube theory anymore, unless you're in the military. So I grew up with computers and enjoy that area the most."

But when an RF problem comes up, he relies on Winston Hawkins, his company's chief engineer.

"He has been really helpful to me," said Hodges. "And he's also good with automation systems. I was never really trained to operate those and in college we had a really crude system that a friend of mine programmed from scratch.

"Now that I'm into more complicated systems with switchers, routers and schedules, Winston can answer my questions. At our stations we've been standardizing our studios with (OMT Technology's) iMediaTouch."

Some of the company's stations are still using a 15-year-old system for which phone support is no longer available.

"Without support, it's difficult to keep it running. But for some of our satellite-programmed stations that don't have to do a lot, it's OK."

Taking care of business

Hodges is involved with planning and building news studios, and works with fellow engineer Joel Wright to install new equipment.

"Scheduling is the most difficult challenge," he said. "If there is a fire and we need to run, we do so. After that, we have to decide who can wait, which calls for judgment and sometimes causes hurt feelings because we have to leave one station to work at another.

"Occasionally there are two emergencies at once and we have to decide which station will be hurt most by missed billing due to being off the air."

See HODGES, page 29 ▶

World Radio History

It's all about the sound.

palm size

MicroTrack II Professional 2-Channel Mobile Digital Recorder

Sound matters–that's why the MicroTrack™ recorder has become the only choice for audio professionals worldwide. Now M-Audio has designed the MicroTrack II with even higher audio quality, an extended input gain range and multiple workflow enhancements including faster file transfer rate. With this unbeatable combination of functionality and fidelity, MicroTrack II represents a new standard for mobile digital recording–delivering superior results for broadcast, interviews and ENG.

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Includes stereo electret microphone, earbuds, headphone extension cable with lapel clip, power supply, USB cable (A to Mini B) and protective carrying case with mic pouch.

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World Radio History

PRODUCT EVALUATION

Audemat Navigator Guides Analysis Tasks

by Lawrie Hallett

The Audemat Navigator is a self-contained comprehensive modulation analyzer.

It provides all the facilities required to measure and assess an FM transmission chain all the way from audio input through to the RF output.

Intended for use by equipment manufacturers and broadcasters alike, the Navigator is portable and designed to be easy to use.

Reproducible results

A fully digital design, developed to deliver stable, accurate and consistently reproducible results, the Navigator weighs in at approximately 13.5 pounds, including case and accessories, and will fit into a standard 3 rack-unit, 19-inch rack space.

To avoid problems of rack access, all controls and connectors are front-panel mounted, the only item on the rear being a ventilation grille for the internal cooling fan.

For field use, the Navigator is designed to work from within its padded carry-case, which features meshed top and rear-ventilation and a removable Velcro front cover.

The Audemat-Aztec analyzer operates from an external power source of between 11 V DC and 20 V DC.

XLR connectors are also used for audio, left and right, and for AES/EBU digital connections, three-pin female sockets for inputs and male sockets for outputs.

RF input, MPX input and output, together with an auxiliary output are via BNC sockets, while computer connectivity is via USB, RS-232 and Ethernet ports. The final front-panel connector is a 1/4 inch stereo jack socket for monitor headphone use.

Real-time testing

The main control interface is a front-panel, color LCD touchscreen, which the user can switch off when not needed. This is accompanied by six touchpad buttons and three LED indicators. A stylus input device — attached to the unit so that it is hard to lose — is provided for use with the screen.

On power-up, the Navigator boots up and then presents the user with a menu screen through which to access various internal parameters.

Using the front-panel Ethernet port, it is easy to connect a laptop computer and then access and change parameters such as passwords, system time and network configuration.

Real-time testing of a transmitter with the Navigator is a straightforward affair. Simply supply the unit with a source — RF or composite MPX at the appropriate input — and then select one of three options, Spectrum Analyzer, Modulation Monitoring or RDS, via the front-panel display.

In Spectrum Analyzer mode, provided the user has selected the correct frequency, the Navigator will display spectral occupancy, both real-time and maximum (peak deviation over time).

Switching to Modulation Monitoring allows the Navigator to show MPX modulation, RDS and pilot injection levels, left, right, L+R and L-R audio levels. In RDS mode, the unit summarizes RDS information including PI code, PS code, PTY code, TP and TA flags, as well as instantaneous and global error totals.

Future analysis

As well as such real-time testing, the Navigator is configurable to control third-party equipment such as signal generators for automated testing.

In addition, after running required tests, it is possible to set up the unit to generate automatically a report for future analysis, remotely retrievable via IP.

Contained within the Navigator is a Java application, the Navigator Modulation Analyzer, downloadable via a standard Internet browser.

Once downloaded, this application can provide considerably more information about the transmissions being analyzed. The user can view information in real-time, taken over a specific period and stored in word processor files as evidence of completed testing and for future analysis and reference.

The Navigator software provides a range of functions, allowing the user to examine in detail a number of signal parameters relating to items such as MPX, audio, subcarriers, modulation, spectrum, THD and RDS.

The user can access each item via its own software "tab" or by simply pressing the relevant function key.

Comprehensive facilities

In many instances, for example MPX, audio subcarrier, spectrum, oscilloscope and THD, it is possible to select a particular item of information for display in a larger window at the bottom of the computer screen.

The user can then magnify or "zoom in" on this information so as to examine it visually in more detail.

When running a transmitter test, it is possible to generate a report, which is then stored on the test computer hard drive in the desired word processor format.

Four separate measurement reports are retrievable, covering MPX power analysis, RDS measurement analysis, audio analysis and RF spectrum analysis, each of them several pages long.

The information, including "screen grab" pictures of the test results obtained, is formatted as a report available for distribution to interested parties, such as manufacturers, regulators and operators.

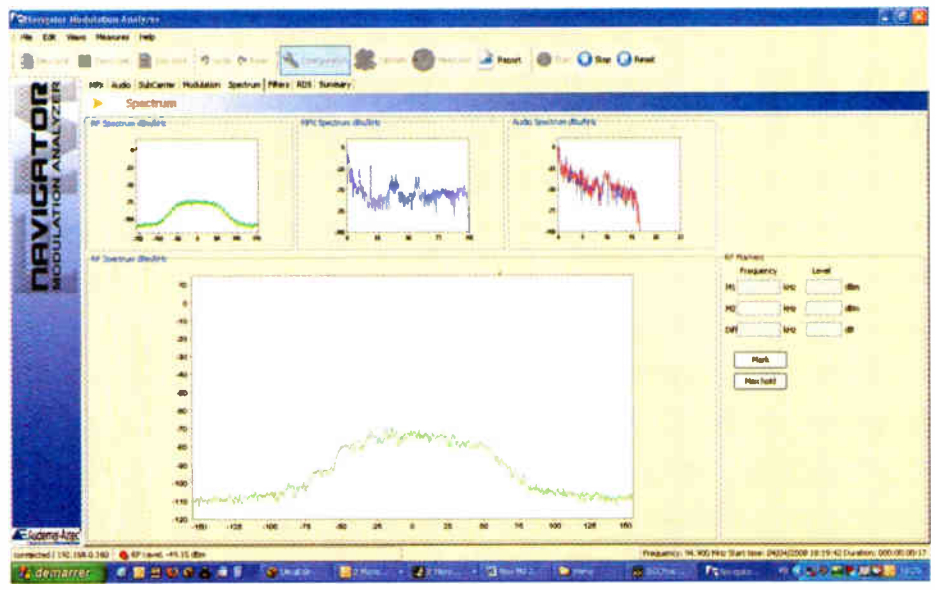
It is difficult to fully assess such a complex item of test equipment within a short article. However, from the tests carried out, it is clear that the Audemat Navigator together with its associated Modulation Analyzer software provide comprehensive facilities for testing the various parameters of FM broadcast transmissions.

The fact that the unit is lightweight and portable, making it suitable for field testing, is a useful bonus.

It is perhaps, however, the provision of comprehensive printed reports at the touch of a button that makes the Navigator such a productive piece of test equipment.

Lawrie Hallett is based in Norwich, England. Contact him via e-mail at lawrie@terella.com.

For information contact Audemat in Miami at (305) 249-3110 or via www.audemat-aztec.com.



Item	Details include
MPX	Instantaneous Log, Cumulated Log, Peak kHz over time, Peak dB over time etc.
AudioM	M channel kHz over time, S Channel kHz over time, Left audio kHz over time, Right audio kHz over time.
Sub-carriers	Pilot kHz over time, RDS, kHz over time, SCA, kHz over time
Modulation	MPX (kHz), M (kHz), Pilot (kHz), S (kHz), RDS (kHz) SCA (kHz), Decoded AF levels (DBr) (L+R, L-R, L, R).
Spectrum	RF Spectrum (dBm/kHz), MPX Spectrum (dBu/kHz), Audio Spectrum (dBu/kHz)
Oscilloscope	MPX (V/ms), Audio (L and R channels)
THD	Left Audio / Right Audio (dBu/kHz) Harmonics (dB)
Filters	MPX, Observed against reference comparing L+R, L-R, Left, Right, Display of spot frequencies (RF, Pilot, RDS).
RDS	Comprehensive RDS information including AF lists, EON AF, Radio-paging, TMC, hexadecimal and ASCII, PI, PS, TP, TA, PTY etc. and error ratios etc.

Table: The Audemat Navigator Modulation Analyzer software allows the user to examine in detail a range of signal parameters.

Dining for a Good Cause

Wendy Moger-Bross Photography

Barbara Walters, Anne Sweeney and Vanessa Williams enjoy the Golden Mike gala at the Waldorf in New York in February. The event honored Sweeney, co-chair of Disney Media Networks and president of Disney-ABC Television Group, and raised half a million dollars for the Broadcasters Foundation of America, which offers financial assistance to broadcaster in dire straits due to illness or other circumstances.

World Radio History

Hodges

▶ Continued from page 26

Hodges is looking forward to three new non-commercial FM stations that will be built within the next year.

"We're gearing up for that," he said. "These are in West Virginia and we'll be starting from scratch including the tower. I'm excited. They'll be HD, probably the first fully HD stations we'll be building. Ours is a mid-sized group and a lot of our stations haven't yet gotten into HD, which is pretty much just a major-market thing now."

Asked about his worst days, he says he tries to block them out.

"Two years ago we had a station that got hit by lightning and I was four hours away and had to turn around and drive back there. The power company didn't get us back on until dark, and lightning had destroyed our satellite receivers, automation and consoles. We had four stations in that cluster and only one was running when the power came back on. We had to replace everything."

On the brighter side

There may be frustrations with the job, but there are also gratifying moments.

"The most rewarding project I've done was given to me early in my job here," he said.

"We were changing two stations over to ESPN affiliates and I was put in charge of moving and installing the satellite dishes, wiring satellite receivers and adjusting the automation system for the new programming. Both stations were in different states and went live on the same day. I was pleased when the company placed this much confidence and trust in me."

I don't come into work worrying the stockholders have sold our company to the highest bidder overnight.

— Dave Hodges

The commercial stations in the group are owned and run by several generations of the Baker family. Dr. Vernon Baker is CEO, Vernon's wife Virginia Baker is treasurer and son Eddie is the president of the company. These three are also on the board of the non-commercial group.

According to Hodges, working for a small company has its advantages.

"I feel that the staff and management genuinely care about the well-being of everyone," he said. "The individuals in charge care just as much about my future as they do about their own and I don't come into work worrying the stockholders have sold our company to the highest bidder overnight."

Hodges is single, with a cat his sole companion at home at present. He said this works out well because he travels three to four days each week.

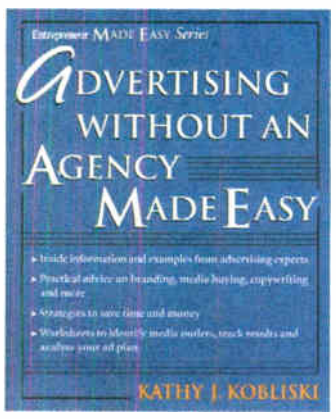
Books

▶ Continued from page 4

★ ★ ★

My friend Craig Baker is a radio broadcaster in Georgia and often suggests books that other small-station owners and managers might benefit by.

He tipped me off to Kathy J. Kobliski and her book "Advertising Without an Agency Made Easy," part of a "Made Easy" series from Entrepreneur Press. (Other titles in the series include "Strategic Planning Made Easy," "Meetings Made Easy: The Ultimate Fix-It Guide" and "Business Plans Made Easy: It's Not as Hard as You Think.")



She's a former sales rep and now the owner of Silent Partner Advertising, a small agency in New York state.

She says she wrote the book to help direct advertisers who must "wing it" with little or no professional help. Radio sales folks may wish to share this with clients, or can benefit themselves by learning about other media choices they can recommend or fend off as part of an ad strategy. It's practical and presented in a format familiar to readers of "Dummies" and "Idiot's Guide" books.

A companion booklet is "Successful Radio Sales," aimed at people who want to be radio account execs or who are starting in such a job. It can be a reminder of sales basics for more experienced sales people. She deals with cold calls, file management, promotional material and so forth.

You can also find good information and tips about sales at her site *www.silentpartneradvertising.com.*

"Advertising Without an Agency Made Easy" by Kathy J. Kobliski retails for $19.95 and is published by Entrepreneur Press. Look for the blue cover if you shop online; earlier editions are also still sold.

"Successful Radio Sales" is available through her Web site for $7.

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Radio World — Resource for Business, Programming & Sales — April 23, 2008

NEWS MAKER

Chicago's Cool Gent: V103's Herb Kent

Urban Radio Pioneer Believes 'A Good Song Is a Good Song Forever'

by Ken Deutsch

The voice that has entertained Chicago radio audiences for almost 60 years is smooth, but not slick. It is cultured but not stuffy; friendly without being phony. His diction is superb and his manner is low-key.

Herb Kent, now a weekend music host on Clear Channel's WVAZ(FM), began his long career in the late 1940s.

"I started making crystal sets when I was a kid and loved the smell of the solder," he said. "When I got into high school I was president of the radio club and I auditioned for [public station] WBEZ(FM). I got in and we used to put on historical dramas. Of course at that time, almost no one had an FM radio. We used to sit at a big table and they taught us about radio.

"Then I got a job as an office boy at WMAQ(AM) in 1949 when I was about 18. An announcer there knew I wanted to be on the air so he sent me to try out at nearby WGRY(AM) in Gary, Ind. That was a job that paid $35 a week."

During the 1950s, there were only a handful of black air personalities, but according to Kent, they held tremendous influence in their communities.

"When I worked there, we had about five or six black people on WGES(AM), the big cheese in Chicago," Kent said. "Al Benson should be in the Radio Hall of Fame. He had great magnetism, although not great speech, and Sid McCoy was on there and he is still a voice on TV's 'Soul Train.'

"Black jocks were loved, and we found out how much when the white kids came home from college in the summer and became our biggest fans."

Herb Kent's longest stint at one station was the period he spent at Chicago's soul giant, WVON(AM), from about 1960–1977. Those call letters stood for "Voice of the Negro," and it was one of the first black stations to broadcast 24 hours a day.

Herb Kent

"There should be a movie about that place," said Kent. "It's now a gospel station. But then, we could play anything we wanted, back in the days before we had formats and music lists. I'm an oldies jock now."

According to his station bio: "In the 1960s, during the height of the civil rights movement, Herb hosted a program with Stevie Wonder, for Dr. Martin Luther King Jr.'s last visit to Chicago.

"Ironically, it was also Kent who after the assassination of Dr. King, took to the airwaves to calm rioters on Chicago's West Side in the late '60s. For his many years of service and dedication to the community, the City of Chicago has bestowed numerous honors upon Kent, among them, a street named in his honor, 'Herb Kent Drive' and Honorary Mayor of Bronzeville."

Express yourself

Black singers and rappers of today have their own language, and that's not really so different from when Kent started broadcasting.

"We had something called drag talk," a kind of slang, he said. "Snoop Dogg has his own language and the kids love it. It's just a different way of expressing himself. I like some of the contemporary artists like Beyoncé, who is cute as hell.

> **Every time I've been fired, I've been rehired. I can be depended on, and that's something every radio station needs.**
>
> — Herb Kent

"I've talked to some rappers and it's surprising how intelligent they are when they aren't onstage. (Poet) Maya Angelou thinks rap is a great form of poetry and I can't knock it, though I'm not an advocate. I like the beats but I'm not too sure about the lyrics. Radio stations play toned-down versions of the songs and I'd like to see artists tone it down a bit more but hey, God bless 'em!"

While terrestrial radio has been good for Kent, he's not sure about the future of the medium.

"We might be in the last years now because you have iPods, satellite radio, HD Radio and a zillion stations on the Internet," he said. "I think that will take a toll. While I don't want to lose listeners on my show, I guess all that choice is great for the folks because they can listen to what they want without interference or talk. But you know, I've found that if you just play records it becomes very dull. Even if you hear your favorite song, you are accustomed to hearing a jock in there helping you along."

What does Kent think it will take to save terrestrial radio?

"Whoever comes up with that, it'll be a money-maker, brother. I know a guy down the street with an Internet station and he has listeners. The sum total of that is going to hurt us.

"But I think what will keep people listening to the radio is good, strong personalities. Branded jocks. Of course, now all the good jocks are syndicated. With satellite you can take one jock and knock 50 or 60 other jocks out of work. We're going through some changes, that's for sure."

But Kent loves being on the air, and he is particularly fond of his oldies.

"I was one of the first guys to devise an oldies format, back in 1953 or '54," he said. "A good song is a good song forever."

But it wasn't always easy, and like most air personalities, Kent has been fired, more than once.

"One guy fired me because before I came to work for his station, I was the number one jock at the competition and he hated that," said Kent. "He took it personally. I came in one day and he asked me how I felt. I said I felt fine, and he told me I wouldn't feel fine in a minute. Then he fired me.

"But every time I've been fired, I've been rehired. I can be depended on, and that's something every radio station needs."

We asked Kent if anything funny ever

See KENT, page 32 ▶

World Radio History

Broadcast Software

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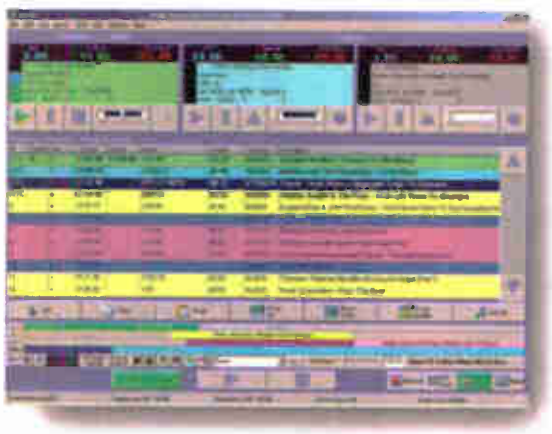
Radio Automation

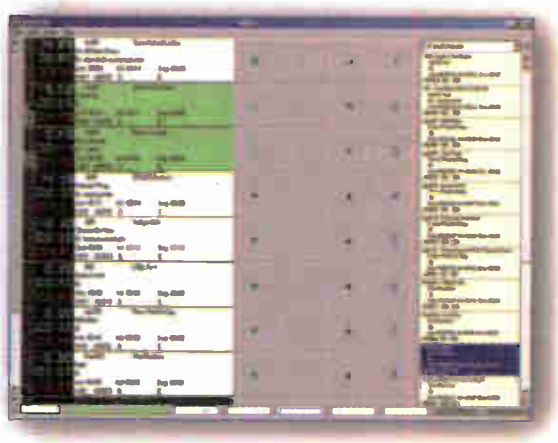


Simian - radio automation and digital playout system.

Instant Audio

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

Digital Cart Player



WaveCart - the original on-screen cart machine replacement.

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SkimmerPlus - skimming and audio logging with web playback.

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Systems - fully configured with hardware, software and music.

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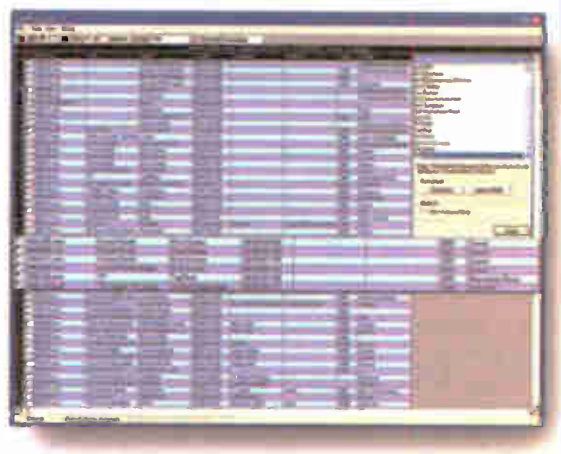

MusicStore - select from over 48,000 ready-to-play songs.

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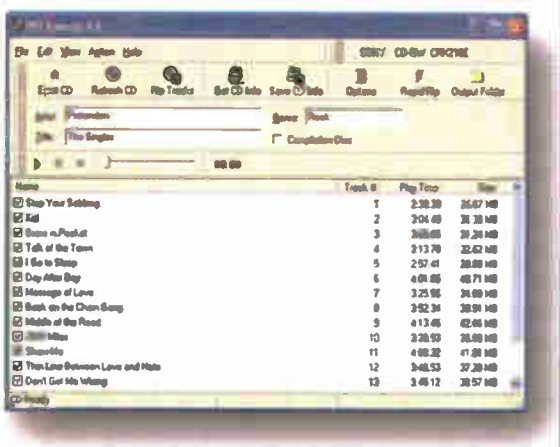

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World Radio History

I Still Believe in Radio's Future

PROMO POWER
BY MARK LAPIDUS

When a person is terminated from a position, it's usually a shock. Even if you know down deep that the elimination of your job is inevitable, part of you just can't believe you're that person being shown the door. After all, you worked hard and were successful — and now this?

When the consolidation finally began at the former ABC stations recently, it shouldn't have surprised anyone. A vestige of stations being operated as if consolidation had never happened, they've now joined the ranks of the last 12 years' reality.

Beginning in 1996, owners realized two things: Stations could be effectively managed top down by far fewer people; and software technology could satisfactorily perform many previously manual functions.

I hate to say it, but having witnessed it so many times over the years, the consolidation at some of those companies isn't over even yet. It takes two or three phases of layoffs until the Powers That Be finish the job.

Most of us believe it's best to speak the truth and to face reality. However, many folks avoid this particular truth — and the reality is that the world is changing so fast we don't yet know where the radio business is headed.

©iStockphoto.com/Geoffrey Holman

So many, so cheaply

One of the most unnerving aspects of the future is that the water in the talent pool continues to drain away.

For example, creative genius Lee Abrams — who ably criticized terrestrial radio and helped create the new niche approach in satellite radio — has left the building. While he may have involvement with Tribune's one big-market AM, in his new role his focus will certainly be elsewhere, developing other media.

Lee has an excellent blog that I hope will continue for many years so that others may be inspired.

Fortunately there remain at least a dozen brilliant independent consultants who continue to challenge the status quo. Most of them are now over 50 — a sobering thought in that the young and brilliant have had to choose the corporate path over the goal of making it as consultants.

There they may well become casualties of group-thinking, financial necessity. Or they may simply have the limited mandate to apply one good idea over 50 stations, only to find that it works in just one out of five markets.

In these tough times, any number of things are holding back our favorite cultural icon.

Before you open the window and jump out of the business, it's vital to remember that if you work in the industry, you are still part of the mightiest medium in America.

Nobody can reach mass audiences the way we can. Nobody is able to deliver mass numbers of people in a specific demo around the clock. Most importantly, no other medium, Web included, can reach so many so cheaply!

The question many struggle with — and the reason for this tirade — is: How do we propel creativity forward to make the medium sizzle as it did for so many decades? I can't pretend to have the answers, but because I have this platform, I'd like to toss out a few ideas as fuel for discussion.

Better Voice Tracking: I'm going to get hammered for stating this, but I believe that voice-tracked radio stations can be great stations as well.

However, a voice-tracker has to be a terrific personality who has learned to use his energy, humor and intelligence to sound as if he is live.

When voice-tracking is done well, an audience really doesn't know the difference. Unfortunately, voice-tracking has become a commodity and we have people voice-tracking multiple stations a day.

Commercial radio continues to serve up pseudo-localism, which is now wearing thin on listeners, advertisers and regulators.

I'm not blaming them; they're only trying to make a living. I'm blaming companies that have driven the price down so low that they pay someone less than $10,000 a year to track a station.

And the ones who track multiple stations a day sound professional — but so what? They don't have time to be anything more than bland.

Create a Farm Team: More companies must use their smaller-market morning shows to try out and then grow new talent.

When a personality doesn't work, try another and keep it up until something clicks. Encourage actors, comedians and charismatic people you meet to give personality radio a try. Most will fail, but a few will succeed and can bubble up to save some of our sagging markets.

It would also be great if companies would help out college radio stations by mentoring their leaders at the local level.

No college stations in your area? No problem — let a local university have one of your HD channels to run as their own for a few years. You've probably got automated drivel on it anyway. There might even be a tax benefit for "donation" of the lease to broadcast.

Put Your Promotion Department Back Together: One promotion director with less than five years' experience can't proactively handle a cluster. He's lucky if he can take care of the sales department's frantic needs.

A little investment in professionals can go a long way to being more community-involved, doing stunts to get noticed and generating press for the station.

Market Your Station: Hello! Advertising works. If it didn't, commercial radio wouldn't exist.

Take More Chances: Doesn't anybody try anything new anymore, either within a format or by creating a new one in a particular market that craves it?

I still believe in radio's future. The medium is so resilient, it's nearly impossible to mess up. It's really more a question of whether radio will regain its status as entertainment that resonates deeply — the way it was for so many years.

The author is president of Lapidus Media. E-mail him at marklapidus@verizon.net.

Kent

▶ Continued from page 30

happened to him on the air, and his answer is a backhanded tribute to his credibility with his listeners.

"I went on the air and did some commercials for an insurance company," he said. "One of my listeners had his Corvette stolen and this schlock company wouldn't pay him so he called me. He said, 'I listened to you and I believed you and now they won't pay me!' You always want to watch who you do spots for and make sure they're reputable."

Keeping it current

Kent is nicknamed "The Cool Gent" as well as "King of the Dusties" for his love of classic records. His bio on WVAZ's Web site — "Today's R&B and Old School" — includes a photo of a car with the license plate "COOL GNT." Kent also has written a book with David Smallwood about his life bearing that nickname.

He was one of three black disk jockeys inducted into the Radio Hall of Fame in 1995, the first year blacks were so honored. For information on the book, write to *sbetz@chicagoreviewpress.com*. Hear Kent live-streamed every weekend at *www.v103.com*.

Kent works on OMT Technology's iMediaTouch automation-assist software and loads his own music prior to airtime. Sometimes he prefers the station's version of a song, which may be longer or shorter.

"I'm on the air Saturday from 8 a.m. until noon and Sunday from noon until 7 p.m.," he said. "I do a lot of pre-planning and I've already been to the station three times to get my music ready for this weekend.

"I also look up a lot of facts and figures about the artists. For example, this weekend I'm doing a feature on Smokey Robinson. That's another big change. We used to just walk in and play the records. We used to holler and scream. Now the music is locked down ahead of time because people need to see the information on their RDS systems in the car.

"I want to be prepared for everything. It gives me a smoother show because there's no stumbling around."

Ken Deutsch is a former disk jockey who didn't quite hit 60 years on the air. Barely six, in fact.

STATION SERVICES

'Watchdog' Seeks Broader Syndication

PR firm Eclectic Media Productions and Shannon Rose signed Chris Markowski to a long-term agreement.

Markowski is editor of The Markowski Monthly, an investor newsletter. His show "The Watchdog on Wall Street" is syndicated in 75 markets and airs Saturday mornings on the Talk Radio Network. An author and self-described muckracker, he calls his show the "only con-free, hoax-free, fraud-free, swindle-free arena anywhere in the financial media."

He said in the announcement that Rose was hired to improve his Web site and handle publicity. Rose is his contact for radio show bookings. Rose started in pro wrestling handling PR for wrestling events in addition to ring announcing.

For information e-mail Shannon Rose at srose4@tampabay.rr.com *or call (813) 960-8412. Show info is at* watchdogonwallstreet.com.

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World Radio History

Keeping Tabs: Public File 101

My Real-World Advice on What to Keep and What to Toss, and When

by Chuck Bullett

The author is director of engineering for Cumulus Media Partners' San Francisco stations.

Recently I was requested to produce a retention schedule for our public file officer, spelling out the length of time to retain each document in the file and answering the question, "How much historical information is really required?"

It's a good idea to make an ongoing habit of policing your public files of unnecessary documents in an effort to keep it as condensed and concise as possible. An ongoing maintenance program will keep the file focused and manageable.

If keeping a historical archive is important to you, I recommend establishing a separate archive altogether for such material, or even enlisting a representative of your local historical society to take charge of such material for you. The public file is not the location for those documents.

So what should remain?

Clearly labeled folders, in the presentation order described here, will ensure that the various aspects of your efforts to serve the public's interest are addressed. This guide is gleaned from the FCC's publication "The Public and Broadcasting."

I cannot act here as your company's legal counsel. But after undergoing countless inspections over the years, my experience has demonstrated that the following is a recipe for successful and painless public file maintenance, minus the legal-eagle double-speak, as valuable as it is.

A "clip-and-paste" retention schedule accompanies this article. You may find it handy to keep it near your public file "maintenance area."

Many thanks to Harry Cole of Fletcher, Heald and Hildreth, an RW contributor, for his input as well.

Chuck Bullett

Retention schedule and contents

Stations must keep the following materials in their public inspection file, and may even wish to provide an index of the file material in the front folder:

• ***The Station License.*** Stations must *keep a copy of their current FCC license in the public file,* together with any material documenting FCC-approved modifications to the license. *This would include letters to and from the FCC requesting and/or authorizing HD Transmission.*

Part 73 also dictates that a copy of the license and all authorizations be posted at the station's control point. This license document reflects the station's technical parameters (authorized frequency, call letters, operating power, transmitter location, etc.), as well as any special conditions imposed by the FCC on the station's operation. *The license also indicates when it was issued and when it will expire.*

• ***Applications and Related Materials.*** The public file must contain copies of all *applications filed with the FCC that are still pending before either the FCC or the courts.* These include applications to sell the station (technically known as "assigning" or "transferring" the license) or to modify its facilities (for example, to increase power, change the antenna system or change the transmitter location).

Also, the station must keep copies of any construction or sales application whose grant required the FCC to waive any rules. Applications that required a waiver, together with any related material, will reflect the particular rule(s) that the FCC waived.

The station *must also keep renewal applications that the FCC granted for less than a full license term until final grant of the next renewal application.* The FCC may grant such short-term renewals when they are concerned about the station's performance over the previous term. These concerns will be reflected in the renewal-related material in the public file.

• ***Citizen Agreements.*** Stations must keep

See PUBLIC FILE, page 36 ▶

STATION/STUDIO SERVICES

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PEOPLE NEWS

Send items for People News to radioworld@nbmedia.com.

Inovonics appointed **Steve Gordoni** marketing manager, North American sales. He brings more than 30 years sales experience to the company, having worked for suppliers such as Audemat, Aphex, 360 Systems, BE and RAM. Gordoni also previously served as North American sales manager for Orban, and is a former DOE, for WOJO (FM), Chicago.

Wayne Young joined **Jampro Antennas** as regional sales manager for the eastern United States and Canada, a new position. He had been manager of broadcast services for Radian Communications Services, where he managed the construction of more than 150 FM sites in 30 states, and supervised the construction of numerous terrestrial repeater sites for satellite radio expansion into Canada.

Steve Gordoni

Industry pioneer **John Eargle** was posthumously awarded a 2008 Technical Grammy at the Special Merit Awards ceremony in Los Angeles, on the evening prior to the 50th Grammy Awards telecast. The engineer, musician and longtime JBL Professional consultant died in 2007.

Joan Gerberding joined **Private Label Radio,** a division of DMI Music & Media Solutions, as senior vice president of advertiser solutions. She brings more than three decades of experience in radio station management to the company, having directed the design and implementation of strategic growth initiatives for broadcast groups such as Access 1 Communications, and both Nassau Broadcasting Partners and its Jersey Radio Network division.

Receiving the Grammy on John Eargle's behalf (from left): JBL Professional Vice President of Marketing Mark Gander; Cyndi Bird, Eargle's niece; and his nephew John Paul Eargle.

Gerberding also was instrumental in launching a digital place-based media signage company, Nassau Media Partners, an outdoor division of Arbitron; and the Local Focus division of Focus360, a media rep firm based in New York.

World Radio History

rubicon

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AP CHICAGO PUBLIC RADIO JAMES MADISON UNIVERSITY
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We'll always be there when you need us. Call us or visit our web site to learn how you can become an SAS Connected Digital Network.

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

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World Radio History

Public File

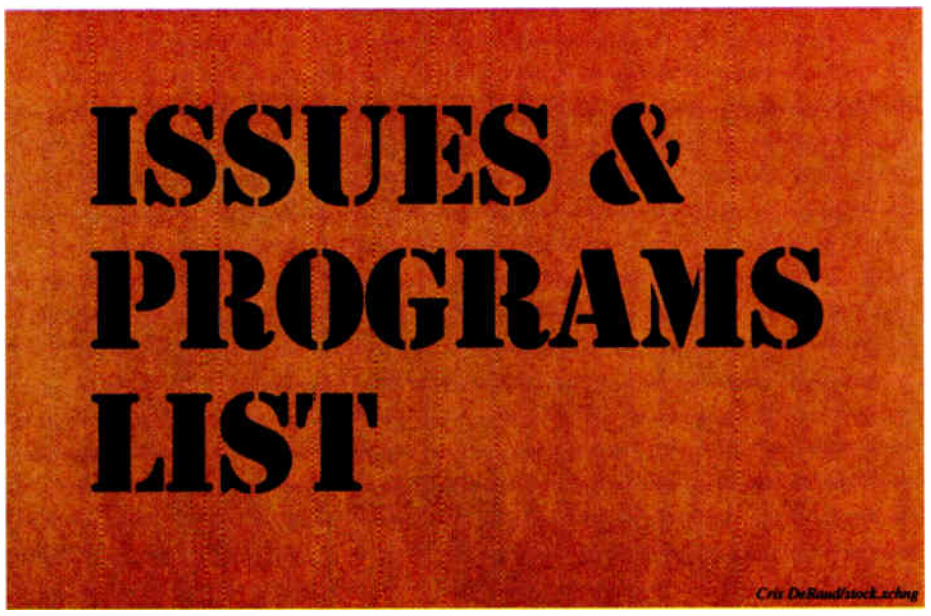
▶ Continued from page 34

a copy of any written agreements they make with local listeners. These "citizen agreements" deal with programming, employment or other issues of community concern. *The station must keep these agreements in the public file for as long as they are in effect.*

• ***Contour Maps.*** The public file *must contain copies of any service contour maps or other information submitted with any application filed with the FCC that reflects the station's service contours and/or its main studio and transmitter location.* These documents *must* stay in the file for as long as they remain accurate. Not all stations are required to have contour maps.

• ***Material Relating to an FCC Investigation or a Complaint.*** Stations must keep material relating to any matter that is the subject of an FCC investigation or a complaint that the station has violated the Communications Act or the FCC's rules. *This material must be retained until your station's FCC counsel advises that it may be discarded.* Since the FCC is not involved in disputes regarding matters unrelated to the Communications Act or the FCC's rules, stations do not have to keep material relating to such matters in the public file.

• ***Ownership Reports and Related Material. The public file must contain a copy of the most recent, complete Ownership Report filed for the station.*** This report has the names of the owners of your station or stations, and their ownership interests. It also lists any contracts related to the station that are required to be filed with the FCC, and identifies any interest held by the station licensee in other broadcast stations.



• ***List of Contracts Required to Be Filed With the FCC.*** Stations have to keep either a copy of all the contracts that they have to file with the FCC, or an up-to-date list identifying all such contracts. If the station keeps a list and someone asks to see copies of the actual contracts, the station must provide them within seven days. The requesting party is responsible for all applicable copying costs.

Contracts *required to be* maintained or *listed* in the public inspection file include:

Any contracts *relating to (current) network service* (network affiliation contracts);

Also, any contracts *relating to ownership or control of the licensee or permittee or its stock.* Examples include articles of incorporation, bylaws, agreements providing for the assignment of a license or permit or affecting stock ownership or voting rights (stock options, pledges or proxies), and mortgage or loan agreements that restrict the licensee or permittee's freedom of operation;

Management consultant agreements with *independent contractors, Joint Service Agreements* and *station management contracts* that provide for a percentage of profits or sharing of losses.

• ***Political File.*** *Stations must keep a file containing records of all requests for broadcast time made by or for a candidate for public office.* The file must identify how the station responded to such requests and (if the request was granted) the charges made, a schedule of the time purchased, the times the spots actually aired, the rates charged and the classes of time purchased. The file must also reflect any free time provided to a candidate. The station must *keep the political records for two years after the spot airs.* You can find the political broadcasting rules elsewhere in "The Public and Broadcasting" manual.

• ***Annual Employment Reports and Related Material.*** The FCC requires all broadcasters to afford equal opportunity in its employment practices. The recent EEO language of 2001 requires all broadcasters and cable entities to place an annual EEO report in their public file detailing their outreach efforts. The rule reads differently for operators with five or fewer employees in smaller markets, so be sure to consult your station's FCC counsel on what your responsibilities are if you're not absolutely certain. More on the recent EEO rule changes may be found at the FCC's Media Bureau Web site. Simply perform a search for EEO Rules. *While no retention schedule has been specified, the records should probably be retained for the term, or length, of the license.*

• ***Copies of the manual "The Public and Broadcasting."*** Stations must keep a copy of this manual in the public file. You can also read it on the FCC's Web site.

• ***Letters and E-Mail from the Public.*** Commercial stations must keep written comments and suggestions received from the public regarding their operation for at least *three years.* Noncommercial stations are not subject to this requirement.

• ***Issues/Programs List.*** Every three months, all stations must prepare and place in their file a list of programs that have provided their most significant treatment of community issues during the *preceding three months.* The list must briefly describe both the issue and the programming where the issue was discussed. *The stations must keep these lists for the entire license term.* This file must be updated on the 10th day after the completion of the preceding quarter.

• ***Radio Time Brokerage Agreements.*** A time brokerage agreement is a type of contract that generally involves a station's sale of discrete blocks of air time to a broker, who then supplies the programming to fill that time and sells the commercial spot announcements to support the programming. Commercial radio stations must keep a copy of every agreement involving: (1) time brokerage of that station; or (2) time brokerage by any other station owned by the same licensee.

• ***Local Public Notice Announcements.*** When someone files an application to build a new station or to renew, sell or modify an existing station, the FCC often requires the applicant to make a series of local announcements to inform the public of the application's existence and nature. These announcements are either published in a local newspaper or made over the air on the station, and they are intended to give the public an opportunity to comment on the application. Copies of these announcements must be retained in the public inspection file. If audio, any reasonably accessible media may be used. (i.e. cassette, CD, Web Site MP3, etc).

File Folder Label	Document(s)	Retention Schedule
Station License	Station license & all authorizations	Until License Renewal
Applications	All pending applications before FCC or courts	Until License Renewal
Citizen Agreements	Written agreements with listeners	Until Agreement Expires
Contour Maps	Any contours submitted with FCC Apps	Accurate? Keep Them
FCC Investigations & Complaints	Any document relating to complaint or FCC action	Until FCC advises material may be discarded
Ownership Reports	Ownership report as supplied by corporate counsel	Most Recent Report Filed on Behalf of Station
Contracts	Any contract on-file with FCC	Current and Active Only
Political File	Records of requests for broadcast time by/for candidates for public office	Three Years After Spots Air
Annual Employment Reports	Current copy as recommended by your FCC Counsel	Term of License
"The Public & Broadcasting"	A least one copy of this manual must be on file	Indefinitely; Until Revised
Letters & E-mail From the Public	All letters and e-mails received	Three (3) Years
Quarterly Community Needs Assessment/Issues & Programs	List of programs giving significant treatment to community issues	License Term
Time Brokerage Agreements	Copy of agreements involving this or other owned stations	Entire License Term
Local Public Announcements	Copy of announcements (CD, cassettes, newspaper clippings)	Entire License Term

Everyone seems to have their own methodology for maintaining this file. The key is to make sure to visit it at a bare minimum, quarterly, to insert the Issues & Programs lists on a timely schedule, and to use those precious moments to also purge old or expired documents.

Performed on a regular schedule, this will assure that the file will serve as a reminder to any who request to view it as representative of your station's commitment to their community, and to your company's license.

This article offers my advice but it is not legal counsel. Be sure to check with your communications attorney to confirm or modify these practices to fit your particular situation.

Chuck Bullett, CSRE, has held DOE positions in New England, Washington and now San Francisco. He is former chair of SBE Chapter 37 and holds amateur call sign WIAEK. Write him at chuck.bullett@cumulus.com.

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World Radio History

MANAGER Q&A

Hughes: Cheap Signals Are a Threat

This is one in a series of interviews with radio executives about the challenges they face and strategies they've adopted.

Don Hughes is president/CEO of Great Plains Christian Radio in Meade, Kan. The organization has five full-powered stations and 35 translators.

As a radio executive, what's the biggest challenge facing you this year?

As a local broadcaster, there was a day when we were concerned with providing good programming and service to our listeners. These things would result in creating paths to good cash flow and keeping up with expenses.

Now, the threat is from big corporations putting cheaply operated signals across the country, as well as satellite and Internet competition. It is a challenge to have a presence on the Internet to compete, as well as expanding at least regionally in order to increase the listener potential. We are located in a small market. There also is the issue of performers thinking that local broadcasters are basking in wealth and wanting royalties.

Plus, our presence on the Internet is threatened by a desire for more fees for music use. How do you use new technologies when there is the added expense?

How can radio overcome our recent flat revenue performance?

I can use new technologies such as the Internet to expand listener potential. However, this helps to keep us on a somewhat level playing field. Those seeking greater royalties need to back down.

Has your organization adopted HD Radio? If so how's it going; if not, why not?

I am just waiting to see if other broadcasters and consumers are really interested.

Should the FCC allow AM stations to use FM translators, as currently proposed?

No. People who owned AM stations have known for 40 years that the frequencies on FM were declining as well as interest in AM. Why are they just now hitting the panic button?

What impact would tighter staffing requirements, like the FCC is talking about in its localism initiative, have on your business?

I think the localism requirements should be tied to the size of the community. There are companies that have stations in large communities with no staff. They should have staffing requirements to serve the area.

We have some small stations in communities with low population. Just having the station is a service to these areas. To require us to have a staff there would mean we need to discontinue service.

To give you an example, we are building a 10,000 watt station in the west end of the Oklahoma panhandle that will serve about 3,500 people. We cannot make this work financially if we are required to have a staff.

Should lawmakers allow the adoption of what NAB is calling a "performance tax"?

No, it is radio that made these people stars and made millions of dollars for them in record sales. Why do they want even more? To use the old adage, they should not bite the hand that feeds them.

What notable capital improvement projects do you have on the calendar for this year?

Building more stations to try to measure up to the growing competition.

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World Radio History

RADIO IT MANAGEMENT

10 Tips to a Faster, Healthier Computer

by Larry Foltran

Here's a list of regular tasks that users should be performing to assure their computer's health. In the course of my work as a corporate IT manager, I find that many users can benefit from a regularly scheduled checkup routine.

If you already take these steps, the list may be helpful to save for a user/colleague.

1. Antivirus Renewal

For some, keeping up on their antivirus subscription is at the bottom of the list, if it appears on the list at all.

Quite honestly, I don't keep my subscription renewal date memorized either. For that reason, I typically renew my antivirus software at the beginning of each year.

In most cases, renewing early also makes me eligible for a discount. I know I'm going to need the software, so why not take care of it and be done with it?

Set up your own schedule at a time of the year you're likely to remember it.

2. Anti-Spyware Renewal and Updates

The same goes for anti-spyware software, which has become so important in recent years.

Apart from renewing, I make sure any updates have been downloaded and installed. Once those items are complete, a full scan of the computer is in order.

During my yearly "friends and family" computer checks, I often encounter six months or more of updates waiting to be installed.

Just a few months back, I was working on a friend's computer that had gone four years without a full spyware scan; it contained a sizable roster of who's who in the spyware world.

That computer is running much faster after a full scan and clean.

3. Windows Updates

Although many users set their system up to download and install Windows updates automatically, I have come across some machines that were still running Windows XP SP1.

Make sure to check *www.update.microsoft.com* or go through *Start > Control Panel > Windows Update* (on the left). Either way, you can ensure that your machine's operating system is up to date.

4. Disk Cleanup

Your regularly scheduled checkup is a great time to clear out some of the "garbage" that's on your machine, anything from files that you haven't accessed in several years to temporary files located on the hard drive.

Depending on how much data you have on your computer, this could be a time-consuming exercise; but it will be worth it.

Also make sure to clear out any temporary files that may have accumulated on your hard drive. This can be taken care of through *Start > All Programs > Accessories > System Tools > Disk Cleanup*. Easy enough?

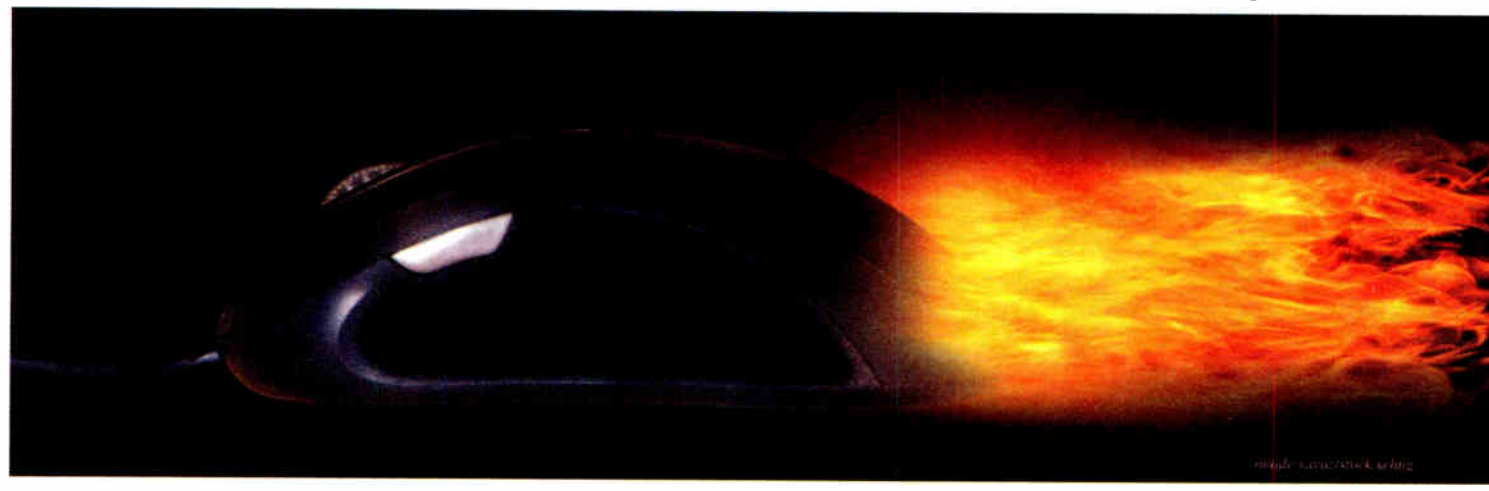
5. Disk Defrag

Another often ignored utility located in the system tools menu is the Disk Defragmenter. Running this program will organize the data on your hard drive, making it much easier and quicker for your computer to find.

Regardless of your data organizational skills, though, defragging the drive won't help you find that elusive file you've been seeking for the last few months.

6. Clear the Cache

Pronounced "cash" (as in the thing you have less of as a result of tax time), the computer cache stores data relating to Internet browsing.



If you have plenty of time on your hands and no idea how to spend it, how about performing a clean start on your computer?

This area can become full of files that are no longer necessary. If you are using Internet Explorer, you can clear this area by going to *Tools > Internet Options*. Then click on "Delete" under the Browsing History section of the menu window.

For those using Firefox, you can simply use ctrl+shift+del to clear the cookies.

7. File Backup

If you're like me, you back up the important data on your machine each month or as often as every other week. For others, data back-up is something that is taken care of infrequently or never at all.

Take this opportunity to back up your important data to a CD or DVD. Better yet, invest in an external hard drive and a good backup software package. You can then schedule regular backups and let your computer do the work.

8. E-mail Backup and Cleanup

Your e-mail client is another area that can quickly accumulate cyberjunk. Take this time to eliminate any messages older than two years or back up messages you feel are important.

You should also check your junk e-mail folder and any spam folders you may have. Once those areas are clear as well, you should clear out your deleted items folder.

9. Create New Passwords

Although this item isn't as important as the others on my list, setting up new passwords regularly can prevent security issues posed by using the same passwords repeatedly.

Remember to note your new password(s) ... in a safe place of course.

10. A Clean Start

One task that I've only completed a few times in the past is clearing off the computer and starting from scratch.

If you have plenty of time on your hands and you have no idea how to spend it, this could be the job for you.

After clearing your data and reinstalling your operating system via your OS disk, you will need to reinstall all of the software you use on a regular basis.

This could be a great opportunity to get rid of programs you haven't used in quite some time. Make sure you first back up all of your important data and e-mails prior to starting. Once they're gone, they are gone.

For those who don't use their computers often, these steps might be done on once or twice a year. For others, a more frequent schedule is appropriate.

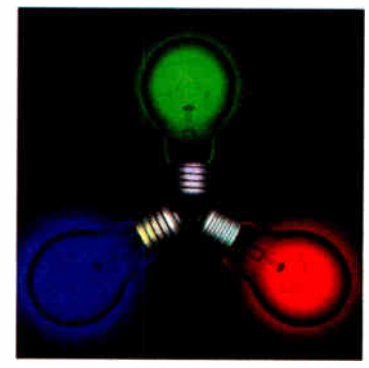
The author is corporate Web site and information technology coordinator for Crawford Broadcasting. This article appeared in a different form in the company's engineering newsletter The Local Oscillator.

RW welcomes tips and ideas for IT management stories. Write to radioworld@nbmedia.com.

IDEA BOX

Sign Sweeps and Other Promo Ideas

by Stu Wright



Here are some contest and promo ideas to help fellow radio people keep things interesting.

Early Morning Prize Pack — I've heard a lot through the years about listeners getting up early, having to be on their job by 7, not being able to play the contest featured during morning drive. Or maybe they are in bed by that time after working the all-night shift.

The answer is the Early Morning Prize Pack, usually given out between 5 and 6:30. Name it whatever; there's your thought starter.

Pet of the Week, Creature Feature — Do it through your local SPCA chapter. Help a cat or dog they really want to find a home for. The animal also can be featured on your Web site. A sponsor tie-in for pet care store, vet office, feed store.

Leftover Monday — All those prizes not picked up in the allotted time by winners? Save 'em (if you don't keep them yourself or make a few extra bucks by selling them on eBay — just kidding). Give them away again on a *Leftover Monday.*

Get Out of the Dog House — A weekly contest where guys call or e-mail you describing why they are in the doghouse with a wife or girlfriend (or both). Then on behalf of the best one, your morning team sends a real *nice* arrangement, delivered by a sponsoring flower shop.

Sports Sponsorships — Sell the legal ID... there's plenty of time in those 10 or 15 seconds to say, "Sports 1290-WRWN, Anytown ... Two for One subs at Sid's Sub shop on Main Street every football Saturday..."

Sign Sweep — After the big election, offer prizes for listeners who bring in political signs that otherwise seem never to be taken down. Bring them to the station where candidates can pick them up.

We did this one at a station in Delaware years ago, and we *should* have let politicians then claim their signs, which had been designed to be re-used. Instead they went into the dumpster. Oops! It did make the front page of the paper though.

By the way, the election will be here before you know it; line up sponsors now. Even music-intensive stations can benefit, especially in smaller markets. It's your chance to make a few extra bucks.

Stu Wright does mornings at WORG(FM) in Orangeburg, S.C. He says, "Forty years in the biz, I've had an idea or two."

Share your own radio contest and promotion ideas at radioworld@nbmedia.com.

World Radio History

Green Grows the Radio

by Michael Hedges

Global warming and the environment are hot topics for broadcasters, not only here but abroad.

And broadcasters are taking environmental issues personally, adopting carbon-neutral initiatives, joining the rush within many business sectors to embrace an issue deemed increasingly important by listeners.

Becoming carbon-neutral means reducing a carbon footprint to zero. Public transport, bicycles, foot power and phone calls replace personal automobiles and air travel.

Clear message

Curbing emissions also means reducing energy usage in buildings and equipment. Electrical power is obtainable from renewable sources, such as solar panels on rooftops or switching to renewable energy providers.

One of the biggest media companies in the world, News Corporation, has announced its intention to become carbon-neutral by 2010. Though News Corp. no longer owns radio stations, its initiative sends a clear message to all broadcasters — public concern about the planet deserves attention.

"It is only a beginning," said James Murdoch, the company's chairman and chief executive for Europe and Asia.

"The key to any company's environmental program is to improve energy efficiency and we have a lot more to do in this area.

"As a major media company, we reach a wide audience both in the United Kingdom and worldwide," said Murdoch. "It is important that we get the message across: that we are making good progress on an issue we, and they, care a great deal about."

Passion for the Planet, a DAB and Internet radio channel in the United Kingdom, has gone carbon-neutral, said co-owner Chantal Cooke. "The first step is to reduce your carbon emissions," she said.

That means encouraging employees to walk or cycle to work. "When we travel, we use public transport, which does produce emissions but is more efficient than each person going in a car," said Cooke.

Shuttle service

Air conditioning at Passion for the Planet is reduced and staff turn off lighting and computers that are not in use. "We also are converting to flat-screen monitors on PCs as they are less energy hungry," said Cooke.

Public broadcasters have rallied to environmental initiatives. KQED in San Francisco claimed the title as the first carbon-neutral public broadcaster in 2007.

"Being carbon neutral is another way of serving and better sharing the planet with KQED audiences, members, volunteers and staff," said KQED Vice President Don Derheim. "Like everything we do at KQED, being green is not prompted by popular opinion or short-term economic viability."

KQED runs a shuttle service for employees to and from the nearest subway stop. It prints direct mail promotional materials on recycled paper and purchased advanced photocopy machines that provide direct e-mail functions, reducing paper copies.

programming and event promotion.

Bangkok, Thailand-based station Green Wave has been on the air since 1991, geared toward adult listeners who are "environmentally minded," said chief executive Saithip Montrikul Na Ayudhaya.

The station is about more than forest, mountain or sea, but all things surrounding humans, said Ayudhaya in an interview with a local paper. "It is about the environment of the home, the office, even of other people."

Irish public service broadcaster Radio Telefís Éireann (RTÉ) produces "The Green Light," which tackles environment and sustainability issues in Ireland. Its podcast is one of the most popular in Ireland.

Travel features

French Internet station Fréquence Terre produces a multitude of programs, ranging from ecology and nature to food. The station claims 500,000 listeners through podcasts and 11 partner FM stations.

Passion for the Planet focuses its travel features on U.K. destinations, the carbon footprint for air travel being large.

Swedish public broadcaster Sveriges Radio (SR) has increased its programming addressing environmental issues. According to SR Communications Director Mikael Nilsson, this is just one notable sign of the increasing interest in Swedish society as a whole and at SR for these issues.

"A couple of months ago, we had a special thematic day headlined 'klimatfeber,' which means 'climate fever,' on several of our national channels, where a great number of our current affairs and news programs focused on climate and environmental issues," said Nilsson.

Sweden has led all countries in the Climate Change Performance Index since 2006. The Swedish government announced plans recently for the entire country to become carbon-neutral by 2021.

Michael Hedges reports on the industry for Radio World from Geneva, Switzerland. Contact him via e-mail at michael@followthemedia.com.

After all the reductions we had put in place, we calculated our carbon footprint as a company at 16 tons per year.

— Chantal Cooke
Passion for the Planet

Extra step

In the United Kingdom, one carbon-offsetting charity is Pure Trust, used by Passion for the Planet. "After all the reductions we had put in place," said Cooke, "we calculated our carbon footprint as a company at 16 tons per year."

Fresh Air, an Internet station run from studios at the University of Edinburgh, offsets its carbon footprint by contributing to an organization that plants trees.

Taking the extra step in environmental awareness to a carbon-neutral operation seems far more painless among Anglophone broadcasters, in the United Kingdom and the United States. Many broadcasters are tackling environmental issues through

World Radio History

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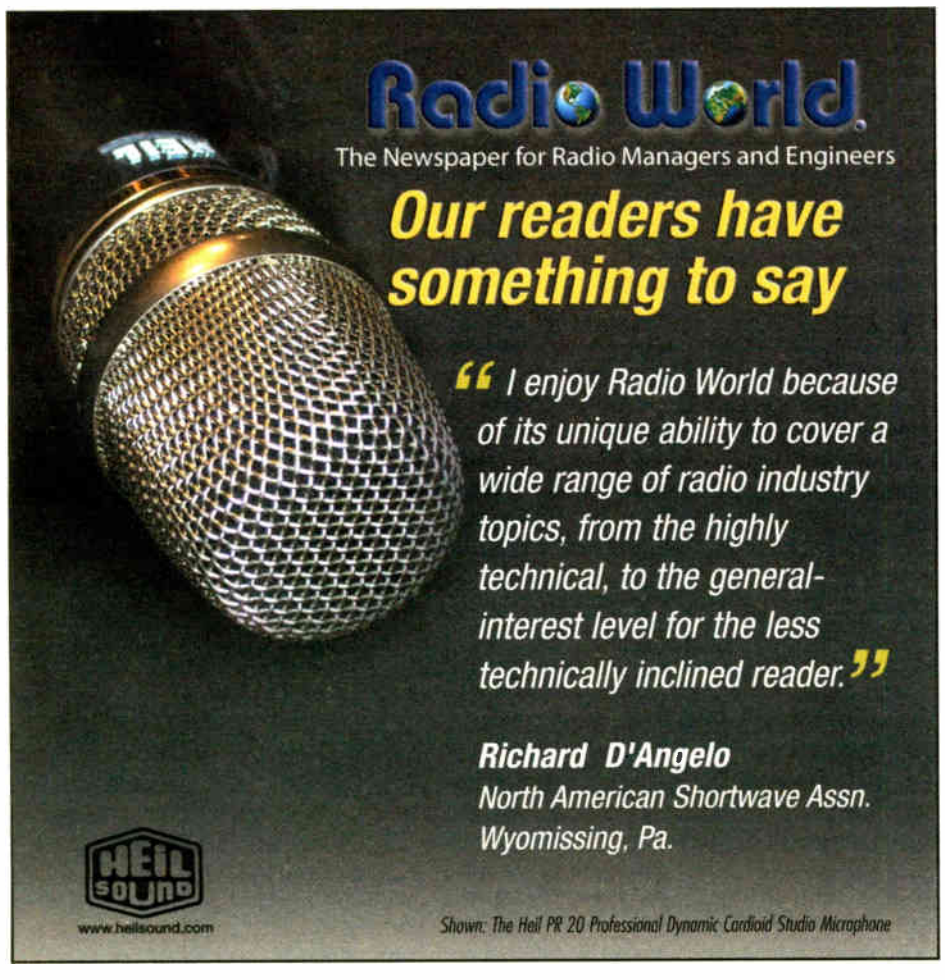

◆READER'S FORUM◆

Services Rendered

In regards to the letters from Michael G. McCarthy (March 1) and Howard Fine concerning my commentary on the SBE Game Day Frequency Coordination program in the Jan. 2 issue, I have a few comments.

Mr. McCarthy claims that I am "incorrectly informed" about the SBE coordination program, yet he doesn't say how. My comments were based on information provided to me, in writing, by SBE leaders.

He continues by saying that the SBE program interferes with my fee-based coordination services business, to which I agree. I believe that a professional organization should not interfere with the business of the individual professional it claims to support.

Yes, Mr. McCarthy, I am an EE and a PE. I have earned these credentials through hard work and am entitled to any associated rights and privileges. I hold a professional engineering license because I would be in violation of my state's professional licensure laws if I practiced engineering without it.

I also am a member of the Association of Federal Communications Consulting Engineers and the National Society of Professional Engineers, fine professional organizations that support the principle of appropriate pay for services rendered.

SBE claims to uphold this principle, but fails in practice.

In his response, Mr. Fine seems to miss the point of my commentary. Regarding his assertion that frequency coordination has always been voluntary, this is not true. The Olympics always have paid frequency coordinators and consultants, and other events such as political conventions and golf tournaments also have had paid coordinators.

He states that some professionals offer free or pro bono publico services, but fails to mention that these services usually are offered only to charitable organizations or indigent individuals.

The NFL is not a charitable organization nor indigent, but a wealthy, for-profit corporation. Professionals such as NFL doctors and lawyers do not provide their service pro bono publico to the NFL, but are well paid. There is no reason why frequency coordination engineers should provide free services to the NFL.

Should the SBE protect broadcasters for free during an event? I say no; let the event organizers who are creating the problem hire a professional like Mike McCarthy or Howard Fine to manage the spectrum. If non-profit entities such as the Olympic organizing committees can pay for frequency coordination, rich, for-profit entities like the NFL certainly can.

Incidentally, the NFL recently paid $500,000 for new spectrum analyzers, yet they pay nothing to the engineers who use them.

My main complaint is that the SBE unfairly competes with me (and others) in business; this is something that no other professional organization in this country does to its membership. The SBE also subsidizes the NFL, a wealthy, multi-billion for-profit corporation, and violates its own Code of Ethics regarding appropriate pay for services rendered.

The future for broadcast engineers is bleak when our very own professional organization has sold us out.

Mario Hieb
Salt Lake City

Ed. Note: Just as this issue went to press, the Society of Broadcast Engineers announced it will transition out of organizing frequency coordination for the NFL; the league will retain coordinators itself after the coming season. RW will report further on that story in a future issue.

Jim Williams

I saw the news about Jim Williams' retirement at AP (*RW Online*, March 14). He is a dear friend.

I know for an absolute fact that retirement was Jim's decision alone. As a former AP guy who once worked closely with Jim, you can quote me that he is an astonishingly talented executive who helped conceive and launch new products like AP Television News and ENPS, the best news production system in the world, as well as restructuring the services and pricing of news products for radio.

He went from a local salesman in the Deep South to AP's chief global broadcast executive in a 29-year career.

Jim's staff was extraordinarily loyal to him because he treated them with respect and led by his great example. I can't wait to see what he decides to do after he takes some time off. Some other enterprise eventually will get a tremendous innovator and leader in Jim.

Glenn Serafin
President
Serafin Bros. Inc.
Tampa, Fla.

Where the Streets Have No Name

Just wanted to say "yes, please" to a better numbering scheme for NAB walkways and booths ("On the Street Where You Live," March 26)! I too have wasted precious time and energy searching for vendors.

Doug Ford
Engineering Supervisor
Skywalker Sound
Nicasio, Calif.

World Radio History

◆READER'S FORUM◆

Tell the Taxpayers

I just Randy Stine's article on localism and he did a stellar job ("Radio: 'We Already Do Localism,'" March 12).

There are two things to correct:

First, the radio station ownership is under Christian Broadcasting System Ltd. (CBSL). Broadcast Properties is my brokerage/consulting company.

Second, the sites mentioned, *www.helpradionow.com* and *www.savechristianradio.com*, are meant for the audience as well. Broadcasters have a vested interest, so our concerns are discounted accordingly.

I feel that the commission might be moved only by the taxpayers, our listeners. That is why the site is printer-friendly, and through our site you can contact your representation in Washington as well as send an e-comment. Many people are printing out the data and handing it out.

We need to encourage station owners to talk it up on the air and place our links on their Web sites. Thank you for your great coverage of this.

Jon Yinger
President and CEO
CBSL
Flint, Mich.

Lights Out

I was quite impressed with James E. O'Neal's excellent article ("Last of VOA Wartime Stations Goes Dark") about the Voice of America's station at Delano, Calif.

The history in words and pictures was very good, with the author doing a nice job of explaining Delano's unique history going back to the early days of World War II.

As someone that has listened to the shortwave spectrum for almost five decades, I know it is effective in reaching audiences where the free flow of ideas and information is severely restricted. With this legendary landmark of a station leaving the shortwave airwaves, the United States loses yet another valuable voice in the communication of ideas.

I hope the masterminds at the Broadcasting Board of Governors really do know what they are doing by eliminating this valuable shortwave radio facility from its arsenal. But I suspect not, and that would be truly unfortunate for us as time goes by and opportunities to communicate effectively are lost.

Richard A. D'Angelo
Executive Director
North American Shortwave Association
Levittown, Pa.

Just read your article about Delano. Great job! I enjoyed hearing the history of its beginning and the good photos. Being a broadcaster, SWL and ham (W1DAN), I listened to the VOA often and am saddened that the site is dark.

A friend and I are enjoying learning about past audio processing the VOA used. There was a Langevin clipper that was commonly used by the VOA in the late 1940s–'60s before the Orban HF 9105a. I am looking for detailed info about the Langevin unit and any other audio SW transmission processing. I also am looking for a used 9105A to study and use for the ham bands.

Thanks again for such a nice article. I hope there will be a good tribute Web site about the station sometime.

Dan Brown, CBTE
Boston
w1dan@arrl.net

Hy Lit

What a blast from the past, that photo on page 32 of the March 1 issue ("Hy Lit Spun the Platters in Philly"). How well I remember that historic DJ studio at WIBBAGE during the famous rock-n-roll wars between WIBG and WFIL 1966 to 1970.

As Sam Lit says, the WIBG technical setup was unique. I've never seen anything else like it in 41 years in radio.

The DJs had turntables and cart machines on their side of the glass, with the console, operated only by NABET engineers, on the other side in a glassed-in booth off the transmitter room. The NABET labor contract dictated that engineers had control of "opening and closing microphones" and "maintaining all audio levels."

So Big 99 operating procedures were unusual. Each 45 rpm record had a little sticker on it, which indicated what setting of the console fader would correspond to "0 VU." You'd cue up your record, hit the intercom and tell "Woody," or whoever was behind the Gatesway II console, "give me a 14 on this one," indicating which TT to turn up with hand signals. The engineer would then dutifully reach down and crank up the pot to 14 — or, at least, so you would hope.

You also had to call for your mic. This meant having to plan ahead because the engineers were bored, not having enough to do. Otherwise you'd suddenly discover your song was ending, and the engineer was standing 4 feet away from the console engrossed in some urgent task like replacing the pilot light on a modulation monitor.

Of course if there was dead air, you received a stern reprimand from Paul Drew or the PD via the announcer's "Batphone," a 150-watt floodlight that went off in your face.

To this day I open my microphone 20 to 30 seconds early.

WIBG had other unusual features, even for that point in history. The Big 99 operated with 50 kW at day, 10 kW at night, necessitating a phasor and transmitter changeover at sunrise and sunset.

With the tube-type transmitters and old-style contactors used in the WIBG system, this produced a carrier interruption of several seconds and the consultants didn't like this occurring in the middle of a song.

So WIBBAGE was the only station I've ever known to announce its twice-daily pattern changes. At sunset a cart was played: "In just *three seconds*, turn up your radio for *more power*, from WIBG Philadelphia!" You'd wait for the change to occur, get a thumbs up from the engineer on duty, play a jingle and roll the next song. The sunrise version was slightly different, announcing "more power" in "just three seconds."

WIBG's (then) five-tower directional antenna system used thermocouple base current and common point meters. Proper engineering practice is for this type of meter to be read only without modulation. The FCC rules of the day required antenna current readings within two hours after pattern changes, so this meant six more periods of dead air would be necessary, twice a day.

The WIBG engineers drove programming execs to distraction, but what could they do? Management couldn't order the engineers to violate FCC regs.

Finally, a "solution" of sorts was implemented, whereby six commercial stopsets would be scheduled within a half-hour period containing PSAs with three-second pauses: "In just three seconds, a message from the National Safety Council."

There would be a pause, during which the engineer would log the current reading without modulation. The engineer would have the next record (then three minutes or so) to run to the next tower in the array to read the next meter. (The sixth pause was for the common point reading.)

A minor correction: The transmitter seen in the photo of Hy Lit is actually WIBG's nighttime transmitter, a plate-modulated RCA BTA-10H.

The 50 kW BTA-50G Ampliphase was located far to the right of Hy's line of vision. WIBBAGE used the Amplifuzz almost exclusively during the day because the 50G didn't like the nighttime array's common point characteristics, and thus the 10-H sounded better.

Thanks for the stroll down major-market top 40 AM radio memory lane.

Bob Savage
President/CEO
WYSL(AM)
Avon, N.Y.

GM Journal

Resource for Business, Programming & Sales

Radio World

Hy Lit Spun the Platters in Philly

by Ken Deutsch

For over 50 years, his baritone voice and lively delivery were heard on Philadelphia airwaves and at hundreds of personal appearances.

He was there when rock and roll was born in the 1950s. He hosted Elvis, the Beatles and the Stones in the '60s. And he helped promote the city's unique soul sound in the 1970s and '80s.

That voice was silenced when Hy Lit, the top 40 radio pioneer, died Nov. 17, 2007 at age 73.

White and black

It was 1954 when South Philadelphia-born Lit returned to his home town after college at Miami University.

At a promotional basketball game, Charlie O'Donnell, then program director of "Negro"-formatted WHAT(AM), offered Lit a Saturday morning job on the air.

O'Donnell, now the voice of TV's "Wheel of Fortune," was pleased with his new disk jockey, even though Lit was the only white face on the station.

size, he was told to "get it from the record companies." That meant payola, which was not illegal at the time. Record companies were forthcoming with cash and other goodies for deejays, who in those days were allowed to choose their own records.

"Hy always declared everything he got on his taxes, so he never got a lot of heat," said Sam Lit. "What it was really about was the fact that New York executives didn't like black rock and roll and feared for their daughters. There was a racial current that was really behind the

WIBG enjoyed a great run as Philadelphia's premier top 40 station, and as in the case of so many radio battles everywhere, an upstart challenger comes along and repositions you. WFIL not only decimated the once venerable WIBG, WFIL did it fair and square, and the evidence is incontrovertible.

To say otherwise denigrates and disrespects the hard work of scores of talented men and women, who made WFIL the legend and example of great radio that it remains even today.

Kevin Fennessy
Lyndhurst, N.J.

I am writing to correctly state facts concerning the Philadelphia radio battle between WIBG(AM) and WFIL(AM), as featured in your recent profile on the late Hy Lit.

I grew up in Philadelphia, began working at Philadelphia radio stations when I graduated high school in 1972 and was the last program director of WFIL under the LIN Broadcasting ownership.

With the passage of time, and the passing of veteran broadcasters and "ear-witnesses" to the battle, recently there has been a revision of actual history, with several people claiming that WIBG was defeated by WFIL because WFIL signed on commercial-free and stayed that way for its first year.

WFIL converted to top 40 on Sept. 18, 1966, and defeated WIBG in very short order in spite of the following:

• WFIL carried a healthy spot load carried over from its previous format.

• WFIL carried news twice each hour at :15 and :45, initially augmented with ABC Network News.

• WFIL aired a nightly 90-minute news block called "Assignment 56," which aired daily from 6 p.m.–7:30 p.m., followed by "The George Michael Show." WIBG's "Hy Lit Show" began nightly at 6 p.m.

• WFIL aired Don McNeil's "Breakfast Club," from 10–11 a.m. weekdays for the first six months due to contractual agreements with ABC.

• WFIL carried the Philadelphia Phillies at the end of the 1966 season, and throughout the 1967 season.

Just wanted to thank Ken Deutsch for the excellent article on the legendary Hy Lit.

I had a chance to speak with Hy on the telephone when my husband had dinner with Sam [Lit] about three years ago. I answered the phone and almost fell over when Hy said, "This is Hyski O'Roonie McVoutie O'Zoot."

We had a great talk about the Philadelphia greats like Diane Renay, Kenny Gamble and Leon Huff. Hy laughed and said, "Oh! You mean Huff and Puff."

It's guys like Hy that inspired me to enter the radio biz. Hy certainly touched the souls of his listeners and he had deep respect for the artists. When I read the article, it gave me lots of inspiration. I share Hy's philosophy about radio and how it should be done. So glad Sam is continuing with *hylitradio.com*.

You did a great job sharing about a radio legend.

Joyce Conroy
Rocky Mount, Va.

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NewBay Media

Share the Burden

Mulling Options to Encourage Further Adoption of HD Radio

Stations continue to convert to HD Radio, and at their chosen pace, a real benefit of this particular technology.

Still, we cannot help wondering about ways to speed the process, particularly in smaller and medium markets. An impediment to consumer acceptance is the availability (or lack thereof) of HD signals across all stations in all markets. And now that the Justice Department has given impetus to the satellite merger, our sense of urgency increases.

Several ideas to accelerate conversion come to mind. Some have been tried on a limited basis; but all stakeholders must be involved if the technology is to get the push it needs to be accepted. Radio World is not necessarily endorsing all of these ideas, but we put them forth to further thought and discussion.

Congress could authorize a one-time tax deduction to stations for HD equipment purchases. This could be in the form of accelerated depreciation (above that approved as part of the 2008 economic stimulus package), or as an outright deduction from corporate income.

It could authorize a coupon program, similar to that offered to consumers who need to adapt their analog TV sets to receive digital signals. Though circumstances differ (and RW is not calling for a mandated radio conversion), there are enough similarities for a comparable radio program to be given thought. Coupons could be redeemed for a discount toward the purchase of an HD-compatible radio of any type or brand.

It seems appropriate to think about such help given the bailout that Justice regulators okayed for satellite radio. If XM/Sirius deserves such relief from regulatory rules, why not all of radio? Is there a case for a quid pro quo here? If it allows the satellite merger (which the FCC has not done as we write), should the government now be lobbied to provide aid to terrestrial radio that offsets the perceived subsidy conferred on the new monopoly?

But encouraging adoption of technical innovation is not just up to regulators.

If you hate the idea of a government subsidy, how about this: The industry could adopt a plan like the NFL's. A portion of everyone's revenues goes into a digital conversion fund that is shared with stations that need grants to convert to digital.

In fact many station owners already have invested a great deal; and tabletop receiver manufacturers have stepped up. But a potluck approach means everyone brings something to the buffet.

Ibiquity could offer a further moratorium on licensing fees. This fee adds significantly to the cost of an HD encoder, and places those devices outside the budget of many small- and medium-market stations. This is especially true of many AMs, which have yet to identify a business rationale for investing.

Equipment vendors could join with Ibiquity to offer zero-cost financing for HD-related equipment purchases or leases, with a delayed "first payment" option. Allowing broadcasters to make interest-free purchases and including a delayed payment option would remove a financial roadblock.

HD Radio has the potential to help traditional radio blunt the impact of satellite, even a merged entity. As well, the technology essentially gives broadcasters newly accessible bandwidth with which to create incremental revenue, and conceivably, even challenge iPods and cellphones for young consumers' ears and attention.

This is food for further digestion. What do you think? How can all industry players share the burden of rapid adoption of HD Radio? Should they?

— Radio World

◆READER'S FORUM◆

Being There

I have been reading some of the articles concerning the proposed localism rules (March 12) and some of the comments make me want to regurgitate, to say the least.

The article headed "Main Studio, 24/7 Staffing Raise Concerns" had some comments that obviously smack of big money and could be labeled as such even if the person who made them was not identified as an employee of a major media owner.

I started in the radio business in a town of 9,000 in 1960 when there was a considerable amount of regulation for radio. The radio properties prior to deregulation prospered and served the small community in a far better way than is being done now. The program director was chairman of the park board, the news director was on the city council and I was a member of the Jaycees, all in the town of license.

Today I live in a town of 3,200 on the edge of an Indian reservation in southeastern Montana, and if a representative of the station of license to our town showed up more than two times a year I would be surprised. When he does show up, he is probably going through to go fishing or to sell advertising, not provide a service to the community.

There is not one person in 25 in our town that knows the station is licensed to our community. This is not unusual. This is common in rural America with communities where a transmitter can be placed to cover the community of license, and also get a signal in a city 30 times its size.

The thought that main studios ought to be allowed in the "city-grade signal contour" does not make 10 cents worth of sense. If that is the case, why is there a city of license? As the FCC and all of us know, that tactic is used to get into a community where a license is not available or is more expensive or difficult to acquire. It circumvents the spirit of the rules allocating frequencies and restricting signals in areas.

I owned a successful commercial FM station in our town until 1976. I sold it, and after a couple more owners, the transmitter site was moved specifically to put a city-grade signal into a town 30 times larger than ours.

The new owners told me they were not interested in our town. It was too small. Too many are working the system to their own advantage without any consideration for the community they are supposed to be serving.

Some of the comments in the article referred to owners spending millions on facilities to house six or eight radio stations. You bet, and those who did it have turned millions in return, but that does not remove their obligation to provide service to and locate their main studios in their community of license.

Low-power FM rules were enacted to allow LPFM radio stations to have up to 100 watts to improve service to local communities, but the commercial radio lobby was successful in leaving the LPFMs with a difficult way of supporting themselves: non-commercial.

There are two things that stink here. Not only do the commercial properties that were pushing to make the LPFMs non-commercial want to make it as difficult as possible for them to serve a local need, but they are not filling the local need either.

If those opposed to the localism rules are not interested in fulfilling their obligation to serve their community of license, give the LPFM stations a snowball's chance in hell to do the commercial's job by giving them a means of support.

Allow them to sell a spot or two. If those stations with the ability to use more power and cover far more area than a 100 watt LPFM can't compete with the same, then maybe they should find a new means of support. I find it interesting the FCC has to protect the economics of radio and television properties when the computer business I have gets absolutely no protection from Best Buy.

Al Sargent
President
Greater Hardin Association
KRWS(LP)
Billings, Mont.

Correction

The Web site for AKG Acoustics was erroneously printed as *www.akgusa.com* on page 48 of the April 9 issue. Its Web site is *www.akg-acoustics.com*

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World Radio History

MANAGER'S NAB SHOW PREVIEW

||||||

NEWSWATCH

CBS Radio, AOL Team Up Online

A new player developed by CBS Radio and incorporating AOL features will be launched this spring, signaling the end of a four-year deal between AOL and XM.

CBS Radio and AOL characterized their deal as a "ground-breaking partnership" whereby CBS will contribute programming to AOL Radio's Web site.

The companies will combine efforts to create product enhancements including a new player as well as complete support for the Mac, they said.

Once the AOL Radio's stations are integrated into its operations, CBS Radio will drive advertising sales for AOL's 200 or so stations in addition to its own online streams of approximately150 stations and custom channels.

Meanwhile, XM's own Web site will now be the online home of its music channels. The channels that XM now contributes to AOL Radio will no longer be available there beginning May 1.

XM Radio Online will be available through May 30 for $2.99 per month for the first six months and will offer some 80 channels of commercial music and other programming.

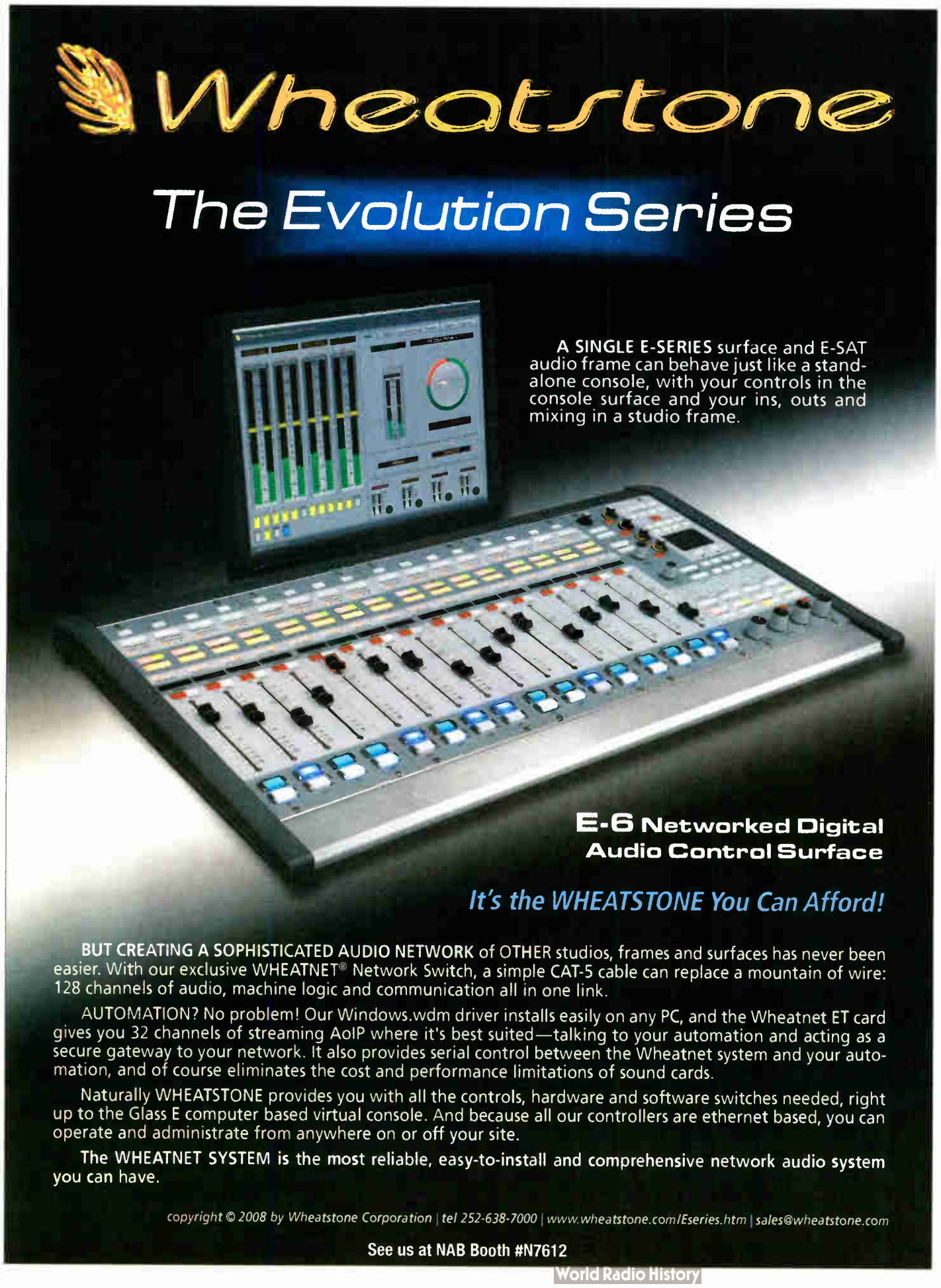
XM EVP/Chief Marketing Officer Vernon Irvin said the AOL/XM relationship was a good way to introduce subscribers to XM's service for free.

CCR Outlines Sat Rad Deal Conditions

WASHINGTON Clear Channel opposes the proposed merger of Sirius and XM; in its most recent discussions with advisors for Chairman Martin and Commissioner Deborah Tate, the broadcaster noted that if approved, the deal would aggregate 25 MHz of spectrum to one licensee, "more than that allocated to the entire AM and FM terrestrial radio bands combined."

In filings to the FCC, the broadcaster also argued for six conditions if the deal is approved:

There must be "intramodel" competition within the satellite radio service which could be accomplished through a third party that leases satellite capacity from the merged entity; a public interest set-aside of no less than 5 percent of satellite capacity should be required; the merged entity should be subject to the commission's broadcast indecency rules; a combined XM-Sirius should be prohibited from transmitting local programming and from receiving local ad revenues; and HD Radio receive capability should be built into all future satellite radio tuners.



Bush Opposes Reviving Fairness Doctrine

NASHVILLE, Tenn. President Bush spoke out against efforts to reinstate the Fairness Doctrine during an address to religious broadcasters.

"This means that many programs wanting to stay on the air would have to meet Washington's definition of balance," said the president at the National Religious Broadcasters convention in March. "We know who these advocates of so-called balance really have in their sights: shows hosted by people like Rush Limbaugh or James Dobson, or many of you here today."

Rep. Matt Pence, R.-Ind., is leading the opposition against efforts to revive the Fairness Doctrine in the U.S. House.

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World Radio History

Dahl Shutters Company, Sells Its Parts

Harbach Buys Dahl Ham, Broadcast Parts Business; Plans for a June Re-launch

by James G. Withers

EL PASO, Texas The amateur radio and professional broadcast pieces of the Peter W. Dahl Company will soon have new life with another amateur radio component supplier, Harbach Electronics.

Dahl said he is optimistic about the experience his customers will have with Harbach.

It's been a long road for Dahl, which occupied an exclusive niche supplying custom wound transformers and power chokes for broadcast transmitters for more than 35 years. Now it has closed shop.

As reported in the Dec. 12, 2007 issue, Peter Dahl is suffering from advanced Parkinson's disease; that forced his decision to shutter the business.

"We still have the Web page up, and some unsold inventory, but other than that," he said in early March, "we have shut it down." When he failed to get offers for the company as a whole, he was obliged to sell it off in two pieces, the building and land going to one buyer, the broadcast and ham parts and intellectual property to another.

The company's 17,000-square-foot building and several acres of land were sold to an El Paso business just after the rights to the company name, and that is the real value," Weinberg said.

He will focus on the professional broadcast and amateur radio markets, and will market Dahl products under the Peter W. Dahl name. "Peter did some military and government work, but we are not going to pursue that work. I've got a lot of experience providing amateur radio parts and Mad Cap already builds large broadcast power supplies, so I'm going to stick with those two things."

Dahl, meanwhile, said even considering the sale of the real estate and the IP, he will absorb a serious shortfall.

"We are looking at a loss this year of around $200,000, mostly due to missed orders and unsold inventory, and we still have to pay a number of vendors." Underscoring the dissolution of the company's Texas operations under Dahl, its eight employees have been let go; except for the first of the year; Dahl was scheduled to vacate the property and turn it over to the purchasers in March.

Harbach Electronics

All of the intellectual property, including blueprints, designs and CAD workstations, were sold separately to Jeffery Weinberg, who owns Harbach Electronics. The Polk, Ohio-based Harbach specializes in ham radio upgrade kits and parts. Neither Dahl nor Weinberg would disclose the price.

Weinberg noted on his Web site in March that a computer crash caused a loss of data, forcing him to process his orders manually. He expected to have the issues resolved by the end of March, in time for the June re-launch of the Dahl operation to begin servicing Dahl's customer base.

Weinberg has been a ham for more than 10 years. He purchased Harbach Electronics when the previous owner died.

Of his plans for the Dahl addition to his business, Weinberg said he plans to add the Dahl product line to his offerings by June, once he has formalized a manufacturing deal with Mad Cap LLC in Canton, Mass., "for the actual winding and construction of the transformers built to Peter's original specifications."

"I lost the real estate to another buyer," he added, "but got all of the IP, even the efforts to sell remaining parts stock via the Web site (*www.pwdahl.com*), the company is no longer doing business, he said.

Filament transformers

Dahl has been a licensed ham radio operator, K0BIT, since 1955, currently holding an Extra Class license; he's been designing specialty transformers and reactors for more than 40 years.

The Peter W. Dahl Co. originated as a sole proprietorship in Minneapolis in 1964 before Dahl graduated from the University of Minnesota with a Bachelor of Electrical Engineering in 1966.

"I started this business almost by accident," Dahl said. "Back when I got my ham license, I had some 4-1000 tubes and couldn't find the right filament transformer to go with them. Rather than throw them out, I decided to wind a transformer myself.

"Word got around and pretty soon, I was winding transformers for other hams. From that, I started making transformers for broadcast transmitters."

In 1966, he moved the company to El Paso and ran the business out of his garage before moving it to another location and reorganizing it as a corporation in 1977.

Dahl and his wife bought the land and the building where the company has been located in 1985.

When told that this writer was an occasional customer and had been impressed with the speed with which his company could rewind and turn around a burned-out transformer to get a broadcaster back on the air, Dahl lamented that in the end, delivery had become a problem.

"It (the Parkinson's) got so bad, that we were running very late on some orders."

He continued, "It is a tough thing to be the heart and soul of the company, since when you stop, the entire company stops." Given the delivery problems caused by his health issues, Dahl said, he finally decided to try to sell, and he is optimistic that selling the designs to Weinberg will work to his customers' advantage.

"Jeffery is a ham — W8CQ — just like me," he said, "and Harbach already supplies components for amateur equipment, so I think this will be a good fit."

> I think this will be a good fit.
>
> — Peter Dahl

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Bill Ashley Turns a Career Page

Bill Ashley is one of those fellows who signs his e-mails "73" instead of "Best regards."

You might see a guy using shorthand like that and think, "Oh, OK, I know the sort Bill Ashley is: technical, meticulous to the point of nitpicky, a storyteller, a radio buff. He's a character. He makes awful puns and swoops in on the donuts. He's probably always going on to his family about op-amps or how much radio has changed and about why WTOP moved its tower site somewhere in 1967."

Family members and Bradley co-workers salute Ashley on his last day in the office.

There you go, stereotyping those radio engineers and ham types.

Still you'd be right.

Collins and Beasley

Ashley retired from his sales position at Bradley Broadcast & Pro Audio recently. I share the news because he has touched many people through his careers as engineer, equipment salesman and manufacturer, including me.

Bill started in radio at WPAQ(AM) in Mount Airy, N.C., a town that would become famous as Mayberry RFD. He worked for and learned from the late Ralph Epperson, whom Bill describes as a gifted engineer and a legend for his knowledge of mountain string music indigenous to the Southern Appalachian highlands.

"Ralph was the first of his family to go into broadcasting, but not the last. Youngest brother Stuart is the founder of Salem Communications; and a cousin, George Beasley, started Beasley Broadcast Group," Bill said.

"After high school, I moved to Atlanta and worked for a while doing what was then called 'top 40' radio at WAKE. My interests, though, were always more on the technical side." So he went to work in 1962 for WDBM in Statesville, N.C., half-owned by a consulting engineer from Nashville and half by a sales rep for Collins Radio Co.

"The station was a dream: it was a living catalog of Collins products," he recalled.

"After a couple of years honing my engineering skills, I was lured away by George Beasley. The next four years were spent planning, building and caring for George's expanding station group.

"Then in 1968 I decided that I wanted to come to the Washington area and try to work my way into the consulting side of broadcasting, since I really enjoyed doing AM frequency searches and allocation studies."

He took a job at pioneer all-news station WAVA and wound up liking it so much that he stayed even into its rock years of the early 1980s. Then it was on to Mutual Radio Network, where he transferred from the network side to the satellite side and wound up manager of field engineering after the network was sold to Westwood One.

"When the satellite division starting to come apart in 1987, I called my old friend Art Reed" — who had worked for Ashley at WAVA and now was running equipment dealer Bradley Broadcast — "and asked him if he'd let me sell for a few months until I could find a more stable engineering job."

Twenty years and seven months later, Ashley retired from that position.

Gentleman

Bradley Broadcast — or as Bill quipped once a day, "Broadly Bradcast" — saluted him with a party. Owner David Matthews, General Manager Art Reed, Marketing Manager Joellen Reed, past and present co-workers, family and clients took part.

Matthews presented Bill with a plaque naming him a "certified radio god" in the art and science of "all things broadcast" (with a minor in highly annoying puns).

Bill told me he had many feelings after the years at Bradley and more than 50 in the business.

Bill Ashley receives a going-away present: a cartridge in a bare tree, the punch line to one of his favorite stories. Bob Eburg makes the presentation.

"Broadcasting has been such an integral part of my life since I was a teenager, I simply cannot even imagine doing anything else."

Many people have befriended him, he said, including industry leaders on both the station and manufacturing sides.

"One memory I must pass on is the time you and I were sharing a hotel room at the Radio Show in Los Angeles and you couldn't sleep because of my snoring."

I had blocked that one out, apparently.

My memory of Bill in the office was him on the phone, pawning onto clients the same five or six puns and worn jokes with which he berated us daily in the hall. You usually could hear him spinning some long tale or shaggy dog story. His customers loved it. When something struck him as funny, you could hear him giggling — there's no other word for it — several offices away.

He also knew his stuff, was willing to impart it and generated a lot of loyalty from engineers who sensed they had a peer on the other end of the line.

Not every customer was pleasant. One from New York called wanting to return a Marantz cassette recorder.

"She claimed that I'd told her she could sync it to her 16 mm film camera. First of all, I had never told her that. Second, she didn't even buy the machine from us."

That is life as an equipment salesman.

"When I told her I couldn't take back a machine we hadn't sold her, she got very unpleasant, calling me all sorts of unprintable names. Must have been a full moon that day."

Bill would tell me about how the Washington area had changed since he moved here. He knew his history farther back too. If I wanted to know what had occupied the site of the Pentagon before it was built, he'd be the one to tell me.

I remember once during a heated sales meeting he raised his voice at me. I was stunned. You simply didn't hear that from him. He hollered, "Just let me finish!" With another person I might have taken offense. But he was right; in my eagerness I had interrupted him, and hearing that helped me learn to listen better, something I thought I already knew.

NPR's Director of Engineering Technology Bud Aiello met Ashley in the 1970s and attended the retirement party.

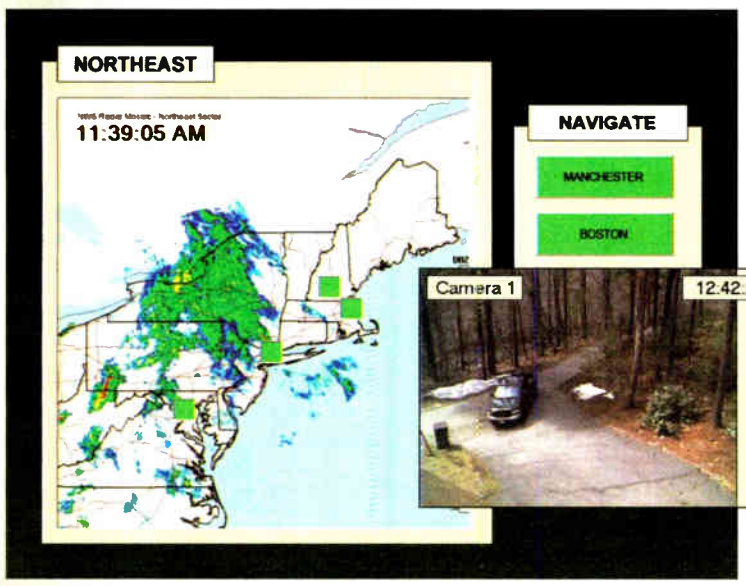
"Throughout all of these years I must say first Bill was always a gentleman,"

See ASHLEY, page 8 ▶

From the Editor

Paul J. McLane

The next best thing to being there.



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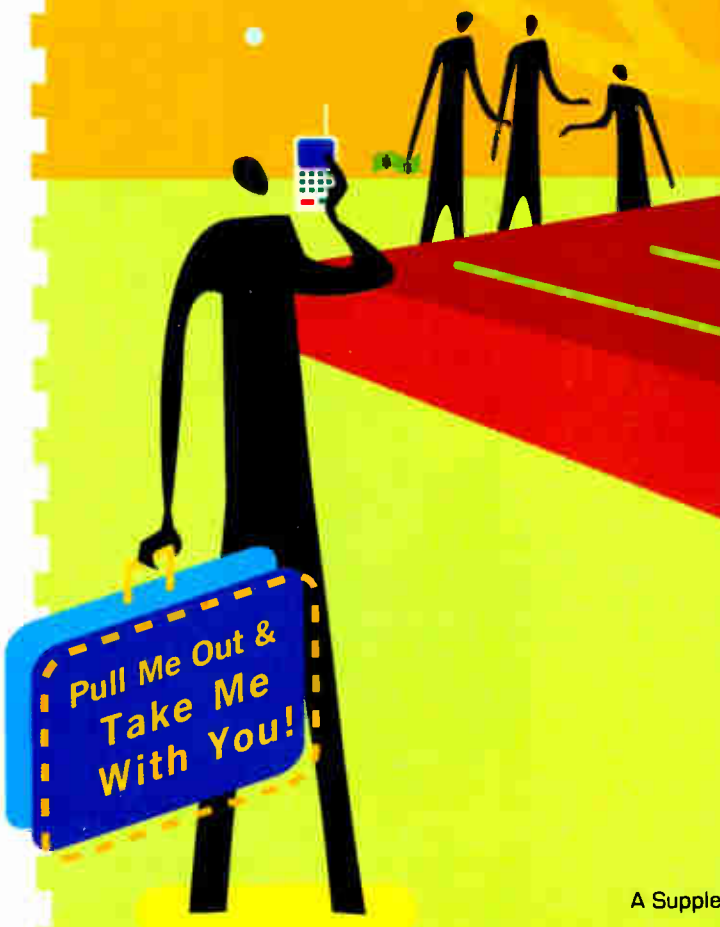

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Radio is not just radio anymore. But even as our industry is enveloped by new media, and portable and online tools undreamt of 20 years ago, the challenge facing today's technology manager is all about the content. You need to deliver winning content — no matter the channel or platform.

Our Product Preview Guide is intended to help you create, manage and deliver that content so you can get the most out of your commerce. Take this with you to Las Vegas or use it to start your post-show research.

This advertising supplement to Radio World includes:

- Product Previews from industry-leading vendors who provide an advance peek at their new products.
- Contacts and booth information for each supplier.
- A color-coded map of the Radio/Audio Hall of the Las Vegas Convention Center. Colors on each profile page correspond to sections of that map.

Have a great NAB Show.

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World Radio History

New-Look APT Unveils New HD Radio™ & IP Codec Solutions

With a brand-new image, several new product announcements and a growing customer base throughout the U.S., the APT booth should be on everyone's visit list for NAB 2008. New gear on show will include:

New Audio Codec for HD Radio™ STLs

At NAB 2008, APT will launch its new audio codec designed specifically for HD Radio™ applications: the WorldCast Horizon HD.

WorldCast Horizon HD is a duplex stereo codec enabling the delivery of FM and HD content from studio to transmitter site. With both a T1 and Ethernet interface, broadcasters can utilize existing T1 links for the FM transport and send their HD content as a UDP stream embedded in the T1 link, eliminating the need for additional bandwidth and cost. At the remote/transmitter link, the HD content is presented back on an IP port.

As a fully duplex device, WorldCast Horizon HD allows off-air monitoring or an independent channel to backhaul RPU feeds and satellite down-linked audio. An RS-232 port is available for PAD and contact closures for remote control.

Compatibility Over IP With SIP

APT is delighted to announce that all its IP codecs are fully EBU N/ACIP-compliant with support for both SIP and SDP protocols.

With hundreds of APT's new IP codec range already deployed worldwide, this latest development strengthens the company's position as a leader in the field of IP audio networking and ensures compatibility with several other major brands.

Linear Audio for IP & T1 STLs

This year's NAB sees the official launch of the linear audio module for the WorldNet Oslo — the unit which is increasingly becoming the STL system of choice for both synchronous and IP circuits amongst major U.S. broadcast networks.

With this new module, the WorldNet Oslo can deliver uncompressed audio quality over both IP and T1 links. The unit also offers an MPEG L2 option and the prograde, low-delay Enhanced apt-X coding which is utilized in hundreds of STLs and studio links throughout the country.

When operating over IP networks, flexible unicast, multicast and multiple unicast configurations can also be achieved using the WorldNet Oslo and APT's range of IP stereo codecs (which also support both linear and apt-X encoding). In T1 operation, back-up transport modules can provide cross-connect functionality (also between IP and T1) and advanced network features such as drop and insert, drop and copy, and backup schemes, in addition to simple unprotected point-to-point links.

apt
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Color-keyed map: Pages 16 & 17

World Radio History

Innovative, Powerful Solutions for Broadcasters

AT2020 USB Cardioid Condenser Microphone

Audio-Technica is introducing its new AT2020 USB Cardioid Condenser Microphone at the 2008 NAB Show. This Windows- and Mac-compatible side-address condenser plugs right into a computer's USB port, offers studio-quality articulation and intelligibility, and functions seamlessly with all popular recording software.

With low self-noise, the AT2020 USB is perfectly suited for sophisticated digital recording equipment. Equipped with a USB digital output, the microphone delivers crystal-clear, natural sound ideal for home studio recording, field recording, podcasting and voiceover use.

The AT2020 USB is based on the design of Audio-Technica's critically acclaimed AT2020 cardioid condenser microphone. Like the AT2020, it features a low-mass diaphragm, custom-engineered for extended frequency response and superior transient response.

- Side-address studio condenser with USB digital output
- Crystal-clear, natural sound for podcasting, home studio recording, field recording and voiceover use
- Cardioid polar pattern reduces pickup of sounds from the sides and rear, improving isolation of desired sound source
- Low self-noise — perfectly suited for sophisticated digital recording equipment
- Includes tripod desk stand, pivoting stand mount, USB cable and storage pouch

ATH-M50 Professional Studio Monitor Headphones

Stop by the A-T booth at the 2008 NAB Show and try out the critically acclaimed ATH-M50 professional studio monitor headphones. Listen in for the whole truth: natural response through the entire frequency range — no little white lies smudging out or hyping sounds along the way.

Designed for professional monitoring and mixing, the ATH-M50 headphones feature circumaural ear pieces (180 degree swivel) and luxuriously padded ear cushions that create an outstanding seal for maximum isolation and ultimate comfort.

The adjustable headband is generously padded for the ultimate comfort during long mixing sessions. A coiled cable at the left earpiece terminates to a gold-plated mini plug with included 1/4 inch adapter.

Audio-Technica's sophisticated driver technology and superior components deliver exceptional power handling and very high SPL capabilities while maintaining clarity of sound throughout their extended range, with deep, accurate bass and outstanding vocal projection. The headphones feature proprietary large-aperture drivers with neodymium magnet systems for ultra-efficient signal transfer.

- Exceptionally natural response for professional monitoring and mixing
- Collapsible design for easy portability and efficient storage
- Ear pieces swivel for one-ear monitoring and easy storage
- Padded ear cushions create an outstanding seal for maximum isolation
- Adjustable padded headband for ultimate comfort

- Proprietary large-aperture drivers with neodymium magnet systems for ultra-efficient signal transfer
- Single-sided coiled cable terminates to gold-plated mini plug with 1/4 inch adapter
- Protective pouch included

audio-technica
always listening

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E-mail: mediaproduction@atus.com
Web: www.audio-technica.com

NAB Show Booth N4529

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World Radio History

The Fastest-Growing Brand in Broadcasting

With nearly 1,000 studios now on the air using Axia IP-Audio networking technology, Axia Audio is the fastest-growing brand in broadcasting.

Axia lets broadcasters build audio networks and routing switchers using standard Ethernet to connect a few rooms or an entire facility, reducing much of the cost of wiring labor and infrastructure. Axia networks can carry hundreds of digital stereo (or nearly a hundred surround) audio channels over a standard CAT-6 cable — over 10,000 streams per system!

Axia's modular Element™ broadcast console offers a wide range of module choices and frame sizes. Element is built for 24/7 reliability, using beefy aluminum extrusions, aircraft-quality switches and custom-molded ergonomic controls. It's scalable from two to 40 faders in single- or split-frame configurations so you can order the ideal surface for every studio.

Element's abundant outputs and flexible architecture can be switched between stereo and surround mixing, and its info-rich user display, built-in router control, automatic mix-minus and integrated phone and codec support simplify the most complex shows. Element is the only radio console available in a choice of colors (Bronze on Charcoal, Silver on Charcoal or Gray on Silver) and features dedicated talkback for every fader, instant one-button recall of individual talent preferences, three-band digital parametric EQ for every source, headphone processing and built-in voice dynamics by Omnia.

The Axia system includes a family of "audio nodes" that interface quickly and easily with digital, analog and microphone audio. Just place a Node next to your audio equipment, connect them and they're on the network. CAT-6 cable connects any studio device to any other, anywhere in your broadcast plant — across the hall, across the building, via fiber or Ethernet radio, even across campus. And Axia IP-Audio networks use Livewire™ for audio and logic connection — a standard adopted by manufacturers such as AudioScience, Radio Systems, Google, Telos, IDC, RCS, Omnia, 25-Seven Systems, ENCO and more.

Clients love their Axia networks. "The Axia IP-Audio system emerged as [a] winner," says Chris Karb, chief engineer for Clear Channel's six-station Asheville, N.C., cluster. "We hoped to provide CC Asheville with a versatile and reliable studio system ... it turned out that we achieved much more than that, and moved CC Asheville to the head of the line in innovative studio system design."

Bruce Potterton, CE of KSGN(FM) in Redlands, Calif., says "The talent absolutely loves working this way and the consoles have really been a hit. The ergonomic layout is fantastic. It's extremely flexible, and everyone found the system very intuitive."

And Iain Grant, manager of broadcast operations at XM Canada, says, "I was sold on the Axia platform from the moment I saw it. Throughout my career I've worn many hats, including host, producer, technical producer and engineer, and I knew I was on to a solution that would benefit everyone."

AXIA
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World Radio History

A Secure, Robust Digital Emergency Alerting System

Global Security Systems (GSS) presents ALERT FM™, an FM-based alert and messaging system that allows emergency managers to create and send emergency information, including NOAA (National Oceanic & Atmospheric Administration) weather warnings, Amber Alerts, evacuation notices, homeland security notices, plant or school closings, employee notifications, traffic alerts and other emergency information before, during and after a crisis to first responders, businesses, schools and citizens.

The single-to-multi-point system delivers messages using RDS technology via GSSNet, our digital network of existing FM radio transmitters around the United States. The reliability and redundancy of ALERT FM lies in its use of overlapping FM signals provided by GSSNet. Targeted alerts and messages are delivered by satellite to FM transmission towers and can be received on ALERT FM receivers and other devices, including PDAs, cell phones and other specialized devices equipped with an FM chip.

ALERT FM is a powerful switchless solution because messages will not clog up existing switched wireless networks, and the broadcast signal is more robust than cellular signals. Alerts or messages can be targeted to one receiver or to all receivers in a specific county, neighborhood or building.

ALERT FM™
Powered by GSSNet

Broadcasters across the county are cooperating to provide the data subcarrier for the delivery of potentially life-saving messages. Those participating in the ALERT FM program will get the RBDS encoder at no cost to the station along with that added ability to transmit an array of non-emergency information, including song titles and artists, call letters and slogans, while reinforcing their public service commitment. These added benefits allow radio stations to monetize listenership with the MySimBook application.

MySimBook, another GSS product, is a mobile social network that enables broadcasters to interact with listeners by synchronizing their radio broadcasts and advertisements with mobile devices. MySimBook allows businesses to deliver advertisements instantly to opt in members via SMS and e-mail.

ALERT FM and MySimBook give FM broadcasters a wider spectrum of possibilities by advancing FM technology beyond the radio. They can help potentially safeguard their communities and directly advertise to those community members.

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World Radio History

Comrex Has the Answer: DH42

As technology changes, broadcasters must adapt. This is especially true as VoIP technology has improved in both the quality of digital delivery and in its cost-effectiveness. In recent years, we have seen low cost Internet telephone services give the traditional telcos a serious run for their money. But finding an elegant way to interface VoIP telephone audio to a broadcast audio console or recording device has been a challenge.

The new DH42 from Comrex represents the natural evolution of the broadcast telephone interface. It is essentially a four-line conferencing telephone hybrid, designed to allow callers to be put on-air with separate send and receive paths, filtering, AGC, and control functions.

What makes the DH42 special is that it blends the technology of the legacy POTS (Plain Old Telephone System) phone interface with Voice-over-IP (VoIP) technology. The unit can handle up to two POTS lines simultaneously with two SIP-based VoIP channels. The VoIP lines may be served from a low-cost Internet-based provider or from an in-house SIP-based VoIP PBX. This makes the DH42 extremely versatile and suitable in many telephone interface environments.

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DH42

The DH42 can be configured to operate in many different ways, including:

- Choice of which callers are routed to which of three separate output connectors
- Choice of which of two available input feeds are fed to which callers
- Choice of which calls are conferenced together
- Choice of which incoming lines ring through to one of two external telephone jacks (or to your PBX inputs)
- Choice of which outgoing lines are presented when each of two external telephone connections (or PBX trunks) are "picked up"

In addition, the DH42 provides the ability to put any phone line "On Hold" and deliver program or "On Hold" audio to callers on hold. It features familiar, DH-style front panel and remote control capability.

Audio interface is via balanced, professional level XLR connectors. Audio level controls and setup are available behind a front panel access cover. VoIP and SIP-based setup, as well as audio routing choices, are made via the built-in web page accessible from any computer web browser.

AAC-ELD makes Comrex ACCESS Debut

Comrex has recently signed an agreement with Fraunhofer IIS to license its new MPEG-4 AAC-ELD (Enhanced Low Delay) coding algorithm for use with the Comrex ACCESS line of audio codecs.

AAC-ELD combines the best aspects of low-delay audio coding with Spectral Band Replication to reduce bit rate. This combination creates a coding algorithm that is uniquely suited to real-time audio transmission over IP circuits.

Combined with BRIC Technology for ACCESS, using AAC-ELD allows full-fidelity, high-quality audio transmission at a data rate that easily fits into satellite and 3G wireless upload channels. One-way ACCESS transmission delay using AAC-ELD is an easily managed 50 milliseconds.

Comrex is pleased to be able to offer this outstanding algorithm as part of the AAC Option package for ACCESS codecs. AAC-ELD is free to current owners of the ACCESS AAC Option.

The new DH42 and AAC-ELD for ACCESS will both be on display at the Comrex booth, N2125, in the North Radio/Audio Hall of the Las Vegas Convention center.

More details at www.comrex.com

World Radio History

Above: Rays broadcasters ***Andy Freed*** *(left) and* ***Dave Wills*** *(right) interview Rays' star third base prospect* ***Evan Langoria*** *on the "The Hot Stove Radio Show."*

Top: ***Larry McCabe****, Tampa Bay Rays Senior Director of Broadcasting and* ***Rich Herrera****, broadcaster and Director of Radio Operations are shown on the field during spring training.*

Impossible Remote?
Nah...You've Got ACCESS!

Tampa Bay Rays' Real-World Super Hero Saves the Day!

Fans of the Tampa Bay Rays baseball team are intimately familiar with Dave Wills and Andy Freed, play-by-play announcers and hosts of "The Hot Stove Radio Show." Offering the inside track on all things Rays, the show kicked off its 2008 season with the "Countdown to Opening Day" series. While at a remote from a well-known sports bar, ACCESS showed its true worth. Two minutes before the broadcast, the ISDN line that was supposed to be used for the broadcast failed to connect. Luckily, they had the ACCESS running on Wi-Fi provided by the restaurant. The broadcast got on the air and was flawless for the entire one hour show.

ACCESS delivers mono or stereo over DSL, Cable, Wi-Fi, 3G cellular, satellite, POTS (yep, ACCESS is a full featured POTS codec and works seamlessly with Matrix, Vector and Bluebox)—plus some services you may not have even heard of. Given the challenges of the public Internet, it's no small boast to say that ACCESS will perform in real time over most available IP connections.

Contact Comrex today and find out how ACCESS can help you become a Real-World Super Hero — wherever you are!

Put Comrex On The Line.

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World Radio History

Meet the SixMix and the MiniPod

SixMix USB Broadcast Console

SixMix is the industry's first compact broadcast console that includes a built-in USB computer interface.

SixMix is a 10-input, six-channel broadcast console that's about the size of a laptop computer. SixMix is the "missing link" that turns a PC or laptop computer into a complete broadcast studio.

The most important (and unique) feature of ***SixMix*** is its integral **USB digital audio interface**. Just connect a USB cable to any PC or laptop, and it's ready to record, edit and play digital audio with superb audio quality. SixMix uses the same A/D and D/A converter technology that is used in the award-winning Henry Engineering USB Matchbox, providing audio quality that is superior that that of a typical PC "sound card."

SixMix is a true broadcast console (not a PA mixer) that is designed for "real radio." It accepts up to 10 audio sources (two mics, seven stereo line plus the PC) and provides numerous *broadcast-specific* functions and features: Stereo Program mix bus, Cue bus with integral Cue speaker, Monitor system with programmable mic-on speaker muting, an "Air" input for the Monitor system, Mic Tally outputs for control of *on-the-air* warning lights, Cough switches for the mic channels, a Mix-Minus output and a guest announcer headphone system with full duplex Talkback.

These broadcast features make ***SixMix*** ideal for a live on-air studio, for use with radio automation, digital production, news editing, Webcasting or as a self-contained emergency studio. Its color-coded knobs, buttons and LEDs prevent embarrassing on-air errors, and its clean uncluttered layout make operating SixMix easy and intuitive.

SixMix offers the best of both worlds: the familiarity and reliability of an analog console with the convenience and sound quality of digital audio. LIST PRICE: $1,195.

MultiPhones MiniPod Compact Stereo Headphone Amplifier

The new MultiPhones MiniPod is a compact stereo headphone amplifier. Each MiniPod includes a volume control and headphone jacks. Its compact size allows it to be mounted on a tabletop or under a counter.

MiniPods can be used with a MultiPhones Master unit, OR as "stand-alone" headphone stations. In either case, multiple MiniPods can be linked together (using Cat-5 cabling) to form a multi-listener headphones system. LIST PRICE: $135.

HENRY ENGINEERING

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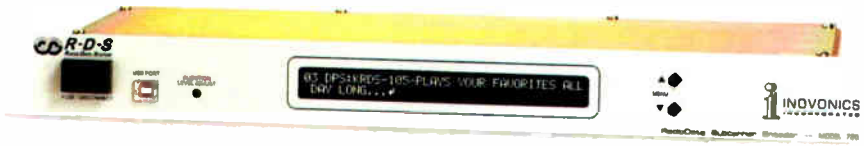
World Radio History

Inovonics Shows New Stuff!



Inovonics will bring three new items to NAB 2008. The first is the latest generation in the firm's line of RDS/RBDS RadioData encoders.

The new Model 720 features self-guided setup routines and diagnostics in both the hardware and the supplied Windows® software to make programming easy and installation virtually foolproof. A front-panel LCD display flips through the contents of all RDS flag and message registers, and shows incoming programming data "on the fly" plus scrolling messages exactly as they are seen by the listener. The 720 interfaces with all popular station automation systems and features a new "no headers" mode that enables the scrolling of song title and artist information from raw, unformatted satellite feeds.

Also new this year is the Model 525 AM Reference Receiver and Modulation Monitor. This frequency-agile wideband AM monitor maintains off-air AM modulation measurement accuracy even for "hybrid digital" IBOC transmissions.

The 525 gives simultaneous display of positive and negative modulation, and switches to also show RSSI (signal strength) and asynchronous noise as well. Operation is entirely menu-driven with front-panel tuning and five station presets.

A special feature of the 525 is a variable low-pass function to provide a user-selected audio cutoff for the monitored audio while maintaining full 10 kHz measurement bandwidth. The filter can be programmed between 10 kHz and 2 kHz to simulate the rolloff of typical consumer radios, or to allow the broadcaster to preview effects of transmission bandwidth restriction. The monitor gives front-panel and remote alarms for overmodulation, carrier and program audio loss, and is supplied with a weatherproof outdoor antenna.

Inovonics will also have a firmware update for their Model 261 Digital "Utility" Processor, the firm's DSP-based AGC, compressor and limiter that was introduced at NAB 2006. The new Rev. 2 firmware adds independent preemphasis protection limiting to the product, making the 261 a truly multifaceted and versatile audio processing product, ideal for LPFM as well as link protection and general leveling jobs around the station. Rev. 2 firmware is available free of charge to existing 261 owners and is implemented in minutes with a plug-in PROM chip.

The firm's full line of products will be shown and demonstrated by the company's team of "usual suspects," and the legendary candy bowl will never be empty. Come see us at Booth N5829.

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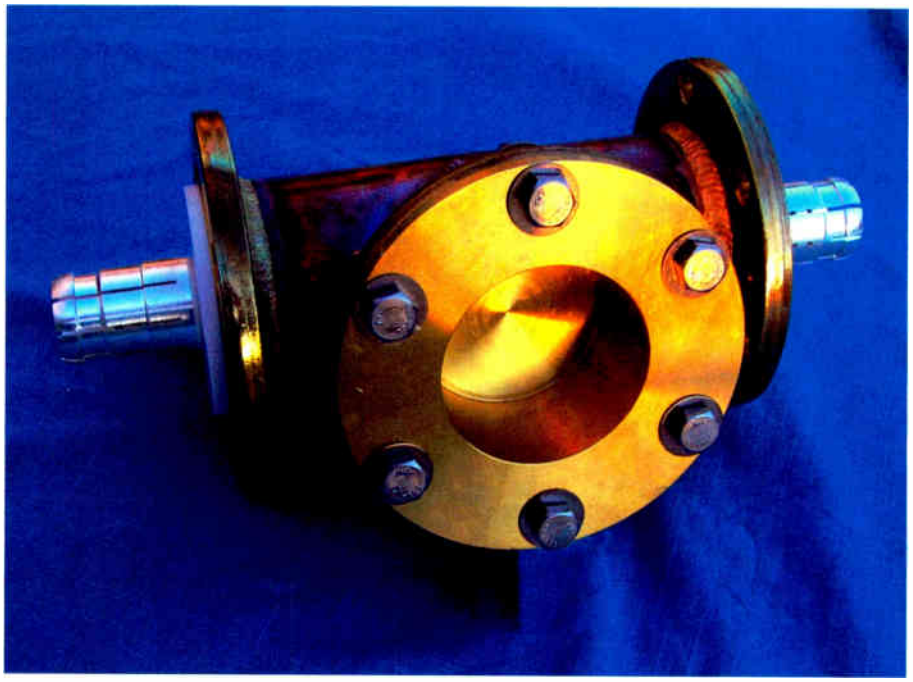
World Radio History

Making Life Easier for Engineers.



New JTS Test Section

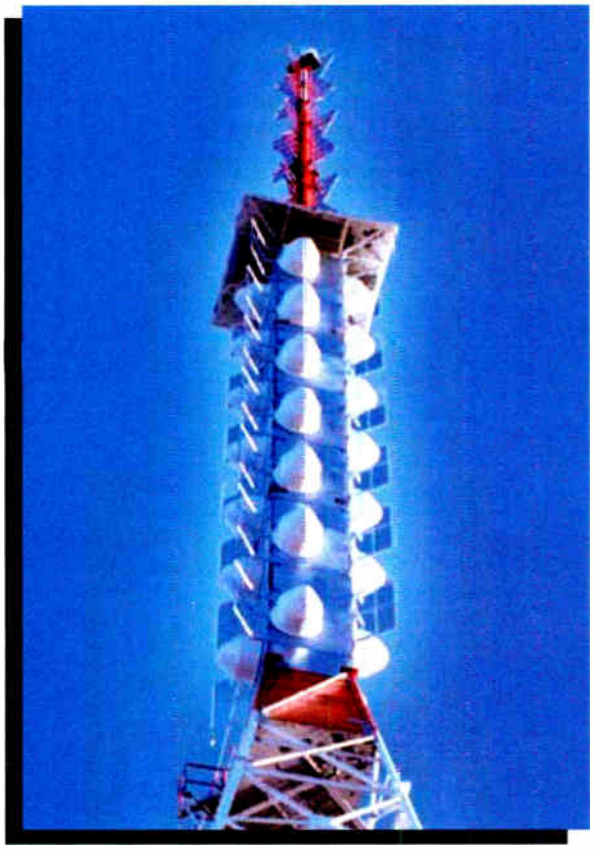
Making life easier for engineers is Jampro's mission, hence the new compact replacement for the bulky tuned elbow complex. The JTS Test Section allows access to either the antenna or the coax system without the need for a tuned elbow complex. It's available for Band I (Low-Band TV), Band II (FM), Band III (Hi-Band TV) and Band IV (UHF TV). It comes with fixed bullets for Input and Output, plus one "O" ring, hardware set, pass-through connection and test turn. Port closure maintains impedance for normal operation.

RCPU Unitized Power Splitter/Patch Panel

Jampro Power Splitter and Patch Panel assembly divide the output of a Band II (88–108 MHz) combiner or transmitter into two equal signals. The unit is composed of one power splitter, a quick release patch panel and interconnecting coaxial lines. All of these items are assembled and packaged in a compact unitized rack cabinet. The power splitter is fitted with coaxial input and outputs, and interlock switches are mounted on the patch panel. The system is designed to allow the broadcaster to split the signal to both upper and lower antenna halves during normal operation or select either upper or lower antenna for emergency or maintenance operation. Also available in Bands I, III, IV/V.

World Radio History

When You Want More Than Just An Antenna



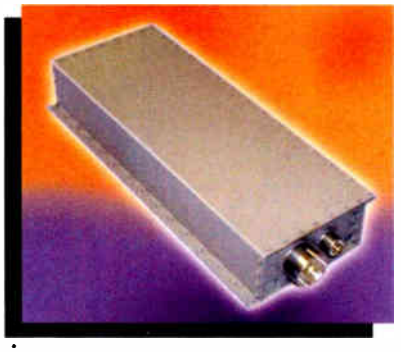
JAMPRO
ANTENNAS AND RF SYSTEMS, INC.

Made in USA since 1954

Full line of HD Radio Accessories: Circulators, Mask Filters, Reject Tuners, and Rigid Components.

MASTER FM DUAL INPUT HD ANTENNA

JSHD DUAL INPUT HD SIDEMOUNT ANTENNA



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World Radio History

Sleek Packs, Professional Performance

JK Audio introduces our new Beltpack series of man-on-the-street interview and IFB monitoring tools. These sleek packs provides a professional look and feel to field reporters and remote talent.

BluePack connects a microphone and headphones to your cell phone using Bluetooth Wireless Technology. This professional microphone preamp and powerful headphone amplifier makes sure the message gets through.

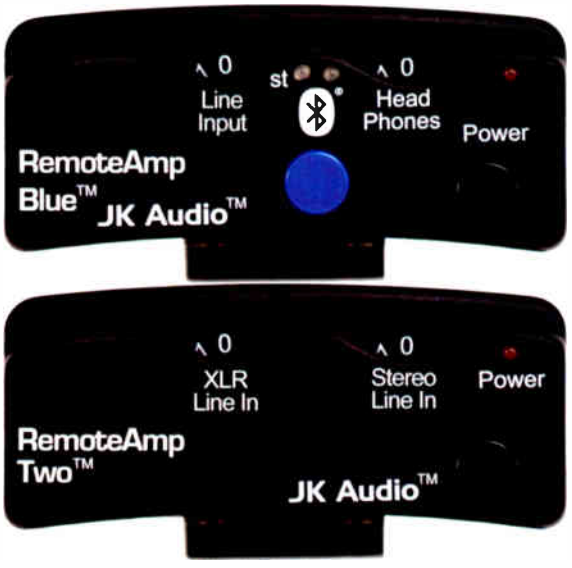
A 3.5 mm stereo line input jack allows recordings to be mixed into the broadcast. The 3.5 mm stereo line output jack provides your full-bandwidth microphone signal on the left channel and Bluetooth audio on the right channel. Like any phone call, live interviews are limited to 3.4 kHz voice bandwidth back to the station. This stereo output jack allows you to make a full-bandwidth recording using your favorite recorder.

The stereo headphone output gives you a mix of the XLR microphone input, 3.5 mm input and Bluetooth audio. This powerful 1/2 watt stereo headphone amplifier will cut through any crowd noise. BluePack also pairs to Bluetooth-equipped sound cards and music players in full-bandwidth stereo A2DP mode. You can expect >10 hours on one 9 V alkaline battery.

RemoteAmp Blue allows IFB monitoring through a cell phone equipped with Bluetooth Wireless Technology. This is a listen-only device designed for voice IFB or full-bandwidth stereo music listening.

The XLR and 3.5 mm line input jacks allow wired operation in parallel with the Bluetooth connection. The XLR input accepts either a balanced mono signal, or a party line intercom feed (listen-only). The 1/4 inch headphone jack provides 1/2 watt per channel into 8 ohms. The 3.5 mm stereo output jack can power either mono or stereo earpieces. RemoteAmp Blue also pairs to Bluetooth equipped sound cards and music players in full-bandwidth stereo A2DP mode. You can expect >10 hours on one 9 V alkaline battery.

RemoteAmp Two provides a wired, listen-only connection for mono IFB or full-bandwidth stereo music listening. Separate volume controls for the XLR and 3.5 mm line input jacks allow a simple mix of mono and stereo sources. The XLR input accepts either a balanced mono signal, or a party line intercom feed (listen-only). The 1/4 inch headphone jack provides 1/2 watt per channel into 8 ohms. The 3.5 mm stereo output jack can power either mono or stereo earpieces. You can expect >20 hours on one 9 V alkaline battery.



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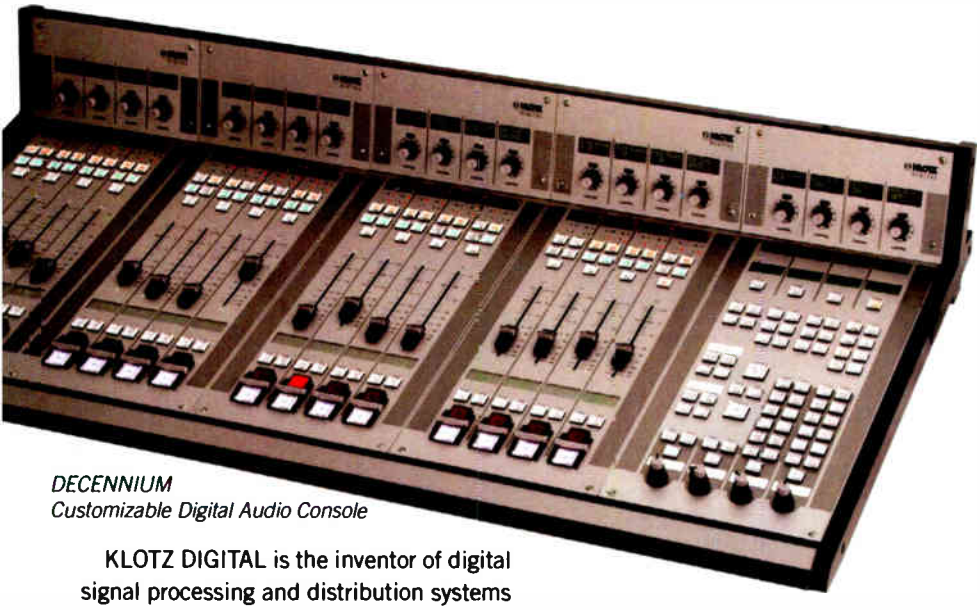
World Radio History

New Workflow Efficiencies From Klotz



DECENNIUM
Customizable Digital Audio Console

KLOTZ DIGITAL is the inventor of digital signal processing and distribution systems for the modern broadcast industry. Based on the unique digital VADIS platform, KLOTZ DIGITAL offers solutions ranging from stand-alone on-air mixing consoles for radio and TV stations to complete solution packages, including simple to highly complex audio- and control-networking systems.

Latest products from KLOTZ DIGITAL showcased at NAB are designed for the media industry to enable new workflow efficiencies while driving down installation and operating cost. Join KLOTZ DIGITAL at NAB to see and experience why so many broadcasters are choosing KLOTZ DIGITAL. On Booth N5925 in North Hall KLOTZ DIGITAL will be introducing:

VADIS Workflow Tools: Every broadcaster in the world has a unique way of operating, which, up until now, has been limited by the technology installed in their facility. At KLOTZ DIGITAL we believe workflow rules and technology adapts. That is why our engineers have developed a large range of software modules which can be used in almost any combination to achieve a completely custom solution. Tailoring each solution allows the simplification of previously complex tasks, improve operational flexibility and accommodate future change and growth all of which save the client time and money.

To manage the use of sharing resources through LAN infrastructure KLOTZ DIGITAL has invented the VADIS Workflow Tool 'Shared Control Management.' It is one of a wide range of software tools KLOTZ DIGITAL will introduce at the 2008 NAB Show.

XENON — the "all-in-one" Digital Audio Console — is the perfect mixing solution for small radio stations, small studios that are part of large radio facilities and for outside broadcasting. The all-in-one, fully digital broadcast console offers audio inputs and outputs in analog and digital format, routing capabilities and free assignment to faders, DSP functions for audio treatment and processing and a pool of free configurable GPIs for best integration capabilities. XENON is available as a six- or 12-fader console.

AEON Audio Networking Console: Combined with an integrated state-of-the-art router, AEON provides a cost-effective mixing solution. Based on KLOTZ DIGITAL's ultra-slim console modules (2.5 cm thick) it allows flexibility in console layouts and studio set up. AEON is available with eight—, 12-, 16- and 20-fader control surfaces. The "AEON Setup Tool" software is included and enables users the configuration of the system exactly according to one's personal requirements.

Radio broadcasters will be delighted by **DECENNIUM**, KLOTZ DIGITAL's Customizable Digital Audio Console. It is networkable and comes along with an avant-garde audio engine to be integrated in audio and control networks. As DECENNIUM is equipped with first-class DSP features, an external voice processor or other peripheral equipment is unnecessary. Fully parametric six-band equalizers and highly sophisticated Dynamics with limiter/compressor/expander can be inserted and stored in each channel. The console's special feature is the eye-catching "Multi-Purpose Control Element" (MPCE) which is integrated in each channel strip. With the MPCE the console is easier to operate and offers the implementation of additional customer- or project-specific dynamic functions.

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MUSICAM USA

Meeting the Needs of Broadcast for Today and Tomorrow

Corporate Computer Systems Inc., better known as CCS, d/b/a MUSICAM USA, shipped the world's first professional broadcast audio codecs in 1987. Since then, we have led the industry with innovative codec products that have connected tens of thousands of audio professionals worldwide.

Long the standard of those who test and measure audio, CCS/MUSICAM USA's first-generation codecs were the first to offer multiple algorithms, multiple data rates, Prima™ Logic Language, in-band SMPTE Time Code, remote relay contact closures, ISDN BONDING, MUSICAM®-enhanced MPEG Layer 2 Encoding, and a host of useful features designed to make your job easier. The second generation of CCS/MUSICAM USA products offered a modular design with E1 and T1 support.

Third Generation

Today, MUSICAM USA innovates again with the beginning of its third generation of codecs, led by the **Suprima**.

Suprima is a versatile, multi-network audio codec, which can utilize many different industry-standard types of communication networks to transport studio-quality audio. The **Suprima** can send and receive full-fidelity, real-time stereo audio not only via ISDN and dedicated data lines, but also via IP, which opens a new realm of connection capabilities. **Suprima** contains many of the industry-standard algorithms including the latest MPEG 2 Advanced Audio Coding (AAC), AAC-HE and uncompressed linear audio and near-zero delay.

For portable applications, there is the **RoadWarrior**, which is based on the **Suprima** with IP and ISDN interfaces and a five-channel mixer.

RoadWarrior provides two communication lines: Program and TalkBack line. It comes fitted with a built-in five-channel mixer with level control for both input and output sources. The user can set the various monitoring signals on the headphone and auxiliary outputs, and the audio inputs to be sent to the Program or TalkBack lines. **RoadWarrior** can be controlled from its top panel, through a large, easy-to-use navigate menu display, or via remote control, through its embedded Web Page.

For large IP installations, the **SupriMAX** codec line is for you. The **SupriMAX** is a Multi IP Codec in a 3U rack, which can house up to 14 IP audio modules. These IP audio modules are based on **Suprima**, so it supports all the main features of **Suprima** when working over IP, and supports the widest range of audio compression modes. The **SupriMAX-1U** can hold up to 4 IP audio modules in just a 1U high rack space.

With IP broadcast capabilities now upon us, MUSICAM USA is well equipped to handle today's broadcast needs as well as tomorrow's.

MUSICAM USA

Musicam USA
670 North Beers St., Bldg. 4
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Phone: 732-739-5600
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Web: www.musicamusa.com

NAB Show Booth N5825

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World Radio History

Omnia ONE: Good Things Come in Small Packages!

The Omnia ONE family continues to grow. The popular 1 RU audio processor is now available in three versions: Multicast/DAB, FM and most recently, the New Omnia ONE AM.

Brand-new from the ground up, the Omnia ONE is designed as a "universal hardware platform." Using the latest and most powerful DSP hardware architecture, the Omnia ONE platform can handle and adapt to the demands of both traditional and digital broadcasting through simple software downloads.

Today, you need a lot of flexibility in an audio processor because transmission systems exist in many different forms. The processor you choose must have the tools to meet those needs. The Omnia ONE's dual firmware banks allow it to meet the challenges of FM, AM, HD Radio™, DAB, DRM, multicasting, podcasting, netcasting, satcasting and any other form of "casting" you can think of. There's plenty of power inside its 1RU frame, so don't let the size fool you!

Omnia ONE isn't dedicated to a sole application style. It can be used in the studio, for transmission, and even in networked applications, thanks to its Livewire™ interface. Modification is achieved through a simple download. It's that easy!

And since there are two software banks, two styles can be onboard at once, easily switched between when needed. Processing functions like AGC, limiting, audio enhancement, MPX stereo generation and codec pre-conditioning are just the start. As signal processing advancements occur, Omnia ONE goes along for the ride, through the flexibility of its platform.

And Omnia ONE is ready for broadcasting's future. It uses the Livewire™ standard for professional networked audio over Ethernet, connecting directly to Axia IP-Audio networks. When used as part of an Axia network, a single Cat 6 cable carries all inputs, outputs and remote control.

Omnia ONE Features:

- Ethernet, RS-232 Modem and GPI remote control ports with built-in Web page interface.
- Livewire I/O Connectivity now available.
- Analog XLR balanced inputs and outputs.
- Digital AES/EBU input, output and external Sync input.
- Automatic input fail-over on loss of audio.
- Universal power input.
- Built-in stereo headphone jack with front-panel level control.
- Single jog-wheel user interface with LED level metering and LCD screen.
- Web browser remote interface.
- Wideband AGC for smooth "hand on the pot" gain riding.
- Selectable phase rotator.
- Four-band AGC to add dynamic EQ enhancement for consistency and to build density before the limiter stages.
- Four-band peak limiter using feedback limiters for the lower two bands (optimized for bass punch and lower midrange warmth) and feed-forward limiters for the upper two bands (optimized for sparkling upper mids and highs).
- Time-aligned, dynamically flat crossover.

Omnia ONE Multicast / DAB Features:

- Ultra low-distortion look-ahead final limiter optimized for codecs.
- SENSUS™ algorithm self-adjusts processing architecture improving coded audio quality.
- Multicasting isn't the only bit-reduced stream that can benefit from Omnia ONE Multicast: Satellite uplinks, Internet broadcasters, cellcasters, podcasters — anyone producing real-time audio for coded channels can benefit from the audience-grabbing sound that's made Omnia the first choice of broadcasters everywhere.

Omnia ONE FM Features:

- Advanced, pre-emphasized, fully distortion-controlled final limiter/clipper.
- Integrated digital stereo generator with advanced peak control, two composite MPX outputs, SCA input and 19 kHz output.

Omnia ONE AM Features:

- Advanced, NRSC pre-emphasized, fully distortion-controlled final limiter/clipper.
- Selectable low-pass filters suitable for NRSC, HD AM or any ITU installation.

Omnia
A Telos Company

OMNIA AUDIO
2101 Superior Avenue
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NAB Show Booth N7620

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World Radio History

OMNIRAX BROADCAST FURNITURE

Product Preview • Product Preview • Product Preview • Product Preview

The Engineer's Choice

What differentiates Omnirax from other furniture manufacturers is our uniquely balanced blend of style, functionality and ergonomics, our excellent collaborative custom design ability and our fanatical attention to detail.

Omnirax works directly with chief engineers, program directors, architects and station owners to provide intuitive and custom solutions at near-production prices.

At Omnirax our products and services speak for themselves. We let our customers do the talking.

*"...I wholeheartedly recommend Omnirax to everyone." **

*"Our furniture from you not only fit into our budget and timeline, it was very well constructed and looked beautiful. I expect to be outfitting many more facilities with Omnirax ..." **

What's new?

The year 2007 saw further expansion of our Innova line into many more stations across the country, including a suite of rooms and several dozen workstations for the ground-breaking organization Youth Radio in Oakland; a five-room suite of studios for West Virginia Radio's Cumberland Facility; as well as rooms for Focus on the Family in Colorado Springs, and Horizon Broadcasting's Network Operations Center in Minot, N.D.

*"...I was impressed with the exceptional care given packaging for shipment. A few very large and potentially fragile components made it cross-country completely unscathed." **

Clear Channel NYC

*"...The Omnirax design makes these studios incredible for talent and operators on both sides of the console." **

*"...Ease of installation is important and we got that with Omnirax. Customer service was superior to almost any other vendor we deal with." **

Innova combines modular components with custom tailored shapes to fit particular requirements of on-air, production and imaging studios. Cable raceways are integrated into the structural design to facilitate wiring and create logical access points throughout. Conventional casework and cabinetry can be provided so that an entire facility has a unified look and feel. Omnirax also offers custom designed acrylic copy stands as well as a full line of monitor arms.

Clear Channel NYC

We are currently putting the finishing touches on two major projects in New York City: WNYC Public Radio's new facility in the West Village, comprising upwards of 40 rooms, including six on-air and five production studios; and Clear Channel's 30-room consolidation of five stations under one roof on the Lower West Side. This is Omnirax's first large-scale design utilizing Corian solid-surface, featured in the design of 10 futuristic on-air studios.

*"...OMNIRAX service has been personal, timely and unflinching. Upon seeing my desks up in my space for the first time, I simply shot an e-mail to OMNIRAX saying, 'I love you.' If you've ever had any doubt at all about OMNIRAX, rethink. Rethink OMNIRAX. Entrust them with your dreams." **

**References available upon request.*

OMNIRAX

OMNIRAX
P.O. Box 1792
Sausalito, CA 94966
Phone: (800) 332-3393 or
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SAGE ALERTING SYSTEMS

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The Most Trusted Name in EAS

Emergency Alert System

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Sage Alerting Systems, Inc. and its famous Sage ENDEC continue the tradition of bringing the finest Emergency Alert System technology to radio, TV, cable and public safety.

The original Sage ENDEC, certified in 1996, has helped thousands of broadcasters and public safety organizations serve the public with tornado warnings, Amber alerts and notifications of toxic and hazards spills. Taking EAS to the next step is what Harold Price and Geraid LeBow, founders of Sage Alerting Systems, are now doing with the new Digital ENDEC.

Designed as a plug-compatible replacement for the original ENDEC, this new product features a host of new and exciting functions including:

- AES/EBU digital audio connectivity
- LAN/Internet connection
- Secure remote control via Web browser
- CAP-ready, with text to speech capability
- Logging to USB and network printers or e-mail
- Monitors all inputs and emails you if any input fails
- Front-panel menus are compatible with the original ENDEC, minimizing retraining for existing features
- Support for the original ENDEC peripherals and software add-ons
- Software is in FLASH for easy update — no more ROMS

Not only has Sage Alerting Systems brought the ENDEC to the 21st century but it is expanding its availability through a number of the broadcast industry's best distributors. This will make it easier for broadcasters to purchase the Digital ENDEC along with other studio and transmitter equipment they buy from their favorite distributor.

The new Digital ENDEC supports the existing CAP 1.1 spec, and Sage will provide a downloadable software update when FEMA certifies CAP 1.1 as part of the EAS standard and the new FCC requirements kick in. In the meantime, broadcasters who need a replacement for their 12-year-old ENDEC, who want the improved LAN access, remote control and automation interfaces, or who are in areas that are already adopting CAP will want to take a look at the Digital ENDEC.

Sage Alerting Systems works closely with state and national broadcaster associations to ensure ease of purchase and on-time delivery. Jerry LeBow and Harold Price will continue to be available to attend state broadcaster association meetings.

See the Digital ENDEC at NAB at the Harris booth (N2502) and at the Google booth (N6607).

Sage Alerting Systems, Inc. The tradition continues.

SAGE Alerting Systems, Inc

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Telos Zephyr/IP: Sophisticated Technology in IP Audio

The new Zephyr/IP brings an effective package of sophisticated technology to the world of IP audio codecs. Optimized for operation over the public Internet and mobile phone data services, the Z/IP delivers when others can't.

Zephyr/IP utilizes ACT–Agile Connection Technology, which combines state-of-the-art loss detection and concealment with dynamic buffering and auto-varying bitrate functions — to continuously adapt to network conditions, minimizing the effects of packet loss, varying bandwidth and jitter that occur on real-world networks.

Z/IP also introduces another technology leap: AAC-ELD, a new codec based on low-delay AAC. With its excellent fidelity at low bitrates, nearly inaudible loss concealment, and auto bitrate and jitter tuning, AAC-ELD delivers superior audio for two-way IP applications over non-controlled networks.

The Z/IP family includes both a studio codec and a PC-based server that addresses firewall and NAT (Network Address Translation) issues. Firewalls and NAT devices often found at the edges of LANs can prevent audio streams from flowing, but Telos Z/IP Server technology solves this problem, keeping track of users' online status and IP address information so that making connections is as simple as selecting from an onscreen list.

The Z/IP works directly with high-speed mobile phone data networks; a USB connector accepts standard EVDO USB modems.

The Zephyr/IP Features:

- New AAC-ELD (Advanced Audio Coding — Enhanced Low Delay) Codec.
- New Telos ACT (Agile Connection Technology).
- Effective Packet Loss Concealment.
- Audio I/O via AES/EBU, analog and an Axia Livewire IP-Audio interface.
- Studio-grade 24-bit A-to-D and D-to-A converters.
- Ethernet and USB connections.
- Works directly with high-speed mobile phone data networks via an EVDO USB modem.
- WiFi connectivity: Connect to any WiFi hotspot.
- Transmission bitrates from 18 kbps to 256 kbps.
- High-resolution, information-rich interface with context-sensitive on-screen help.
- Full-VGA display screen displays network conditions in an intuitive color-coded graphics format.
- Support of select wireless devices, as well as UMTS devices.
- Telos-hosted Z/IP Server enables lookup of and connection to other Zephyr/IP users worldwide, even through firewalls and Network Address Translation (NAT) devices.
- Dial by name regardless of the currently assigned IP address.
- Compatible with Telos Zephyr Xstream and supports SIP, G.711, G.722, MPEG Layer 2.
- Web server for remote configuration and remote control.

Shipping NOW!

Telos AUDIO | NETWORKS

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Cleveland, OH 44114
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Fax: (216) 241-4103
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NAB Show Booth N7620

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simple, but god has bigger plans for me... attached a picture in white contact me for more info. big_plans #221542

STEADY SEEKING LADY

I am looking for a male partner (38-50)who is willing to be exclusive with me for a long term relationship. Not asking for marriage. I am of average build, dark hair, brown eyes and am an Indian female. I have a wonderful job and attend some classes a couple of nights a week. I have two kids who stay at home with me. They are very precious to me. And they are not going to be a hindrance to our dating. I have a full and busy life. Therefore, the expectation is to see each other on a steady basis, and at the same time, being flexible. precious_me #331252

I LOVE MUSIC. YOU LOVE ME

I'm an indie/hipster girl who adores music and going to clubs and shows. Some of the bands that I'm into are Interpol, The Arcade Fire, Blonde Redhead, Bauhaus, The Smiths, Morrissey, etc. I'm into indie rock, electronica, punk, pretty much anything. I drink and smoke occasionally. I'm 21, 5'8", light-skin, dark brown hair/eyes. I work, am well-educated, funny, spontaneous, nice. #2215234

299685

HANDSOME RAKE

Out of work leaf raker/bagger seeks whimsical beauty with un-kempt auburn or chestnut hair, cool coarse hands and a penchant for wrestling. mellow_mo, 28, #[illegible]

LET'S CONNECT

Radio engineer seeks stable long distance relationship. Need to connect immediately. Everywhere I go, I see broadband internet, but I just never hook-up. I need to meet that special someone that will plug me in so I can be heard. Must be reliable, connect easily, forgive errors and adapt to change. Should come from a good family. [illegible]_going #101352

SIMPLICITY HERE

Simply put, I'm looking for a fun, casual relationship with only one person. That means one person for me and one person for you. :-) Every woman wants to feel safe with a partner, whether it's serious or not. It's key to her feeling comfortable to express her more intimate nature. I don't ask for much other than to hang out, enjoy your time with me and be available to chill.

genuinely looking to [illegible]

MR. RIGHT

I'm actually posting this on behalf of a friend. Since she's been single she hasn't found the right guy and I'm doing this in hopes of helping her find Mr.Right. After you and I talk, if you are chosen then you will get to go on a date with her and who knows, it could be the perfect date and start of a new [illegible]

also
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yoga, wei
hoops) I have
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person all my life a
person but would lov
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lbs, slim, fair skin, and a
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IN LOVE

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Hah are you

Connect with Zephyr/IP: The World's Most Advanced IP Codec

The new Zephyr/IP brings an effective package of sophisticated technology to the world of IP audio codecs. Optimized for operation over the public Internet and mobile phone data services, the Z/IP delivers when others can't.

NEW "AAC-ELD" (ADVANCED AUDIO CODING-ENHANCED LOW DELAY) CODEC: Z/IP introduces a new codec technology invented by the experts at Fraunhofer Institute, the people who brought us MP3 and AAC. Optimized for interactive IP applications, AAC-ELD combines features from MPEG AAC-LD and the Spectral Band Replication technology used in AAC-Plus. It's the most powerful audio coding tech on Earth, offering outstanding bitrate efficiency, low delay, and support for packet loss concealment.

NEW TELOS ACT (AGILE CONNECTION TECHNOLOGY): Z/IP brings automatic on-the-fly bitrate adjustment to IP codecs - a first. The Z/IP constantly monitors the network and sets its bitrate to the optimum value. A dynamic adaptive receive buffer also responds automatically to network conditions, minimizing the effects of the varying bandwidth and jitter that occur on real-world networks.

EFFECTIVE PACKET LOSS CONCEALMENT: The Internet usually has packet loss on audio streams, often ranging up to a few percent. The new AAC-ELD codec combined with ACT can conceal this loss, making for smooth audio even with rough network conditions.

TELOS-HOSTED Z/IP SERVER WITH DIRECTORY SERVICES: Enables you to look up, view the status and connect to other Zephyr/IP users worldwide, even through the toughest firewalls.

A STATE OF THE ART USER INTERFACE: And so you don't feel like you are on a blind date, we give you all of the status information you need on a sharp-looking color LCD which shows live network statistics and trace-route maps in an easy-on-the-eyes graphical interface.

Telos
AUDIO | NETWORKS

Telos-Systems.com

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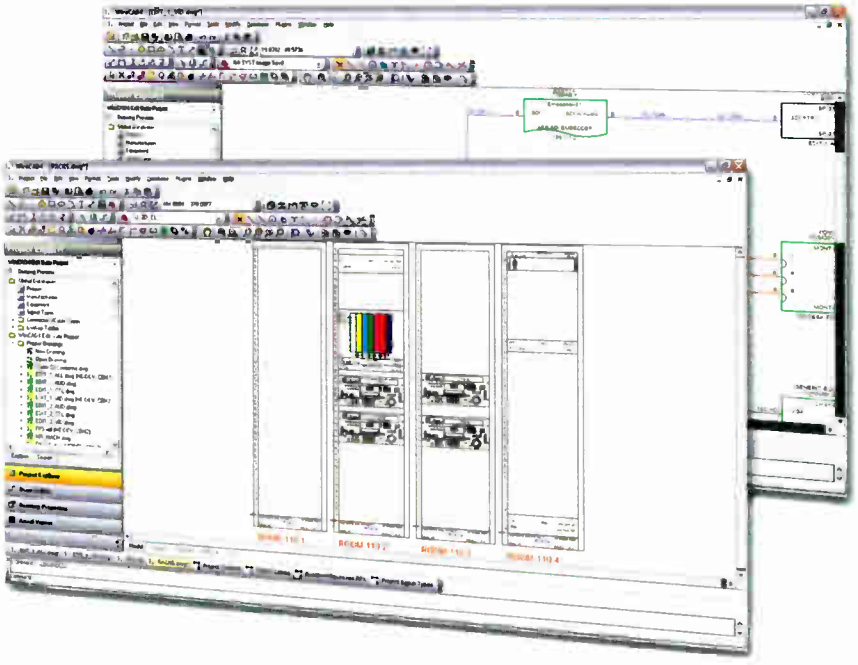
World Radio History

Because Genius Ain't Easy!



So a while back I was out walking my dog Hiccup when the thought occurred to me that what the planet really needed was a way to avoid the tedious, time-consuming, mind-numbing, error-prone process of single-line documentation and all of the associated reports that need to accompany it. I thought there must be a better way than the manual data entry I was doing and having to maintain synchronization between changes I made in the drawings and those in the databases. It occurred to me that we needed to make documentation so easy that it actually got done!

Silly thought, I know, but that is what we set out to do.

WireCAD is the result of years of focus on the problem of creating accurate, detailed documentation without having to learn drafting.

We use a data-driven approach. What that means to you is that you don't have to learn how to draw functional blocks in a CAD program, you just describe the equipment, who made it, what's it called and what I/O does it have. WireCAD does all the heavy lifting for you. And now with version 5 you can share our new Community Server. Upload and download equipment definitions to share with your peers.

We automatically assign cable numbers, do error checking and print all the reports you might need like, cable labels, run sheets, bill of materials, and power consumption and heat-load reports. We automatically create your rack layouts and jackfield designation strips too!

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Thanks for taking the time to read this whole thing.

— Christian Holbrook, President

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Color-keyed map: Pages 16 & 17

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World Radio History

Radio/Audio Exhibitors

Selected exhibitors of interest to radio attendees. Check on-site program for changes and full list. Booths preceded by N are North Hall of the LVCC, C indicates Central, SL is South Lower, SU is South Upper, OE is Outdoor, R is RTNDA at Hilton

25-Seven Systems	N7935
Abaltat	SL9610
AccuWeather	C6428
Acoustical Solutions Inc.	SL2417
Adobe Systems	SL3220
AEQ	N5429
Aeta Audio Systems	N4624
AEV S.P.A.	C12219
AKG Acoustics	N8229
Aldena Telecomunicazioni	C4521
Altronic Research	N5523
American Tower Corp.	N7238
Anritsu Co.	N7320
ANT Group Srl	C3335
Anvil/Calzone	C5611
Aphex Systems	N5617
APT	N8811
(See our Product Preview, page 4)	
Armstrong Transmitter	N8814
Arrakis Systems	N6129
ARRL	Lobby 1
Associated Press/ENPS	C161
ATI	N5229, N5129
Audemat	N7932
Audio Precision	N6125
AudioScience	N5230
Audio-Technica U.S. Inc.	N4529
(See our Product Preview, page 5)	
AVT GmbH	C9619B
Axel Technology	N6629
Axia Audio	N7620
(See our Product Preview, page 6)	
Azden Corp.	N4924
AzEP Arizona Engineered	C7037
Barix AG	N8036
Beat the Traffic	R326
Belar Electronics Lab	N7629
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Broadcast Electronics	N7007
Broadcast Software International	N9111
Broadcast Tools	N8120
Broadcasters General Store	N8120
Burk Technology	N6920
Burli Software	N5838
Burst Electronics Inc.	C9032
C Crane Co.	N9124
Calrec Audio Ltd.	N8723
CGS InfoGraphics Automation	R316
Chyron	SL3713
Circuit Research Labs/Orban	N8536
Clark Wire & Cable	C7519
Clear Channel Satellite	OE316
Clear-Com Communication Systems	C5908
Coaxial Dynamics	N4626
Comrex	N2125
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Continental Electronics	N7607
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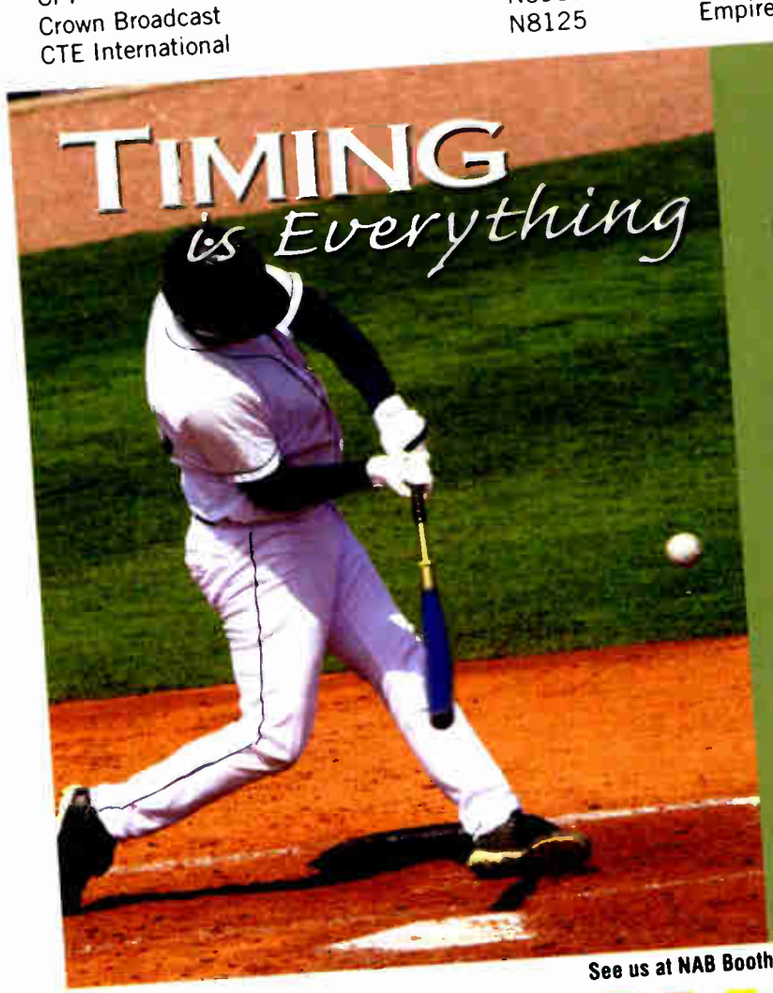
Crown Broadcast	N6912
CTE International	N8125
D.A.V.I.D. Systems Inc.	SL6129
Dalet Digital Media Systems	SU8520
Dan Dugan Sound Design	N4217
Davicom, a div. of Comlab	N6935
DAWNco	C7237
DaySequerra	N5229, N5129
DB Elettronica Telecomunicazioni	N8233
Denon & Marantz Professional	N4833
DG FastChannel	SU10213
Dialight Corp.	N3222
Dielectric Communications	C1918
Digigram	N9025
DK-Technologies A/S	N1533
Dolby Labs	N1814
Dorrough Electronics	N8211
DPA Microphones	N730
DSI RF Systems Inc.	C4537
Econco	N7220
Ecreso, an Audemat Co.	N7932
Elber S.r.l.	C3327
Electrosys S.r.l.	C3331
Elenos	C12124
Elettronika s.r.l.	C1311
Empire State Building	C2844



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ESE	N3121
EV Microphones	N9325
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E-Z Up International	N9318
Fanfare	N6912
Federal Communications Commission	N9114
Flash Technology/SPX	N3114
Fraunhofer IIS	SL7424
Gefen	SL2312
Genelec	SL9220
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Global Security Systems	**N9307**
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Google	N6607
Hamlet	N1531
Harris Broadcast Communications	N2502, N4202, N4206
HD Radio	N6724
Heil Sound/Transaudio Group	N7039
Henry Engineering	**N9023**
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HHB	N8207
Hitachi Kokusai Electric America Ltd.	C5018
HME	C3022, SU10626
Holophone	N6438, N6435
IEEE Broadcast Tech. Society	Lobby 29
Independent Audio	N4920
Inovonics Inc.	**N5829**
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International Datacasting	C8437
ISIS Group Inc.	N602
Jampro Antennas	**C2607**
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Jetcast	N8336
JK Audio Inc.	**N7929**
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JLCooper Electronics	N3118
Junger Audio Studiotechnik GmbH	N2636
Kathrein-Werke KG	C5508B
Kintronic Labs Inc.	N6816
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LARCAN USA	C2618
Lawo North America Corp.	N8720
LBA Technology Inc.	N8733
Linear Acoustic Inc.	C2151
Linear s.r.l.	N4831
Liquid Compass	N7938
Logitek Electronic Systems	N7124
Masstech Group Inc.	SU13813
Mayah Communications GmbH	C10619D
Microsoft Corp.	SL14500MR
Microwave Radio Communications	C1807
Middle Atlantic Products	SU10205
Minnetonka Audio Software	N3215
MOG Solutions	SU7530
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Myat Inc.	C2215
Nagra USA Inc.	N3214, R203
Nat'l Assn. of Tower Erectors	C1431
Nautel	N7116
NDS	N6812
Netia	N5433
Neutrik USA	N9029
NewBay Media	N4930, SL10229, C11837MR
NKK Switches	N2633, N203DMR
Non-Stop Music	SL10615, R306
NPR Satellite Services	C4237
OConnor	C6418
Oldcastle Precast Services	N2532
OMB Sistemas Electronicos	C3024
Omnia Audio	**N7620**
(See our Product Preview, page 19)	
Omnirax Broadcast Furniture	**N4517**
(See our Product Preview, page 20)	
OMT Technologies	N8420
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P+S Technik GmbH	C10319
Patriot Antenna Systems	OE103
Phillystran	N5132
pinta acoustic	N6814
Potomac Instruments	N6226
Power Module Technology	N9109
Pristine Systems Inc.	N8831
Propagation Systems Inc. (PSI)	C2324
PTEK	N9008
QEI Corp.	N6223
Qualcomm/MediaFLO	C2946
Quintech Electronics	C8737
Radio Advertising Bureau	Lobby 2
Radio Frequency Systems	C2321
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RCS	N5917
RDL Radio Design Labs	N6429
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Richardson Electronics	C1724
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S.W.R. Inc.	C1133
Sabre Towers and Poles	N5938
Sage Alerting	**N2502, N6607**
(See our Product Preview, page 21)	
Sennheiser	N8207
Shively Labs	N6424
Shure Inc.	N2830
Siel Broadcast S.p.A.	N9323
Sierra Automated Systems SAS	N6520
SIRA Srl	C1328
Society of Broadcast Engineers	Lobby 27
Sonifex Ltd.	N4919
Sonnet Technologies	SL13808
Sound Devices	N7235
Sound Ideas	SL9616
SoundField	N7037
Spinner GmbH	C9619A
SRS Labs	N4824
Staco Energy	N4218
Stantron	SU5613
Studer	N8229
Studio Network Solutions	SL8208
Summit Traffic	N8831
Superior Broadcast Products	C1107
Superior Electric	N8807
Switchcraft	C7508
TASCAM	SL10328
TeamCast	C3020
Tektronix	N2520, C1051
Telcast Fiber	SU4227
Telos Systems	**N7620**
(See our Product Preview, page 22)	
Teracom Components	C1318
TFT Inc.	N7617
Tieline	N8817
TransLanTech Sound	N6124
Transradio SenderSysteme Berlin	N9123A
Trilogy Communications Ltd.	C8122
TSL SU	14615
TV Magic Inc.	N2136
Valcom Mfg. Group	C2539
Volicon	N2514
V-Soft Communications	N5835
Ward-Beck Systems	SU7420
Wegener	SU7911
Westar Music	SL9612
Wheatstone Corp.	N7612
Whirlwind	C7733
WhisperRoom	SL10220
Will-Burt	C7922
WinMedia Software Inc.	N4623
WireCAD	**N3635**
(See our Product Preview, page 24)	
WireReady	N3835
Wireworks Corp.	C7924
Wohler	N1314
Xytech Systems	SL4326
Yamaha Commercial Audio	SL5710
Zaxcom Inc.	N4533

World Radio History

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World Radio History

FM Power

▶ Continued from page 1

take care of" before the spring show. He also could not say there definitely would be a request to the FCC at all.

"There are still some issues being discussed," Marino said, without disclosing details. Certainly IBOC power will be a topic of conversation at the convention, he added.

Why do this?

The impetus behind the effort came from major broadcast groups participating in the HD Radio rollout.

"It's generally acknowledged that, in many cases, the digital FM coverage is more abbreviated than analog," said Greater Media Vice President of Radio Engineering Milford Smith.

"If HD Radio will be the ultimate replacement for analog and ubiquitous, it needs to be close to what coverage we had" with analog, he said.

The digital signal at present generally is seen as delivering better than good stereo coverage but not quite as good as mono coverage. Proponents seek an up to 10 dB increase in digital power, and the hope is that for the first time since stations began transmitting both an IBOC signal in addition to the analog signal, the coverage of both signals would be equal.

A 10 dB increase is a 10 times increase in digital power. "This is like 60 kW instead of 6 kW in the analog world," said one engineer.

Existing FM stations transmitting both digital and analog are required to set the IBOC power level 20 dB below the analog power level.

One area of concern with the FM digital signal is reception on portable devices that are expected by IBOC proponents to come on the market later this year.

Portables typically have small antennas. A car or clock radio can have a long antenna, but a portable may have an internal one that won't pick up as much signal in the same RF environment.

This is a possible enhancement to HD Radio that needs a good airing.

— Milford Smith

"In most portables, the antennas are essentially half of a dipole with no ground plane," said one expert, who added it's essentially like having half of an antenna in a moving device. Proponents said boosting digital FM power would help IBOC reception on portables.

See FM POWER, page 6 ▶

FM IBOC Power Testing Stats

CBS Radio, Clear Channel Radio and Greater Media conducted several tests in the fall of 2007 to determine effects of increasing FM IBOC power levels (related story, page 1).

The first part of the testing, conducted by Ibiquity Digital and signed off on by Hammett & Edison, looked at the digital coverage increase at the higher power level, comparing digital coverage at 20 dB below analog power and 10 dB below analog power level.

Tests occurred September in three geographic areas with differing terrain characteristics: Detroit; New York, Connecticut and Rhode Island; and Los Angeles, San Diego and Santa Barbara.

Grandfathered short-spaced stations were included in testing, stations that were only 40 miles apart, rather than the required 100 miles of separation. The testing showed "significant improvement in digital coverage even in interference environments," said one engineer.

Super-powered FMs also were tested.

Though test results hadn't been released publicly as of late March, in all cases, according to documentation obtained by Radio World, the increased digital power level "significantly improved" digital coverage — such as by 26 percent in Connecticut and by 33 percent in Detroit.

Even with increased digital power levels, the FCC spectrum mask would still be maintained, according to the results.

Results reportedly show the higher power level would not cause "unacceptable interference" in most circumstances, even outside a station's protected contour.

Several papers in the Broadcast Engineering Conference during the NAB convention relate to the elevated FM digital power issue, including one by Glynn Walden of CBS Radio about building penetration.

They include "A New Approach to Peak-to-Average-Power Reduction for FM IBOC Transmission" by Philipp Schmid of Nautel; "An Improved Coverage Prediction Method for HD Radio" by John Kean of NPR Labs; "Bandwidth & Frequency Allocation Issues in International Digital Radio AM & FM broadcasting," by Chuck Kelly of Nautel; "RF Signal Performance Measurements of Consumer FM Receivers and Coverage Effects" by John Kean; "Implications of IBOC Injection Levels above –20 dB," by Gary Liebisch of Nautel; and "FM IBOC Building Penetration Tests at Elevated Digital Subcarrier Levels," by Glynn Walden of CBS Radio.

— Leslie Stimson

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FM Power

▶ Continued from page 5

A digital power increase may also help IBOC signals penetrate buildings.

"We generally see 8 to 10 dB attenuation just because of building material," like steel and concrete, one engineer said. A spectrum analyzer inside such a building typically shows a 10 dB lower reading for the digital signal, he said.

The noise floor, such as RF noise from power sources such as computers and lighting, hits the digital signal more noticeably because it's 20 dB lower than the analog signal, according to IBOC experts. And while the IBOC carriers are durable, it gets harder to recover the waveform when those RF noise sources increase.

CBS Radio, Clear Channel Radio and Greater Media — with some assistance from Ibiquity Digital — tested the elevated FM digital power levels in two parts on some 13 stations using experimental authorizations (see sidebar on page 5).

Testing

Public radio is studying the issue as well.

NPR Labs is studying a variety of IBOC coverage improvements, including elevated power, and will have more to say about this research at the upcoming NAB Broadcast Engineering Conference.

In March, the group said it is still evaluating the difference between analog and digital coverage, and it's premature to say how NPR Labs will come down on the power increase, according to Senior Technologist John Kean and VP/CTO/Executive Director Mike Starling.

Although NPR Labs' investigations into this area coincided with field testing carried out by the three big commercial broadcast groups, NPR Labs was not involved in that study.

"Only when we're comfortable with our independent studies and feel confident about more fully understanding the science of the digital radio coverage improvement options and interference consequences will we adopt a position on the matter," said Starling and Kean in a statement.

"As part of our year-long research project, three basic avenues of potential HD-R improvement have been studied: (1) receiver and receiving antenna performance, which poses no risk of increased interference; (2) single-frequency networks, i.e., boosters; and (3) increased digital sideband power.

"Given the potentially closer spacing afforded by contour protection allocations in the educational reserved FM spectrum, the second strategy poses the least risk of objectionable interference to first-adjacent analog stations, a fairly important consideration since 99 percent of our listeners are still tuned to the analog signal only."

'It's optional'

Certainly the initiative, though not yet at the level of an official FCC request, has its critics, who cite potential for increased interference as well as increased implementation costs.

One wrote on an engineering listserv: "The NAB has determined that they 'think' the increase to 10 percent will work without interference or damage to the analog. They haven't said they're sure. How do you go to the FCC without being able to document your claim?"

Another engineer said in an interview that an FM power increase would result "in a replay of the AM [interference] problem."

One technical observer said the trick is to find the appropriate higher power level and yet avoid host interference to the analog carrier from the collocated digital subcarriers — and without negatively affecting another desired improvement, digital boosters.

A digital power increase may also help IBOC signals penetrate buildings.

Some stations don't have the headroom needed to implement the power increase in their transmitters, sources said, while other stations could experience self-interference due to more strict transmission system performance requirements. Another possible shortfall is increased interference to first-adjacent-channel analog listeners.

It so happens that a 10 dB increase in the digital power is 10 times the amount of power, according to several sources, meaning a corresponding increase in power consumption. That costs.

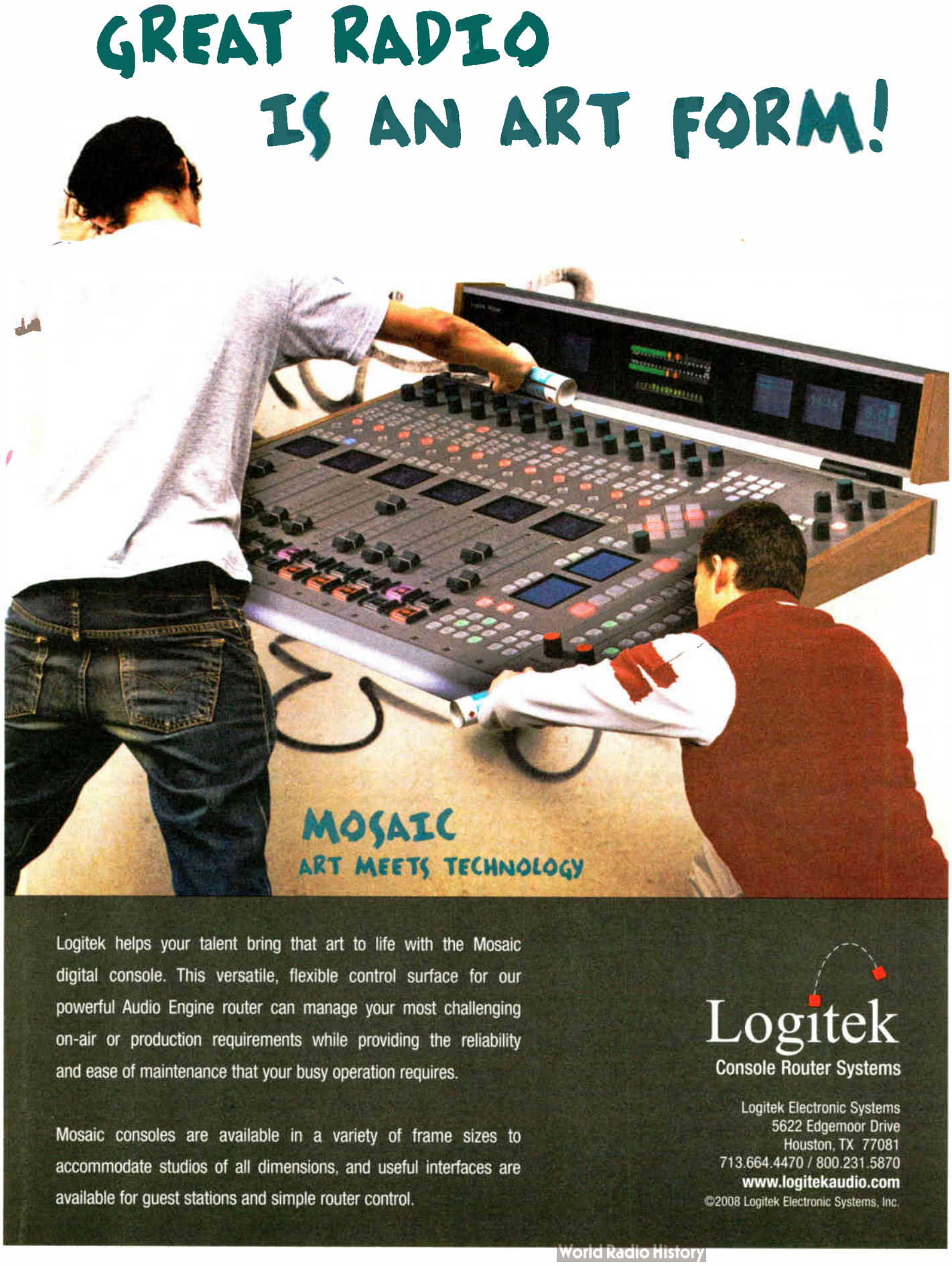
"It's important to note that [if approved], it's optional," said Smith. "Because it costs money. Not everybody will want to do it."

Implementation costs would depend on how a station has its IBOC system set up, he said. Low-level combining of the analog and digital signals before the power amplifier may work for this purpose using a dual-fed antenna designed for digital and analog inputs, he said.

Two efforts reportedly will be announced at the show to make HD Radio implementation more affordable.

Smith said that Greater Media would think about implementing a 10 dB increase, characterizing the net coverage improvement at his company's test stations as "very significant," both in the size of the coverage area and the robustness of the signal in that area.

The digital power increase "is an issue that needs to be out there and discussed," he said. "This is a possible enhancement to HD Radio that needs a good airing."



World Radio History

Shark, shown interviewing BERT MCCRACKEN, lead singer for THE USED, says: "When Comrex told me that their internal code name for ACCESS was "THE NEXT BIG THING" I got it right away. This IS BIG – I was live, on the air, in places I could NEVER have gone with regular old technology. THANKS COMREX!"

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World Radio History

HD-R CONVERSION DIGEST

FM HD-R Implementation Options Abound

Signal Combining Choices Grow as HD-R + FM Power Efficiency Improves

by W.C. Alexander

Cris Alexander is director of engineering for Crawford Broadcasting. This is one in a series of tips about HD Radio implementation. The series is archived at radioworld.com.

Unlike AM stations, FMs considering HD Radio conversion have a lot of implementation options.

High-level combined, low-level combined (common amplification) and separate antenna are just three of the available choices. While people may tell you that one option is "best," the truth is that the most suitable option for your site is only determined by careful analysis of the situation.

Some of the variables that enter the equation are the TPO and antenna gain, age/type of existing transmitter and antenna, auxiliary antenna availability, transmitter building type and configuration, cooling/ventilation system size/type and condition, generator capacity and even headroom in the transmitter building.

The high-level combined option has the advantage of allowing a station to continue to use its existing analog transmitter, provided that it has adequate power capacity to overcome injector losses (typically 10–11 percent). The analog transmitter continues to operate with its Class C (or solid-state) efficiency, without the need for a linearized power amplifier.

The disadvantage is that a 10 dB injector must be used, meaning that 90 percent of the power of the digital transmitter and 10 percent or so of the analog power are dumped overboard into a reject load.

LLC

The low-level combined option has the advantage of simplicity — one transmitter taking care of both analog and digital signals. RF plumbing is simplified, as is audio routing, remote control, etc.

The downside is that efficiency is low because of the required linear power amplifier operation. A typical Class C power amplifier may exhibit 75 percent efficiency or more, and non-linear, solid-state power amplifiers can be even more efficient.

Photo by Cris Alexander

A reject load is required for high-level combined FM systems. Outdoor loads like this help with costs by keeping the heat outside.

A linearized power amplifier capable of undistorted FM + HD-R operation may exhibit efficiencies from the low 40s to the mid-50s.

By way of comparison, while a Class C power amplifier operating at 10 kW with typical Class C efficiency would require in the neighborhood of 13 kW input power; a linearized PA operating at 10 kW output could require 25 kW or more input power. That's a lot of additional power for the convenience and simplicity of a single FM + HD-R transmitter!

The separate antenna option offers the advantage of requiring no injector, no reject load and a much smaller digital transmitter. A 10 kW TPO station using a separate digital antenna, with gain comparable to the analog antenna, would require a digital transmitter capable of only 100 watts average.

Compare that to 13 kW TPO for an FM + HD-R transmitter and 11 kW/1 kW analog/digital for high-level combined operation. The downside is that dual-input antennas and interleaved antennas tend to be heavy. Structural analysis of the tower is almost always required and a structural upgrade may be needed.

Use of an existing, licensed, auxiliary antenna has the advantage of not requiring additional tower loading, but such antennas typically are located lower on the tower than the main antenna. As such, the digital coverage could well be considerably less than the analog coverage.

Depending on the location of the transmitter site relative to the target coverage area, this could be a big factor. In my experience, there seems to be a break point around 7 kW TPO where the low-level combined option becomes less attractive.

This is changing as manufacturers are now beginning to offer single-box transmitters capable of producing HD-R + FM power levels of up to 25 kW with 50 percent or better efficiency. But even with a transmitter capable of producing the desired HD-R + FM power level, the low-level combined approach may be more expensive, both in the short term, due to one-time capital costs, and long term, because of operating costs, than the high-level combined option.

What questions would you like addressed in this series? Write to Lstimson@nbmedia.com.

Cris Alexander is director of engineering for Crawford Broadcasting and a contributor to Radio World.

See us at NAB Booth #N7932

Ashley

▶ Continued from page 4

Aiello told me. "He was always willing to help you if needed — or not, sometimes!

"In the later years he was very good at assessing your situation and helping you to select the correct equipment for your project."

In 1974, when Congress was studying the possibility of instituting winter Daylight Saving Time in response to an energy crisis, Ashley testified before the House Committee on Interstate and Foreign Commerce about the effect that winter daylight saving time would have on daytime AM broadcasters.

No photo survives, but I like to think that he worked a pun or two in there to entertain the politicos.

Gadgets

Even if you haven't done business with Ashley, you might use one of his products, which bear the brand Excalibur Electronics.

The company was started in 1976 by the late Dr. Robert L. Holland of George Washington University, Ashley and their spouses.

Excalibur makes what Bill calls "little accessory-type gadgets whose quantities are too small to interest larger manufacturers, giving us a nice little niche." On-air phone calls at Bonneville's WTOP are routed through an Excalibur HA-1 Hybrid Adapter. For a number of years, the music and fireworks at the National 4th of July celebration on the Mall were synchronized through Excalibur HC-1 Handi-Couplers.

"A matter of pride for us is knowing that 24 Handi-Couplers were purchased a few years back by the White House Military Office for use by White House Communications." Bud Aiello says he's never had an Excalibur device fail.

It's Ashley's goal to do volunteer work for his church and get in more bicycling and hiking. He may try his hand helping Habitat for Humanity or The Wright Experience, which built replicas of the Wright brothers' airplanes.

"I've had two offers so far to buy Excalibur, but I plan to hold onto it for another year or two just so I can still have a presence in broadcasting."

And reminding me of others I know who might sign with "73," Bill also says he will probably drop in and visit radio stations during his vacations (no doubt driving his family bonkers).

His last day at Bradley was "Leap Day," Feb. 29. It somehow seems fitting for this fellow with the ticklish funny bone and quiet warmth.

World Radio History

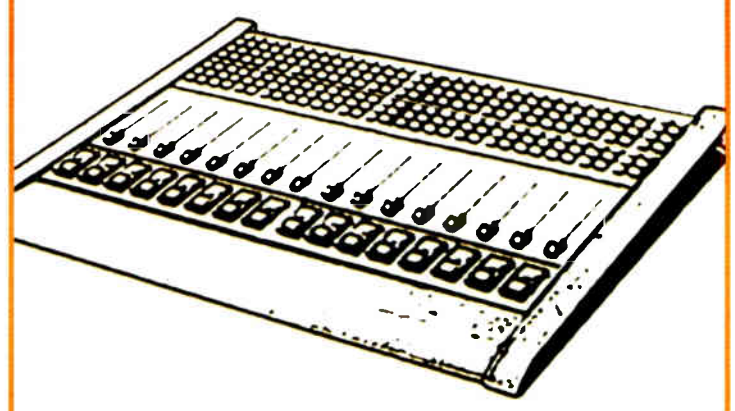
Nobody knows what the future holds.

(But there's a reason our logo is a crystal ball.)

Comdial Executech® PBX phone, *ca.* 1996. Comdial was one of the leading PBX companies in both sales and technology, with a million-square-foot assembly facility and over $7,000,000 in reported earnings. Comdial continued with traditional PBX tech and declining sales until filing for Chapter 11 bankruptcy protection in 2005, when all assets were acquired by **Vertical Communications**, a VoIP company.[1]

Cisco® 7970 IP Phone, *ca.* 2006. Founded in 1984 as a manufacturer of multi-protocol routers, Cisco began, in 1998, to promote VoIP technology to Fortune 500 companies as a more cost-efficient, feature-rich alternative to PBX phone systems. In just 10 years,VoIP effectively killed the traditional PBX; VoIP revenue is projected to reach $48 billion by the end of 2010.[2] Cisco annual revenue reached $35 billion in 2007.[3]

Axia Element broadcast console, *ca.* 2008. Founded in 2003, Axia is a division of Telos Systems, worldwide leaders in broadcast audio equipment. Axia was launched with the mission of bringing proven technology from the computer world – switched Ethernet, audio routing via IP, distributed network architecture – to radio. Using open standards and bulletproof Cisco routing technology, nearly 1000 Axia consoles have been built in just 5 years, making Axia the fastest-growing console brand in radio.



Generic TDM console, *ca.* 200*x*. Some radio consoles and routing systems are still based on Time-Division Multiplexing, developed in 1962. TDM was once the basis of most (if not all) digital PBX telephone systems. Consoles and routers based on TDM employ centralized "card cages" that require all inputs and outputs to be wired to a single location. Like traditional PBXs, TDMs typically rely on closed, proprietary code, and cannot be easily or economically changed or expanded when new operating criteria arise.

Santayana famously noted "Those who cannot learn from history are doomed to repeat it." Some people change when they feel the heat; others when they see the light. With that in mind, a quick comparison of telecom and broadcast technology reveals some common trends that broadcasters are finding hard to ignore.

Nearly 1000 Axia studios are installed around the world — more are added every week. And while our clients probably don't think too much about the technology inside our consoles, they know they won't have to worry about it in the future.

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Technology

World Radio History

KWSO: Big Plans, Tight Budget

WARM SPRINGS, Ore. Radio stations owned and operated by Native American reservations represent many of the indigenous peoples of North America, including the Lakota, Navajo, Comanche, Chippewa, Cherokee, Arapaho and Hopi nations.

(Colorful on-air positioning statements include the one used by low-power KCIE(FM) in Dolce, N.M., with the slogan "100 Watts of Apache Power.")

Many Native stations are noncommercial entities dependent on local community fundraising and the help of volunteers to survive.

KWSO(FM) in Warm Springs, Ore., is owned and operated by the Confederated Tribes on the Warm Springs Reservation. The noncom station went on the air in 1986 and has grown to include seven full-time staff positions, said Sue Matters, the station manager.

"If there is a local event with a free meal, a fundraiser for a youth basketball team, a district Tribal Council Meeting, people across the reservation tune in because they know KWSO will have information about it," Matters said. "We carry a lot of local high school sports."

The Confederated Tribes include three tribes: the Wasco, Paiute and Warm Springs tribes. Nearly 4,000 people live on the reservation, Matters said.

The tribe's 3,000-watt station has an annual Tribal operating budget of $180,000, but receives additional funding from Community Service Grants from the Corporation for Public Broadcasting.

The station has broken ground for a new facility with significant funding for the project provided by the Tribal Councils for all three tribes.

"We hope to begin building this year. We will share the building with the tribal newspaper, the Spilyay Tymoo Coyote News. Money is the big deal to getting the new building up," Matters added.

Despite a limited budget, she said KWSO officials have ambitious technological goals, including a new digital backbone for studio operations, streaming online and a digital conversion to go HD Radio and add additional channels.

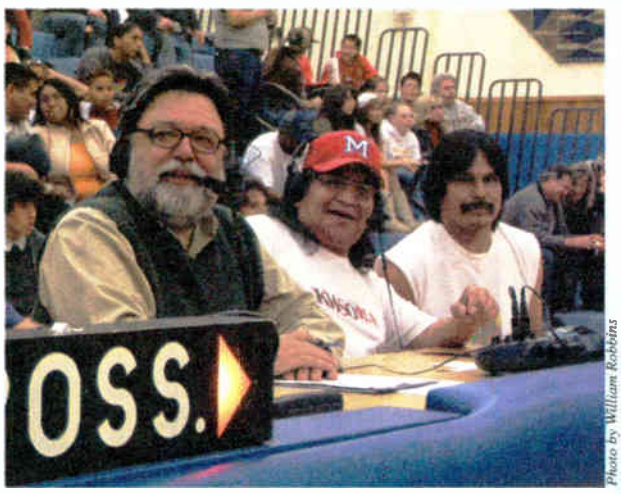


Photo by William Robbins

KWSO(FM) sports announcing team at a Madras High School basketball game. From left, Ted Viramonte, Kenman Miller and Bobby Smith.

"We are developing a five- to 10-year plan and it basically comes down to money to do all of this stuff," Matters said.

Already the station uses the iMediaTouch automation system and has 360 Systems Short/cut editors, Matter said. It successfully converted to Public Radio Satellite System's ContentDepot program delivery system last year.

KWSO's transmission facility, located on Eagle Butte at an elevation of 3,000 feet, is approximately five miles from its studios. The audio chain features a Moseley Digital two-channel STL, Harris 3.5 kW FM transmitter and ERI four-bay antenna.

KWSO employs a contract engineer to perform routine monthly maintenance and emergency response, Matters said.

The local Warm Springs economy is "horrible," Matters said, with local mills laying off workers. That likely will mean KWSO leaders will be forced to pursue more grants and underwriting for programming.

Photo by Sue Matters

The KWSO(FM) broadcast tower on Eagle Butte in northern Oregon.

"We will need to offset any potential cutbacks in our tribal funding. It is likely the Tribal Department budgets will face reductions continuing into the years ahead," Matters said.

KWSO is a Native Voice One affiliate.

— by Randy J. Stine

Native

▶ Continued from page 1

"Native America Calling" and "Stories of Our People." It also owns KNBA(FM) in Anchorage.

NV1 is considered one of the largest distributors of Native American content in the United States.

CPB awarded NV1 approximately $450,000 in startup and operational financing in 2006, according to a press release from Koahnic; NV1 received a similar amount in 2007. The CPB has indicated it expects NV1 to become self-sustaining over time.

NNN Podcast

Native Voice One "educates and celebrates" Native American life while providing program service from a Native point of view, said Burt Poley, its network manager.

It distributes seven Native national programs, including "Native America Calling" and "Earthsongs." Independent producers create all of the programming content carried by NV1.

"We continue to encourage production opportunities to assure a strong and growing list of offerings," Poley said. "Content generation is the number one challenge we face."

NV1 counts 31 affiliates and streams programming 24/7 online at *www.nv1.org* (see sidebar). It also offers "National Native News," another program it helps distribute, for podcast.

NV1 Native Voice One

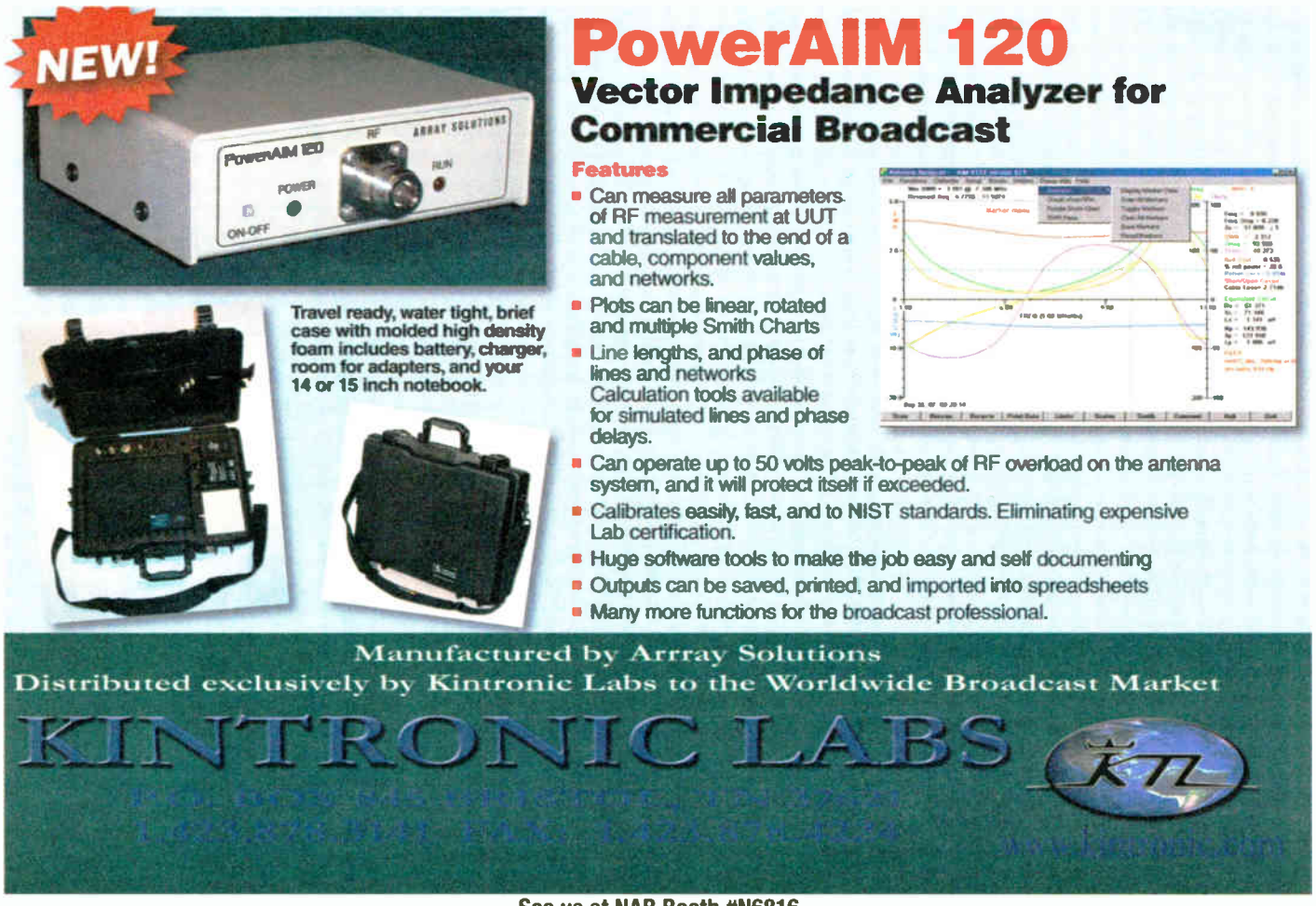
Native American program suppliers face funding challenges. Financial difficulties have sidelined several NV1 shows this year alone, including "alterNative Voices" and "Wisdom of the Elders," Poley said.

"They have run out of money. Funding is always an issue. It has been down the last several years and things are extremely tight for many of the producers. The same goes for Native radio in general. A lack of funding for staff makes them desperate for content, and that means they rely on us for more programming," Poley said.

NV1 operates out of office space it shares with KUNM(FM) in Albuquerque at the University of New Mexico. Poley said NV1 hopes to begin raising the capital funds needed to move into its own building. Poley is assisted on technical matters by Charles Sather, chief engineer for Koahnic, who is based in Anchorage.

Poley described Native Voice One as the "portal" for program suppliers to upload their programming for distribution via the Public Radio Satellite System's ContentDepot.

See NATIVE, page 12 ▶



World Radio History

Wireless Broadband Internet Remotes

"The first time out with the Tieline was a brilliantly simple experience for everyone involved. For lack of a better phrase, the codec just worked."

- Christian Vang
Chief Engineer
Clear Channel St. Louis

"The codecs sounded great. My management was very, very impressed with the demos"

- Grady Jeffreys,
Technical Manager,
Mackay Communications

"The remote was a spectacular success, in no small part thanks to the flawless sound which the Tieline G3 provided over the public Internet"

- Mike Rabey
Chief Engineer
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See Us at NAB Booth #N8817

World Radio History

Native

▶ Continued from page 10

"Our producers upload their own programming as MP2 files from a PC or laptop. It's very simple. We just provide the pipeline to do it," Poley said.

NV1 radio affiliates then receive programming via the on-demand ContentDepot file-based system, which automatically downloads programming as IP-based audio files directly to a radio station's automation system.

ConDep

ContentDepot "allows stations to have more flexibility for programming instead of having to do things in real time or recording satellite programming," Poley said.

NV1 hopes to add new programming options this summer, Poley said, but much of NV1's growth will depend on fundraising and the ongoing support from CPB. That organization agreed to provide partial funding for two years. The agreement expires later this year. "We are still waiting to hear what CPB will award us for 2009," he said.

Photo courtesy of Native Voice One

Burt Poley, NV1 network manager and Frank Blythe, founding executive director of Native American Public Telecommunications, shortly after his retirement visiting the NV1 offices in December 2006.

NV1 replaced American Indian Radio on Satellite (AIROS) in 2006 as the primary distributor of daily and weekly Native programming to public radio stations. AIROS was a service of Native American Public Communications.

Most of NV1's programming is in English, Poley said. However, many local tribal stations will broadcast some of its programs in native languages.

Possibly the best known and most widely heard Native program is "National Native News," a five-minute daily newscast that covers topics of interest to Native Americans. It's heard on approximately 200 tribal and public radio stations in North America and is distributed by NV1.

"We focus on spot news, but we do feature stuff, too," said Antonia Gonzales, host and producer of the program. "We will particularly focus on topics that affect tribal people, including healthcare. Native Americans suffer some of the biggest health disparities across the country, whether it is diabetes and heart disease."

"National Native News," which celebrated its 21st anniversary earlier this year, has more than 40 stringers watching for news that will affect its listenership, Gonzales said.

The newscast, which originates from Albuquerque, is funded in part by CPB and, like NV1, is division of Koahnic Broadcast Corp.

Gonzales has seen firsthand the financial struggles of many tribal radio stations. The nation's economic woes have exacerbated the struggles of some broadcasters.

"We need to get more Native Americans involved in broadcasting and aware of our services. There are a lot of Natives in print journalism, but not radio," Gonzales said.

◆ NEWSWATCH ◆

GAO Criticizes FCC Enforcement

WASHINGTON The FCC processes 95 percent of complaints it receives from the public but does a poor job of tracking grievance resolution, according to congressional auditors.

The Government Accountability Office reported that most FCC investigations into consumer complaints are closed with no action and that, because of bad FCC recordkeeping, the GAO can't determine why, or even whether, some cases were closed without action.

The commission replied that it does track complaint resolution and the GAO exaggerates the number of complaints closed without action.

FCC Chairman Kevin Martin said in a statement, "Since I became chairman, the Enforcement Bureau is responding to 100 percent of consumer complaints. Additionally, under my chairmanship, the commission has collected a record amount of fines, forfeitures and consent decree payments." He added that the GAO made some "valuable recommendations in the areas of enforcement data collection and analysis and performance management practices" and that the commission was already working to address those issues.

The GAO reports that the Enforcement Bureau looked into about 46,000 complaints from 2003 through 2006; and that as of December 2006, the Enforcement Bureau had closed about 39,000 of those investigations.

About 9 percent of closed investigations resulted in enforcement action, while 83 percent resulted in no enforcement action, said the GAO.

The FCC said the GAO overstated the complaints closed without action. The FCC only 3 percent of investigations were closed with no enforcement action. Seventy-one percent were closed with compliance found, 15 percent closed after taking action and 11 percent as a result of insufficient information provided by the complainant, the agency said.

Rep. Edward Markey, D-Mass., chairman of the Telecom and Internet Subcommittee of the House Commerce Committee, initiated the GAO investigation. He said the report "makes clear that any legislation establishing national consumer protection rules for the wireless market must have meaningful, supplementary enforcement at the state level. Unfortunately, solely relying upon FCC enforcement for consumer protection is utterly unreasonable in light of the GAO's findings."

Rep. John Dingell, D-Mich., has begun an oversight investigation into FCC operations. He said in a statement, "It appears the FCC has abdicated its duty to protect consumers."

Fritts Honored at NABA Meet

ATLANTA The North American Broadcasters Association honored Eddie Fritts during its annual meeting, held at CNN World Headquarters in Atlanta in February. Fritts received the organization's International Achievement Award.

The Toronto-based group represents North American broadcasters at the ITU and WIPO. Topics of the conference included WiMax and white spaces, the push toward hand-held devices and digital radio innovations.

Presidential leadership of the organization was passed from CBC/Radio Canada VP/CTO Ray Carnovale, to Grupo Televisa Exec. Leonardo Ramos Mateos.

NPR VP/CTO Mike Starling, also executive director of NPR Labs, was among the organizers, and Durst Organization Director of Broadcast Communications John Lyons gave a luncheon keynote about "thinking green" in facility design. NABA's board of directors includes executives from Sirius, CBS, CPB and HBO.

Kenwood VP New Digital Technologies Mike Bergman, also co-chair of the Digital Radio Subcommittee of the National Radio Systems Committee, said the group plans to vote on the update to the IBOC standard, NRSC-5-B, at its meeting at the NAB Show.

NABA Secretary General Donald Baylor and President Leonardo Ramos Mateos congratulate Eddie Fritts, who was honored at the NABA annual meeting

World Radio History

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World Radio History

NEWSWATCH

News Roundup

2007 SALES: U.S. commercial radio revenue fell 2 percent last year, according to the Radio Advertising Bureau, the biggest slump since 2001. Local radio ad revenue fell 2 percent, national radio was off 6 percent, network was up 4 percent and "off-air" revenue, formerly called non-spot, was up 10 percent. Overall U.S. radio revenue is estimated at $21.31 billion.

COPYRIGHT: NAB, Bonneville and the NRB filed a brief with the D.C. Circuit Court challenging a 2007 decision by the Copyright Royalty board that increased online royalties. The ruling instituted a per-performance, per-listener royalty instead of an annual flat fee. They argue that the CRB failed to follow statutory standards for rate-setting and adopted rates based on flawed methodology.

HD3: Citadel Broadcasting's KABC (AM), Los Angeles is producing original content that can only be heard at kabc.com or on KLOS HD3. Dodgers games will air live on 790 AM in Los Angeles, while talk radio listeners will be able to hear regular KABC talk programming simultaneously live on KLOS HD3 and online.

SENGER: The Asia-Pacific Broadcasting Union has given Digital Radio Mondiale Chairman Peter Senger a lifetime achievement award. Adilah Shek Omar of Radio Television Malaysia presented the award in March. He said DRM has the potential to bring about a "revolution" in broadcasting in the Asia-Pacific region. DRM is a digital radio standard in the lower frequency bands. Senger is stepping down after a decade as chairman of the DRM consortium.

NCE: The FCC has begun sorting through the more complicated applications for noncom spectrum. Of roughly 3,600 applications it received in the window for NCE frequencies, the FCC said it has processed about 800. Those were "singletons" that could be quickly accepted for filing, or needed to be dismissed due to settlements or because they were above the 10-application limit. The agency issued a list of 263 groups, each consisting of four or fewer mutually exclusive applications, in March.

EAS: At an EAS summit in Washington in February, Minority Media and Telecommunications Council Executive Director David Honig announced a multilingual EAS proposal formulated by the MMTC, Independent Spanish Broadcasters Association and the Office of Communication of the United Church of Christ. Stations ready to air emergency information in other languages would be "Designated Hitters" under the proposal, which calls for such stations to agree in advance to provide emergency alerts in whatever language the market needs. Each market coordinator, rather than a state government, would activate the emergency plan.

DIARY: Arbitron continues to update its diary surveys, introducing a "second-chance diary" intended to improve response rates for hard-to-reach demos. In continuously measured markets the company will offer a second-chance diary to respondents in households who had agreed to participate but failed to actually return completed diaries. In testing, 40 percent of households that agreed to participate for a second time returned diaries, Arbitron said. The company has also expanded incentives to 18–34 black and Hispanic males for each returned diary in markets number 10 and higher.

SBE: The society's new marketing committee is publishing an e-mailed newsletter to be distributed twice each month. The group, formed during the 2007 national meeting, is charged with increasing visibility of the society beyond the existing member base. Conrad Trautmann is chair; members include Tom Ray, Vincent Lopez, Jim Leifer and Gary Kline. "Secondary goals include fostering better communication amongst our members, assisting with our recruiting efforts to increase membership, helping to write and review press release information and to assist the national office with our advertising efforts," Trautmann wrote. The newsletter provides information about SBE programs, activities and current events.

SIRIUS BACKSEAT TV: U.S. Telematics has an affiliation and revenue sharing agreement with Sirius for Sirius Backseat TV, a live rear-seat entertainment service featuring three channels of kids' TV programming. Voyager from U.S. Telematics provides live, downloaded wireless mobile internet protocol TV (IPTV) and audio programming for rear passenger vehicle "infotainment." Voyager technology includes a mobile WiFi Internet hotspot to enable online computer use in the car as well as DVD, movies, TV, Xbox and other computer games. U.S. Telematics CEO Howard Leventhal said, "Our plan is to technically provision Voyager to output Sirius' music programming and offer Sirius subscriptions to Voyager users, so that kids in the rear car seat and parents in the front seat can all be 'piped-in.'"

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attached a picture in white contact me for more info. big_plans #221542

STEADY SEEKING LADY

I am looking for a male partner (38-50)who is willing to be exclusive with me for a long term relationship. Not asking for marriage. I am of average build, dark hair, brown eyes and am an Indian female. I have a wonderful job and attend some classes a couple of nights a week. I have two kids who stay at home with me. They are very precious to me. And they are not going to be a hindrance to our dating. I have a full and busy life. Therefore, the expectation is to see each other on a steady basis, and at the same time, being flexible. precious_me #331252

I LOVE MUSIC. YOU LOVE ME

I'm an indie/hipster girl who adores music and going to clubs and shows. Some of the bands that I'm into are Interpol, The Arcade Fire, Blonde Redhead, Bauhaus, The Smiths, Morrissey, etc. I'm into indie rock, electronica, punk, pretty much anything. I drink and smoke occasionally. I'm 21, 5'8", light-skin, dark brown hair/eyes. I work, am well-educated, funny, spontaneous, nice. #2215234

299665

HANDSOME RAKE

Out of work leaf raker/bagger seeks whimsical beauty with un-kempt auburn or chestnut hair, cool coarse hands and a penchant for wrestling. mellow_mo, 28, #101318

LET'S CONNECT

Radio engineer seeks stable long distance relationship. Need to connect immediately. Everywhere I go, I see broadband internet, but I just never hook-up. I need to meet that special someone that will plug me in so I can be heard. Must be reliable, connect easily, forgive errors and adapt to change. Should come from a good family. easy_going #101352

SIMPLICITY HERE

Simply put, I'm looking for a fun, casual relationship with only one person. That means one person for me and one person for you. :-) Every woman wants to feel safe with a partner, whether it's serious or not. It's key to her feeling comfortable to express her more intimate nature. I don't ask for much other than to hang out, enjoy your time with me and be available to chill.

MR. RIGHT

I'm actually posting this on behalf of a friend. Since she's been single she hasn't found the right guy and I'm doing this in hopes of helping her find Mr.Right. After you and I talk, if you are chosen then you will get to go on a date with her and who knows, it could be the perfect date and start of a new

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Hah are yo

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The new Zephyr/IP brings an effective package of sophisticated technology to the world of IP audio codecs. Optimized for operation over the public Internet and mobile phone data services, the Z/IP delivers when others can't.

NEW "AAC-ELD" (ADVANCED AUDIO CODING-ENHANCED LOW DELAY) CODEC: Z/IP introduces a new codec technology invented by the experts at Fraunhofer Institute, the people who brought us MP3 and AAC. Optimized for interactive IP applications, AAC-ELD combines features from MPEG AAC-LD and the Spectral Band Replication technology used in AAC-Plus. It's the most powerful audio coding tech on Earth, offering outstanding bitrate efficiency, low delay, and support for packet loss concealment.

NEW TELOS ACT (AGILE CONNECTION TECHNOLOGY): Z/IP brings automatic on-the-fly bitrate adjustment to IP codecs - a first. The Z/IP constantly monitors the network and sets its bitrate to the optimum value. A dynamic adaptive receive buffer also responds automatically to network conditions, minimizing the effects of the varying bandwidth and jitter that occur on real-world networks.

EFFECTIVE PACKET LOSS CONCEALMENT: The Internet usually has packet loss on audio streams, often ranging up to a few percent. The new AAC-ELD codec combined with ACT can conceal this loss, making for smooth audio even with rough network conditions.

TELOS-HOSTED Z/IP SERVER WITH DIRECTORY SERVICES: Enables you to look up, view the status and connect to other Zephyr/IP users worldwide, even through the toughest firewalls.

A STATE OF THE ART USER INTERFACE: And so you don't feel like you are on a blind date, we give you all of the status information you need on a sharp-looking color LCD which shows live network statistics and trace-route maps in an easy-on-the-eyes graphical interface.

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World Radio History

The Scoreboard

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HD Radio News

Radio World | Covering Radio's Digital Transition | April 9, 2008

FIRST PERSON

HD-R AM Measurement Explored

Pitfalls and Procedures of AM IBOC NRSC and Compliance Measurements

by Benjamin H. Brinitzer

In the Jan. 2 issue, I covered FM HD-R measurements and the pitfalls and procedure for proper measurements; in this column, I discuss the AM measurements.

Since 1994, AM stations have been required to make spurious emissions measurements, known in the field as "NSRC measurements" after the National Radio Systems Committee that developed the standards later adopted by the FCC.

When confronted with making the AM HD-R measurements, I found that we face some of the same challenges as the standard measurements but with a lack of field-distributed test equipment.

For AM NRSC measurements, there are several alternatives ranging from a spectrum analyzer to a "splatter monitor." However, for AM HD-R compliance, there is really only one choice for now, a spectrum analyzer with the right specifications and a loop antenna with adequate sensitivity.

An example of a loop antenna is the LP-3 series standard H-Field antenna made by Chris Scott.

I have also constructed my own using a 1/2-inch aluminum conduit, a conduit bender, a PVC junction box and computer ribbon cable. I use the PVC junction box to break the metal circle. I choose the aluminum for noise rejection.

Loop antenna design

There are several sites on the Internet that describe loop design with instructions for construction. You should not use any filters for tuning unless you can verify that the bandwidth is adequate to pass the HD-R signal unattenuated.

I have not found any commercial filters that meet the requirements of passing the Ibiquity mask for testing purposes, which is currently a bandpass of 29,433 Hz or 30 kHz. When all-digital operation is employed without the analog component, the bandwidth will reduce to 20 kHz, but for now we need the additional 10 kHz of passband.

The spectrum analyzer that Clear Channel Radio is using is an Agilent 4402B, which is no longer manufactured. However you can find the unit on the used equipment market, if you are lucky.

Any spectrum analyzer will work as long as it has the appropriate resolution bandwidth of 300 Hz, 90 dB of dynamic range, PWR sampling and low noise specifications.

As with FM, you should *not* use the sample ports available on the transmitter. These are mostly voltage samples and are before the antenna system tuned circuits, which in some cases will affect your results, due to the inherent filtering capabilities of these networks.

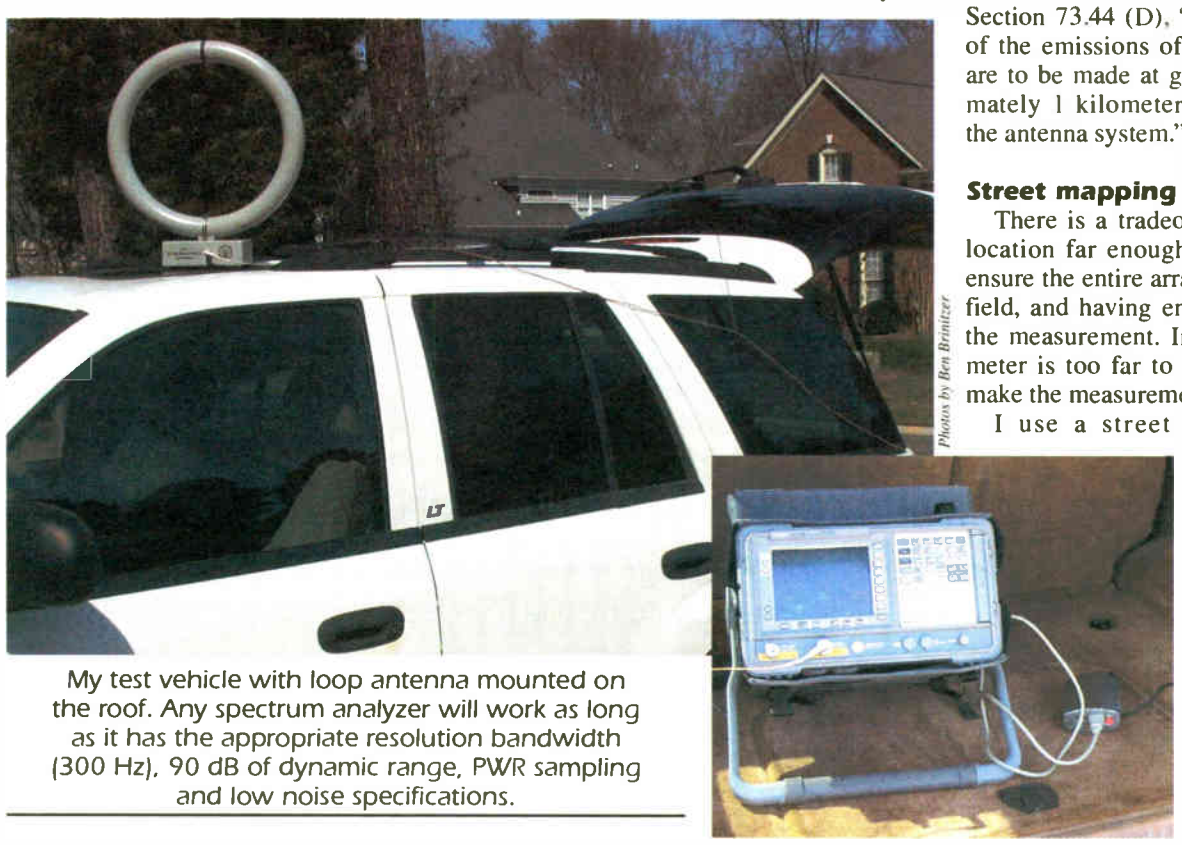
Some manufacturers recommend starting with a sample at the transmitter modulation port with the transmitter operating into a dummy load. This is a fair test to confirm the transmitter performance, but is not a valid measurement to certify compliance with Section 73.44 of the FCC's rules and the IBOC mask.

So where and how are measurements made?

The answer varies greatly depending on what type of station you are measuring. The key points to remember:

For directional arrays, pick a location such that you are in the main lobe of your coverage pattern.

For a non-directional station, pick some location at least one wavelength from the antenna. The FCC rules state in Section 73.44 (D), "Measurements made of the emissions of an operating station are to be made at ground level 'approximately 1 kilometer' from the center of the antenna system."



Photos by Ben Brinitzer

My test vehicle with loop antenna mounted on the roof. Any spectrum analyzer will work as long as it has the appropriate resolution bandwidth (300 Hz), 90 dB of dynamic range, PWR sampling and low noise specifications.

Street mapping software

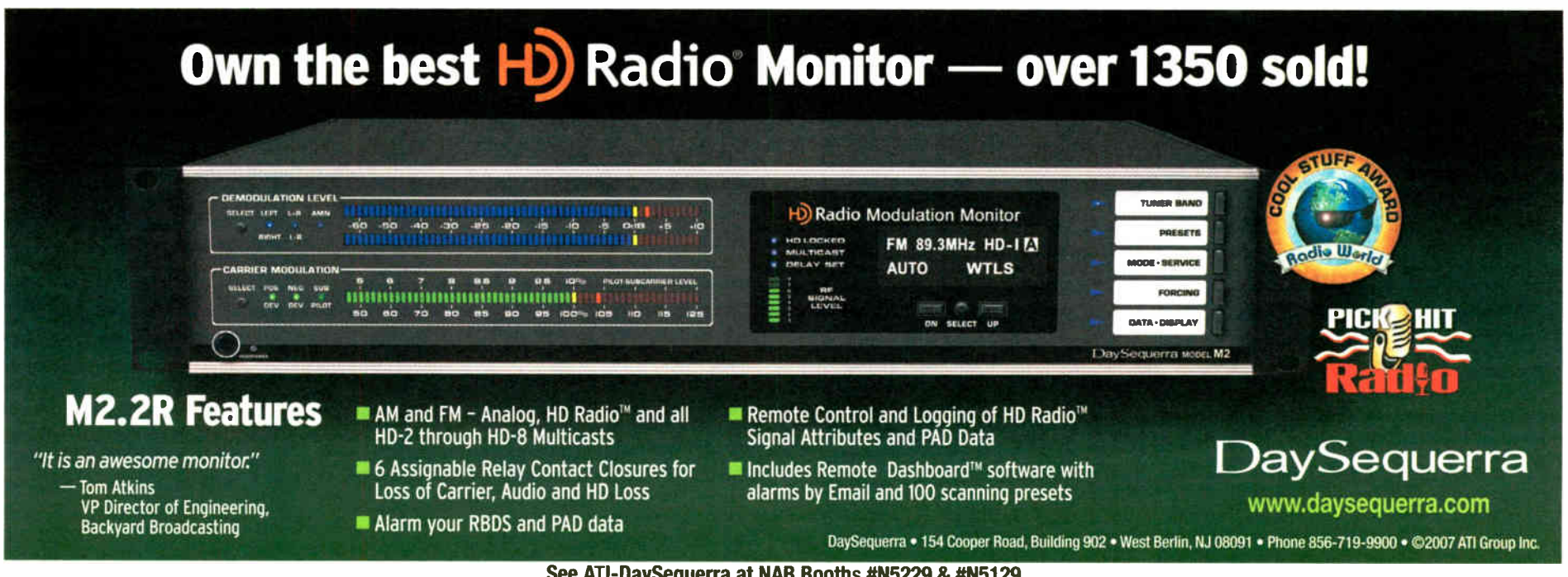
There is a tradeoff between finding a location far enough from your array to ensure the entire array is "blended" in the field, and having enough signal to make the measurement. In some cases 1 kilometer is too far to get enough signal to make the measurement.

I use a street mapping software and a GPS such as DeLorme Street Atlas or Microsoft Streets to locate a position no further than 1 km from the source site. The drawing tools allow you to plot a circle of 1 km radius from any location.

Most mapping software products have a database of stations already loaded so you can find your station easily. Seeing this visually allows you to locate the exact distance from the array and also easily locate "good locations" for your measurement. See the sample map shown.

It is important to know where your main

See MEASURE, page 18 ▶



See ATI-DaySequerra at NAB Booths #N5229 & #N5129

World Radio History

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Radio World's HD Radio™ Scoreboard

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

HD Radio in Seattle

Station	Frequency	Class	Format	Licensee	HD Radio
KVI	570	B	Talk	Fisher Comm Inc	
KCIS	630	B	Inspiration	Crista Ministries	
KBRD	680	D	Nostalgia	Estate-Marrow. Skip	
KIRO	710	A	Nws/Tlk/Spt	Bonneville Intl	
KTTH	770	B	Talk	Bonneville Intl	
KGNW	820	B	Chrst/Talk	Salem Comm Corp	
KHHO	850	B	Sports	Clear Channel	Yes
KIXI	880	B	Nostalgia	Sandusky Radio	
KGTK	920	D	Talk	Gottlieb, Alan M	
KJR	950	B	Sports	Clear Channel	
KOMO	1000	A	News	Fisher Comm Inc	
KBLE	1050	B	Christian	Sacred Heart Radio	
KPTK	1090	B	Talk	CBS Radio	
KWDB	1110	D	Adult Hits	West Beach Bcstg	
KKNW	1150	B	News/Talk	Sandusky Radio	
KLAY	1180	B	Nws/Tlk/Spt	Huntington. Clay	
KTBK	1210	B	Mexican	Bustos Media Entrprs	
KWYZ	1230	C	Korean	Suh, Jean	
KGY	1240	C	AC	KGY Inc	
KKDZ	1250	B	Family Hits	ABC/Disney	Yes
KLDY	1280	B	Classical	Seattle Streaming	
KKOL	1300	B	News/Talk	Salem Comm Corp	
KGRG	1330	D	Altve/Oldes	Green River Foundatn	
KUOW	1340	C	NPR/Nws/Inf	KUOW/Puget Sound	Yes
KKMO	1360	B	Mexican	Salem Comm Corp	
KRKO	1380	B	Sports	SR Broadcasting Inc	
KITZ	1400	C	Talk	Gottlieb, Alan M	
KRIZ	1420	B	R&B Oldies	KRIZ Bcstg Inc	
KSUH	1450	C	Korean	Suh. Jean	
KARR	1460	B	Religion	Family Stations Inc	
KNTB	1480	D	Span/Relgn	Seattle Streaming	
KBRO	1490	C	Span/Relgn	Seattle Streaming	
KXPA	1540	B	Divrs/Ethnc	MultiCultural Radio	
KZIZ	1560	B	Gsp/Inp/Tlk	KRIZ Bcstg Inc	
KLFE	1590	B	Chrst/Talk	Salem Comm Corp	
KYIZ	1620	B	UCH/HHp/Var	KRIZ Bcstg Inc	
KDOW	1680	B	Mexican	Salem Comm Corp	

Station	Frequency	Class	Format	Licensee	HD Radio	Multicasting
KPLU-FM	88.5	C	Jazz/NPR	Pacific Luth U	Yes	Yes
KMIH	88.9	D	CHR	Mercer Island School		
KAOS	89.3	A	Ecltc/Varty	Evergreen St College		
KNHC	89.5	C1	Top40/Dance	Seattle Public Sch	Yes	
KWFJ	89.7	A	Christian	Calvary Baptist Chur		
KGHP	89.9	A	AAA	Peninsula Dist #401		
KGRG-FM	89.9	A	Modern Rock	Green River Foundatn		
KASB	89.9	D	Alternative	Bellevue Sch Dis 405		
KUPS	90.1	A	AOR	U of Puget Sound		
KPLI	90.1	A	Jazz/NPR	Pacific Luth U		
KEXP-FM	90.3	C3	Variety	University of WA		
KSER	90.7	A	Variety	KSER Foundation	Yes	
KVTI	90.9	C1	CHR	Clover Park Tech		
KBCS	91.3	C3	Variety	Bellevue Comm Coll		
KXOT	91.7	C2	NPR/Nws/Tlk	Public Radio Capital	Yes	
KQMV	92.5	C	Rhymc/AC	Sandusky Radio	Yes	
KUBE	93.3	C	CHR	Clear Channel	Yes	Yes
KMPS-FM	94.1	C	Country	CBS Radio	Yes	Yes
KUOW-FM	94.9	C1	NPR/Nws/Inf	University of WA	Yes	Yes
KJR-FM	95.7	C	Clsc Hits	Clear Channel	Yes	Yes
KXXO	96.1	C	Soft AC	3 Cities Inc		
KJAQ	96.5	C	Jack	CBS Radio	Yes	
KBSG-FM	97.3	C	Clsc Hits	Bonneville Intl	Yes	Yes
KFMY	97.7	C	Clsc Hits	South Sound Bcstg LP		
KING-FM	98.1	C	Classical	Beethoven	Yes	Yes
KWJZ	98.9	C	Smooth Jazz	Sandusky Radio	Yes	Yes
KDDS-FM	99.3	C	Mexican	Bustos Media Entrprs		
KISW	99.9	C	Rock	Entercom	Yes	Yes
KKWF	100.7	C	Country	Entercom	Yes	Yes
KPLZ	101.5	C	Hot AC	Fisher Comm Inc		
KZOK-FM	102.5	C	Clsc Rock	CBS Radio	Yes	Yes
KNBQ	102.9	C	Country	Clear Channel	Yes	Yes
KMTT	103.7	C	Adult Rock	Entercom	Yes	Yes
KMCQ	104.5	C3	AC	First Bcstg Ptnrs		
KFNK	104.9	C3	Rock	Clear Channel	Yes	Yes
KCMS	105.3	C1	ChrsContemp	Crista Ministries	Yes	Yes
KBKS	106.1	C	AC	CBS Radio	Yes	Yes
KWPZ	106.5	C	ChrsContemp	Crista Ministries	Yes	
KRWM	106.9	C1	Soft AC	Sandusky Radio	Yes	Yes
KNDD	107.7	C	Alternative	Entercom	Yes	Yes

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

HD Radio at Entercom

Total stations: 114

Licensed by Ibiquity and on the air

Licensed by Ibiquity and not on the air

The HD Radio Bottom Line

	Total Licensed	On the Air	FMs Multicasting
	2,095	1,647	849
Last Month:	2,090	1,615	827
Last Year:	1,691	1,218	561

World Radio History

Measure

▶ Continued from page 16

lobe is located to attempt to locate a position in the center of the main lobe. If you are too close to a minima, you could get a skewed sample that will display as one set of side bands at greater amplitude than the other.

This is due to the slight difference in frequency of the digital carriers relative to the main carrier and how that is treated by the array tuning. Where there is a minima (also incorrectly called a null) in the pattern at carrier frequency, the location of the digital sideband minima will differ slightly in location.

Further description is beyond the scope of this article; however if you are interested in more information, there are white papers on the duTriel, Lundin & Rackley Web site: *www.dlr.com.*

Once you have chosen the location, it's time to pack up the inventory of test equipment.

You will need:

- A spectrum analyzer such as an Agilent 4402B or similar
- A 400 watt or larger inverter or a UPS with sufficient charge to power the test gear
- BNC test cables
- RF pad switchable (such as RF Industries RFA-4056-03)
- A loop antenna and tripod
- Notebook computer with map software
- GPS
- Storage device for the measurement results (pad and pen or floppy disk or USB thumb drive if your test ear supports it)
- Camera to record the location

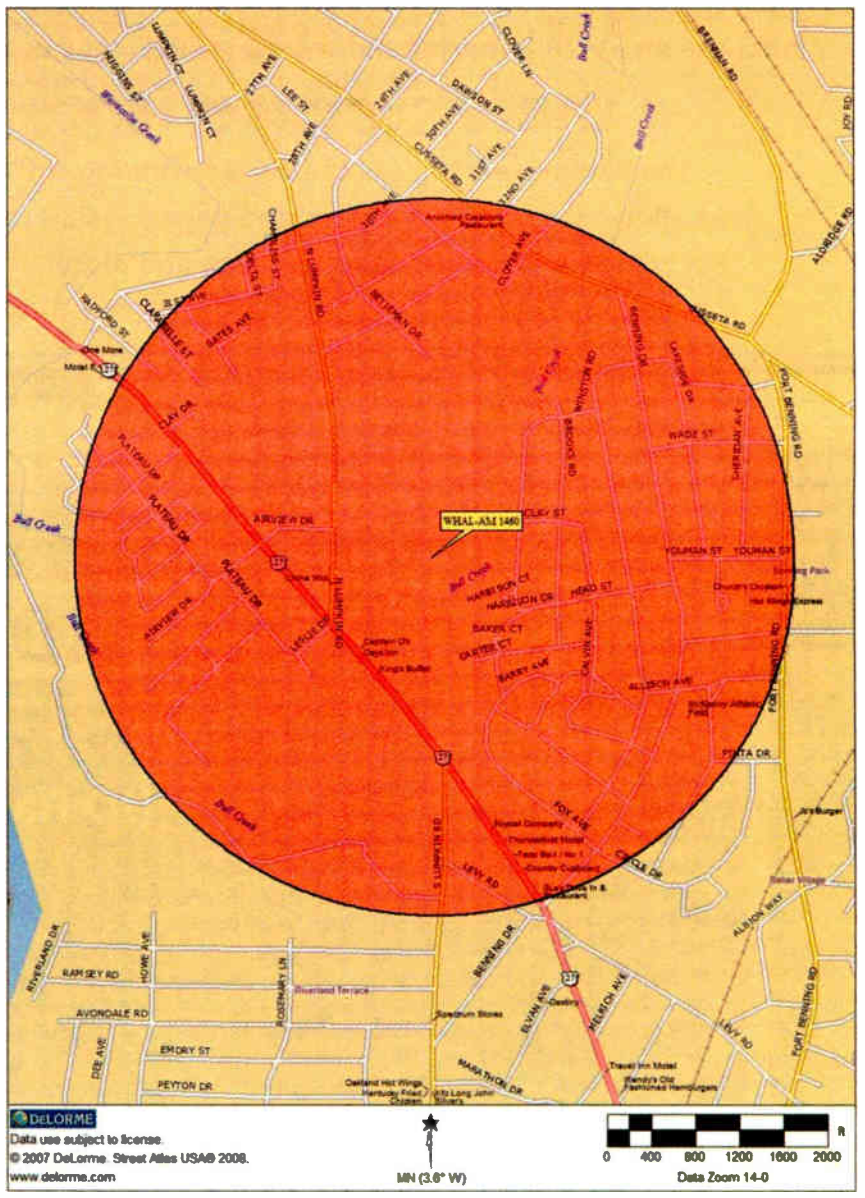
Spectrum analyzer settings

When you arrive at your chosen location, verify there are no re-radiation or noise potentials nearby such as power lines and set up the loop and tripod.

The spectrum analyzer settings for the HD measurement are:

— Resolution Bandwidth: 300 Hz
— Span 100 kHz
— Detect Peak = Off or Sample
— Average = on Minimum 100 samples (off to tune)
— Sweep: auto
— Sample points = 400 to tune 8000 to measure
— Marker set to peak delta
— Marker set to reference level
— Average type PWR

To set your reference, set the unit to detect Peak and interrupt modulation long enough to adjust the external switchable RF pad to reference the top of the display. *This must be completed with no modulation.*



I use street mapping software and a GPS to locate a position no further than 1 km from the source site. The drawing tools allow you to plot a circle of 1 km radius from any location.

Another acceptable method is to change the resolution bandwidth to 100 kHz and reference the top of the display or 0 dBm by changing the level of the RF pad. Then switch the RBW back to 300 Hz. When you have finished setting the reference the emissions should not exceed the mask values below:

AM HD FCC Spectral Mask

Each is offset from carrier frequency level relative to un-modulated carrier

- 5 to 10 kHz –34.3 dB
- 10 to 15 kHz –26.8dB
- 15 to 15.2 kHz –28 dB
- 15.2 to 15.8 kHz [–39 – (Freq offset in kHz – 15.2) * 43.3] dB
- 15.8 to 25 kHz –65 dB
- 25 to 30.5 kHz [–65 – (Freq offset in kHz – 25) * 1.273] dB
- 30.5 to 75 kHz [–72 – (Freq offset in kHz – 30.5) * 0.292] dB
- >75 kHz –80 dB

Some manufacturers of transmitter equipment have provided limit files on their Web sites for download if you are using an Agilent 4402B.

There should be at least 80 dB difference between the measured analog carrier signal and the noise floor. If you find otherwise you will need to relocate closer to the array, or choose a larger aperture loop antenna with better sensitivity. If there is a nearby station that is interfering, see if you can position yourself so that that the loop nulls out the interference.

Most loops will exhibit about –20 to –25 dB rejection at 90 degrees from the measured axis. If you find that you are out of mask due to noise or the noise floor is elevated, find a new location within the main lobe.

For non-directional measurements, we have been successful making the measurements at a distance of 1 wavelength from the antenna; in most cases the transmitter parking lot works well as a location to measure.

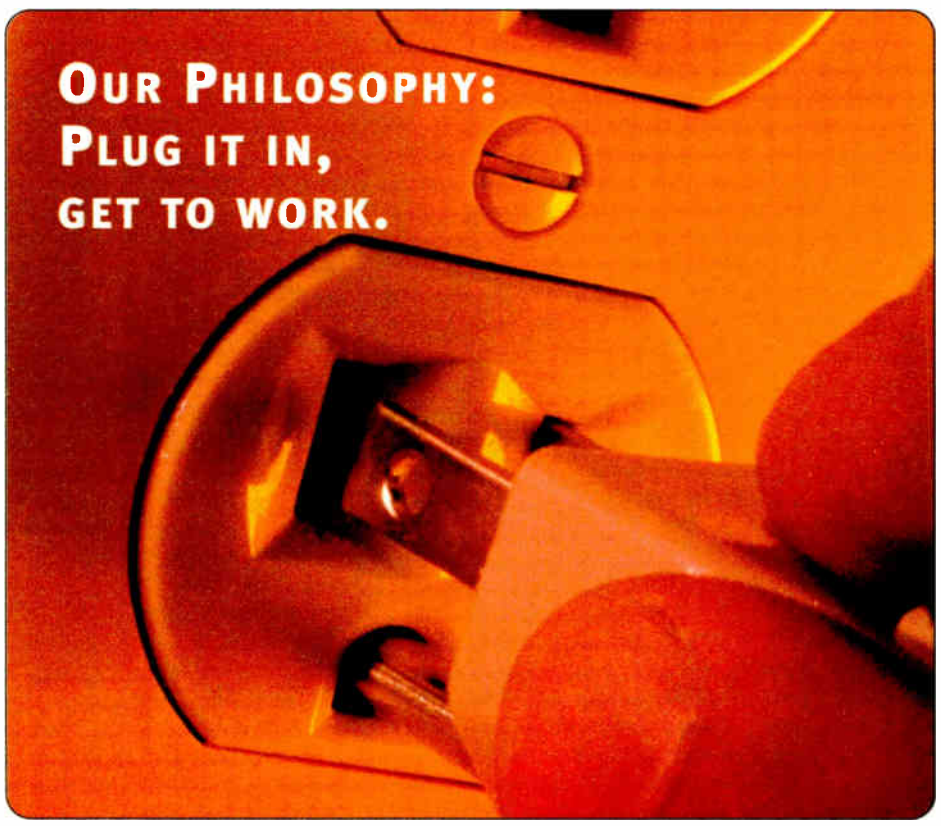
In fact, I recommend switching a DA to non-D to confirm your field measurements. In cases where the DA is 1 kW or less, you will have no choice but to make non-D or "close in" measurements in most cases, to get enough signal.

When finished, you should end up with a properly aligned waveform.

If you find that you have out-of-limit emissions, you should check magnitude and phase alignment of the exciter using a digital scope.

Brinitzer, CPBE, is regional vice president of engineering for Clear Channel Radio's Mid-South region.

This article includes information from a Broadcast Electronics December 2006 white paper, "Measurement Technique for Accurately Measuring the HD Radio Spectrum of an AM Transmitter."



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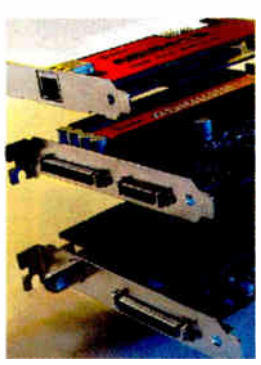

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Radio World's HD Radio Scoreboard is published in alternating issues. Selected data is from BIA*fn*'s MEDIA Access Pro™; the scoreboard also uses information supplied by sources including iBiquity Digital Corp., the HD Digital Radio Alliance and RW's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

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World Radio History

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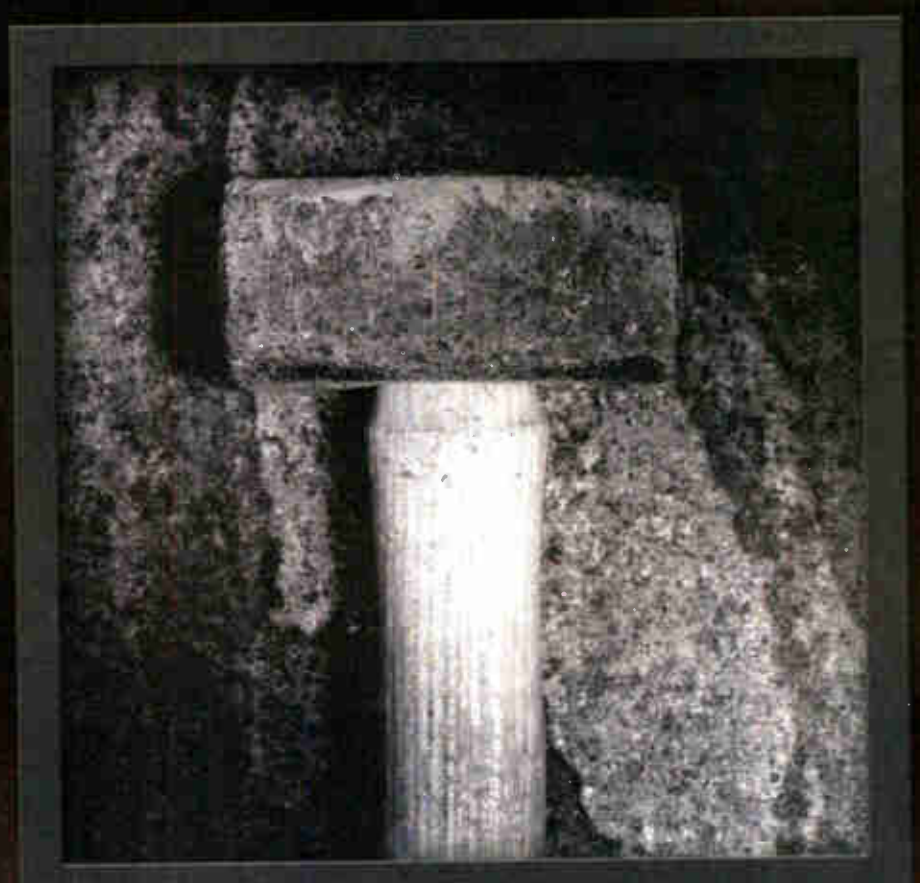

AND EVERYTHING IN BETWEEN

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World Radio History

Monorail: Las Vegas News Bureau

Radio Q&A: What's on Managers' Minds

Execs Weigh in on Localism, the 'Performance Tax,' Digital Radio, AM Translators and More

by Kelly Brooks

With the NAB show almost upon us, RW asked several radio managers and executives their thoughts on business issues facing the radio industry.

Comment on this or any story. Write to radioworld@nbmedia.com.

About This Section

The following pages provide a preview of sessions and themes of interest to radio managers at the 2008 NAB Show. The March 26 issue focused on sessions and topics related to engineers and technical managers.

What: NAB Show

Theme: "Where Content Comes to Life"

Where: Las Vegas Convention Center

When: April 11–17

Who: Attendance approx. 108,000 last year, including 27,000 international

How: *www.nabshow.com*

How much: BEC conference registration varies from $495 for NAB members registering in advance, up to $995 for non-members on-site. Price includes several related broadcast conferences. Students, spouses and exhibits-only rates available.

Hal Widsten
General Manager
KWED(AM) 1580
Seguin, Texas

'We need to make retail outlets and car dealers a smaller percentage of our gross billing and do a better job with the service sector and the Internet.'

Widsten is general manager of a stand-alone locally owned AM station in Seguin, Texas, Guadalupe County, part of the San Antonio metro.

What's your biggest challenge right now?

I'd say the biggest challenge this year is to motivate my sales staff to understand how valuable their time is and how to make the most of every minute.

How can our industry overcome its recent flat revenue performance, particularly given the current economic mood?

The "current economic mood" is the creation of the national media and I wish they'd find something else to peddle gloom and doom about.

If we're going to grow revenue we need to make retail outlets and car dealers a smaller percentage of our gross billing and do a better job with the service sector and the Internet.

What's your perception of the Portable People Meter?

I believe the People Meter will give us the first real look at how people listen to our stations, not how they vote for them.

I am hopeful that radio sales, programming and agency people will not overreact to the People Meter results, given the current sample sizes and how the base has changed. I always have believed that our cume ratings were higher than what Arbitron reported.

I have a feeling that some programming concepts that have slipped away in recent years will be revived.

Has your organization adopted HD Radio?

We're equipped all the way to the transmitter, but we have not purchased an exciter or a processor, and we have not signed an agreement for a license with Ibiquity. We're waiting for the nighttime AM problem to be adequately addressed.

Should the FCC allow AM stations to use FM translators?

Absolutely.

I believe the commission should start by allowing daytimers to apply for available frequencies, then move to those AMs with nighttime power less than 250 watts, and then stations with nighttime power less than 500 watts and so forth. We have areas within our daytime 1 kW coverage that we can't serve with 253 watts at night, and they are in flood-prone areas where the emergency information we provide is needed. A full-time translator would help this immensely.

What about more restrictive station staffing requirements as part of the commission's localism initiative. What impact would they have on your business?

I understand and agree with the commission's desire to have stations adequately serving their markets. If we're required to have a live person in our facility 24/7, we probably will have to shut down at midnight. I see that as negatively affecting us.

What if you woke up in the middle of the night to a big storm, turned on the station you depend on for information and they were off the air? I believe that will result in listeners and advertisers discounting the value of our stations, and radio in general, as this is likely to happen in a lot of small markets. It sure doesn't do anything to preserve and improve local service.

The technology to resolve this issue exists and I believe the commission should require stations to establish the proper contacts with emergency officials as we have and then install the equipment to get emergency information on the air, perhaps from a remote location if necessary until someone can reach the studios. Most automation systems in use today have this capability.

See WIDSTEN, page 22 ▶

Tom Joyner pictured using his one of a kind red PR 40.

World Radio History

Karen E. Slade
Vice President/General Manager
KJLH(FM)
Compton, Calif.

'I believe [the PPM] could destroy the public service or community service model of broadcasting, and promote mass-market broad-appeal vanilla formats.'

What's the biggest challenge facing you these days?

Generating revenue, controlling expenses, preparing for PPM while battling traditional and new competitors for top-of-mind awareness of our targeted listening audience.

How can radio overcome its recent flat revenue performance, given the economic mood?

This is the question of the day, month and year!

It is our job to keep pitching new business and grow existing business, which is tougher given the stagnate market and the ever-growing competitors. We are looking at growing our non-traditional revenue, offering additional marketing elements to traditional radio advertising plans and attempting to secure internet advertising dollars.

What's your perception of the Portable People Meter and its effect on business?

My concern about PPM does not involve the technology. it centers around the impact it has had on urban-formatted stations. It eliminates the listener's "intentional listening" habits and maximizes passive broadcast contact.

As an independent broadcaster with a Class A signal targeting an ethnic audience, I believe it could destroy the public service or community service model of broadcasting, and promote mass-market broad-appeal "vanilla" formats. If my beliefs are correct, it doesn't seem exciting or very entertaining: it would seem to promote passive verse interactive programming.

It will have to be monitored closely with full participation of the selected panelist, which should mirror the community of service demographics. It also should have a higher ratio of population-to-panel count than initially planned.

The commission is talking about tightening station staffing requirements as part of its "localism" initiative. If you're aware of those proposals, what impact would they have on your business?

I am not familiar with the proposed local aspects of the station staffing requirements you are referencing.

I am a proponent for most local initiatives in general. Supporting the communities in which you do business is one of the elements that keep radio relevant to the local audience: hiring from the markets you do business in, promoting national and local advertisers' products, good and services, and of course the public service elements through PSAs, news element and promotions.

Should lawmakers allow the adoption of royalties to artists, what NAB is calling a "performance tax"?

Generally speaking, additional taxation would hurt our current business model. It also could become a deterrent to our goals for expanding our current audio delivery platforms, including streaming.

Who is the radio business person you admire most?

Generally, I admire the small operators for staying the course in this consolidated, big-business environment, forgoing the temptation of selling out and continuing to provide quality broadcast service to their community.

Supporting the communities in which you do business is one of the elements that keep radio relevant to the local audience.

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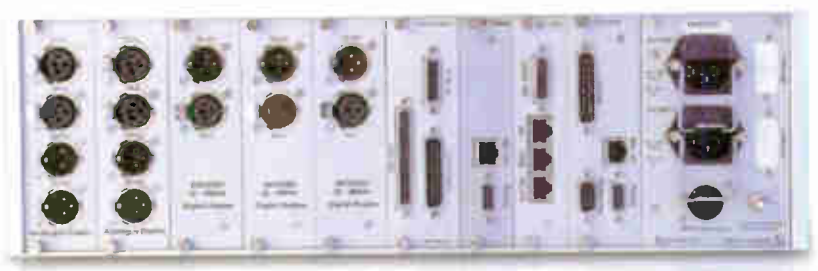

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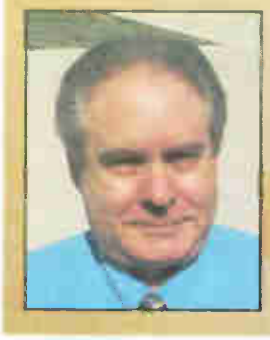


Steve Hafen
General Manager
KVIP(AM-FM) and KMWR(FM)
Pacific Cascade Communications

Hafen is general manager of KVIP and KMWR, a ministry of Pacific Cascade Communications Corp. KMWR is in Brookings, Ore., KVIP is in Redding, Calif., with 32 FM translators scattered throughout the western part of the country.

As a radio manager, what's the biggest challenge facing you this year?

To stay relevant to our listeners.

Being Christian non-commercial, we play programs from outside producers. All of these programs are available on the Internet. A listener can download the audio and listen at his or her convenience. They are no longer stuck with our set air time for the program. These providers even promote as much on our air during the program.

My aim is to introduce more local and regional content and make it available on the air, and on our Web site.

We're in the middle of a listener survey to see what programs really draw listeners, and which ones are "dead weight." That should help as we shuffle things. It's all made a little more difficult due to our coverage area. We hit more than 110 communities in parts of five states for a potential audience of more than 2 million.

Have you adopted HD Radio?

We have not yet adopted HD Radio. We have taken delivery on a new Nautel transmitter to replace the FM transmitter we bought used in the mid-'70s. We're raising needed funds for the rest of the system — STL, processing gear, air conditioning, etc. We went digital in our studios about a year ago.

I'm very pro HD for the FM, as there are a few music formats I'd like to look at for the HD2 signal. My board of directors is not too thrilled with the idea of paying a licensing fee for the Ibiquity system, though.

Should the FCC allow AM stations to use FM translators?

'If the FCC tightened staffing rules it would be a hardship for us.'

My chief engineer, Paul Brown, and I go back and forth on the idea of AM on an FM translator. KVIP(AM) is at 540 with 2,500 watts day, but only 14 watts at night. We currently simulcast with the FM at night. If we had a translator for the AM, we could put separate programming on and offer our listeners in Shasta County a choice, like they have during the day time.

On the other hand, we operate 32 translators, and see the band in many parts of the west filling up. We have the potential for two of ours to be bumped in the near future.

What about new station staffing requirements as part of the "localism" drive?

If the FCC tightened staffing rules it would be a hardship for us. We are manned weekdays from 6 a.m. to 5 p.m. Our equipment is able to dial out to each staff member, on a list, if anything goes wrong after hours. Chief engineer first, his assistant second, me third and so on.

We also have alarm systems at home that are activated too, which really makes the wives roll their eyes and grit their teeth, as they go off more often at night than during the day.

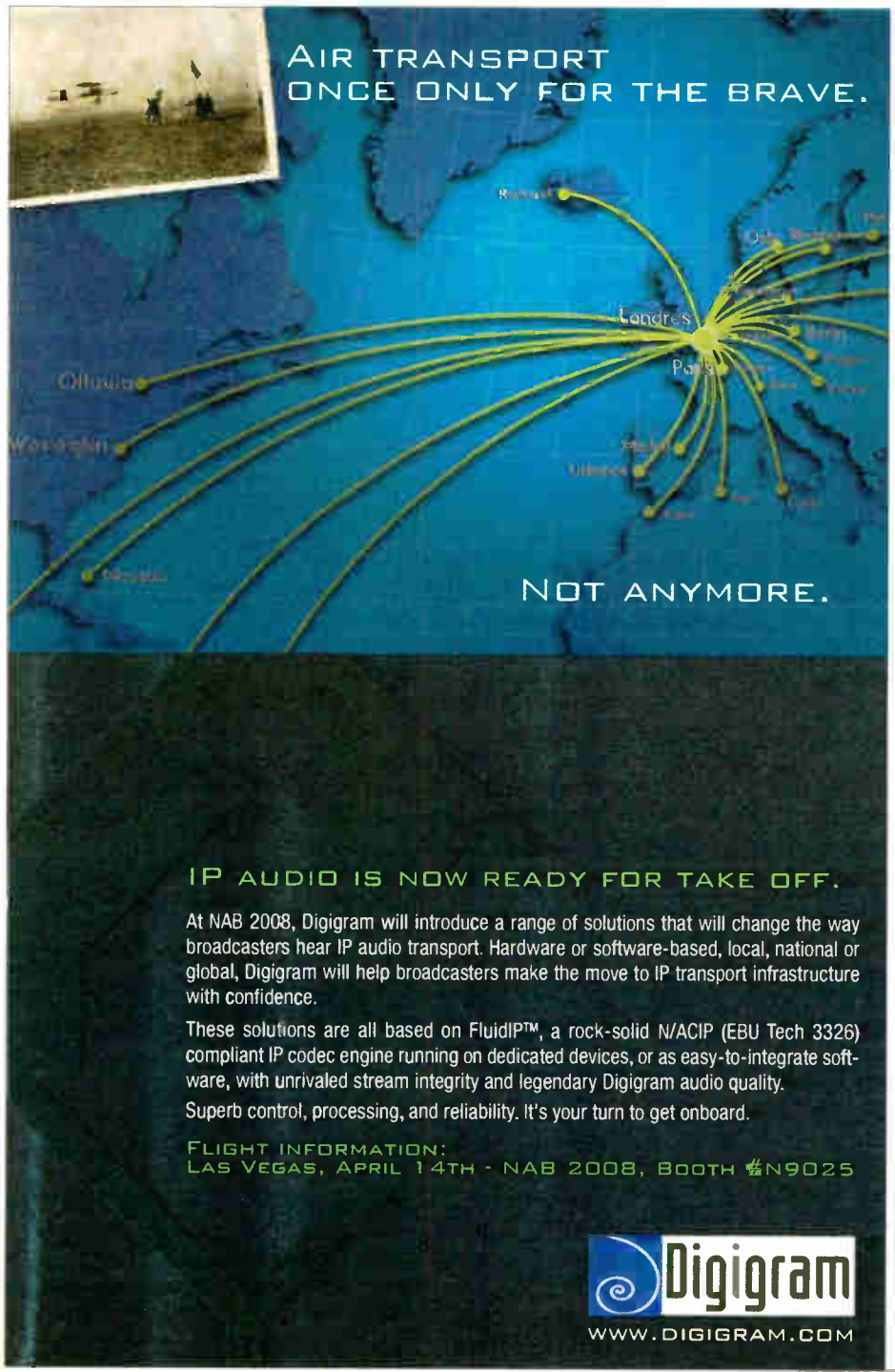
The rule also would mean staffing our station in Brookings, Ore. Currently, we run the station from here in Redding and it passes the KVIP(FM) signal through 100 percent. We can go on the air from Brookings if a staff member drives there. I know our board would not like to more than double our staff to cover the night here and Brookings 24 hours a day.

Who is the radio business person you admire most?

Larry Roberts of Fisher Radio in Seattle. I worked for him in Spokane, Wash. Hard-working, enthusiastic, loads of integrity. He got me out of programming and into sales, giving me a chance to grow into an area of the business that eventually led to management positions.

Will you attend the NAB Show?

I'll not attend NAB 2008. Our board only sends me or the engineer when we are ready to shop for expensive goodies. We've already got the shopping list done.



Widsten

▶ Continued from page 20

Should lawmakers allow the adoption of royalties to artists?

The radio industry and recording artists have had a symbiotic relationship for a long time. We play their music and they benefit greatly from the free promotion. We don't make a cent from their concerts, record sales or other income streams, and for their part they do not share in our expenses.

Radio airplay has made multi-millionaires of many artists, and the use of their music has generated listeners and profits for radio. It has been a good deal for both sides since the 1920s.

Now, foreign-owned record companies — all of the big four are controlled from overseas — are attempting to change the relationship by suggesting that radio stations pay what amounts to a performance tax on airplay. The record executives have tried to color this as a means to compensate artists.

This is happening at a time when record companies have lost control of their product due to digital duplication in many forms. They've lost a lot of sales because they've failed to control their product and embrace digital technology.

So if such a performance tax were levied, it is unclear whether the artists or the record companies would end up with the money from those fees.

The numbers I've heard are just plain frightening to a small-market operator like me, and I can't imagine what the guys in the big markets would have to pay. And for what? We already compensate the composers, authors and publishers through ASCAP, BMI and SESAC. We make rich stars out of the artists whose music we play. What do the record companies do for them?

This is a bad idea because you can bet that most of this money would go to the companies and not to the artists, and the percentage of our revenue they'll want will always get larger.

What notable capital improvement projects do you have on the calendar for this year?

I'd like to say that we'll begin HD Radio broadcasting this year, but the answer to that isn't clear at this time. We are planning to replace some studio equipment.

Who is the radio business person you admire most? Why?

Having worked in both large and small markets in my career, I admire people in both because there are big differences between them. My big-market guy is former WLS, Chicago programmer John Rook who programmed the Big 89 when it was Chicago's number one music station. I learned a great deal working with John then, and we remain friends today.

My small-market guys are Dean Sorenson, who is well-known in the midwest as a long-time station owner and operator, and Bud Walters with the Cromwell Group. Both these guys are great operators and people who have given of their time and money to serve their industry through their leadership in the NAB, RAB and the International Broadcasters Idea Bank, of which I also am a member.

Will you attend NAB 2008?

I am planning to attend. I believe David Rehr is doing a tremendous job and that all broadcasters should support the NAB as best we can.

World Radio History

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World Radio History

Tom Calococci
Operations Manager/Program Director
WPOW(FM)
Beasley Broadcast Group
Miami

'Labels need to remember that we pay the electric bill to run the transmitters, and pay a staff to deliver compelling content, which largely includes information about music and the artists.'

As a radio manager, what's the biggest challenge facing you this year?

Maintain relevance and find a way to re-engage young listens.

How can radio overcome its recent flat revenue performance and grow revenue, particularly given the current economic mood?

We have to think outside the box and do a better job in leveraging our on-site (Web) assets.

Dollars are moving from traditional media to the Internet, and there's no reason we can't be a part of that, and deliver compelling and effective promotions and marketing campaigns for our clients online.

What's your perception of the Portable People Meter and its effect on the business?

It should have been tested in small to medium markets first so that the kinks could be worked out. I think we as an industry need to embrace this; but Arbitron still has some issues delivering reasonable response rates from the 18–34 demo.

Has your organization adopted HD Radio? How's it going?

Beasley Broadcast Group is a big believer in the HD platform and we currently have three HD streams here in Miami: one for WPOW(FM) Power 96; one for Power Dash 2, which is formatted for dance music; and one for our sister AM station, WQAM.

It's been a slow go as far as adoption due to a lack of understanding amongst consumers as to exactly what HD Radio is.

The commission is talking about tightening station staffing requirements as part of its localism initiative. What impact would these have?

They would be terrible for our business. First of all, many stations in all markets across the country already do a great job in addressing local community concerns, particularly in times of crisis. The problem I have with this initiative is that it is so very subjective in terms of determining who is and isn't providing the proper level of local community support.

It also would create distractions that would be major time-stealers. I think you'll see a lot of individuals with personal agendas harassing radio stations to bow to their viewpoints on what is and isn't the proper type and amount of local content.

Should lawmakers allow the adoption of royalties to artists, what NAB is calling a "performance tax"?

Absolutely not. And this is something I feel very strongly about.

First of all, the level of pressure and heat I feel from labels, producers and artists to play their music directly speaks to the fact that they recognize the value we bring to the table. We give an audience to their music. If you take a look at history, you'll note the direct correlation of music sales to radio airplay.

Now, of course, the times they are-a-changin' — and quite rapidly. Radio companies are laying people off, cutting expenses such as research, promotion budgets and, in some cases, the hiring of new sales people. If we get hit with a new expense, and a sizeable one at that, there will be consequences.

Stations will change format to talk radio, it'll be more difficult to break new and emerging artists and it creates an uncomfortable atmosphere between the two industries, which have worked relatively well together for years.

And consider this: the labels have been known to be less than forthcoming with artist royalties to begin with, therefore, there's a good likelihood that the bulk of this revenue would never get to the artists. The labels need to remember that we pay the electric bill to run the transmitters, and pay a staff to deliver compelling content, which largely includes information about music and the artists.

We're also charged with "serving the public interest" and we give up a ton of commercial air-time in times of crisis and need, for example, 9/11, Hurricane Katrina, California wildfires, hurricanes, tornadoes and local flooding. Another expense would jeopardize all of this.

As it is, most radio stations are already operating on a bare-bones budget with far fewer persons than ever before. Always remember the law of unintended consequences and be careful what you wish for.

What notable capital improvement projects do you have on the calendar for this year?

Upgrading our studio facilities as well as our online platform.

Who is the radio business person you admire most? Why?

Jerry Lee, owner of WBEB in Philadelphia.

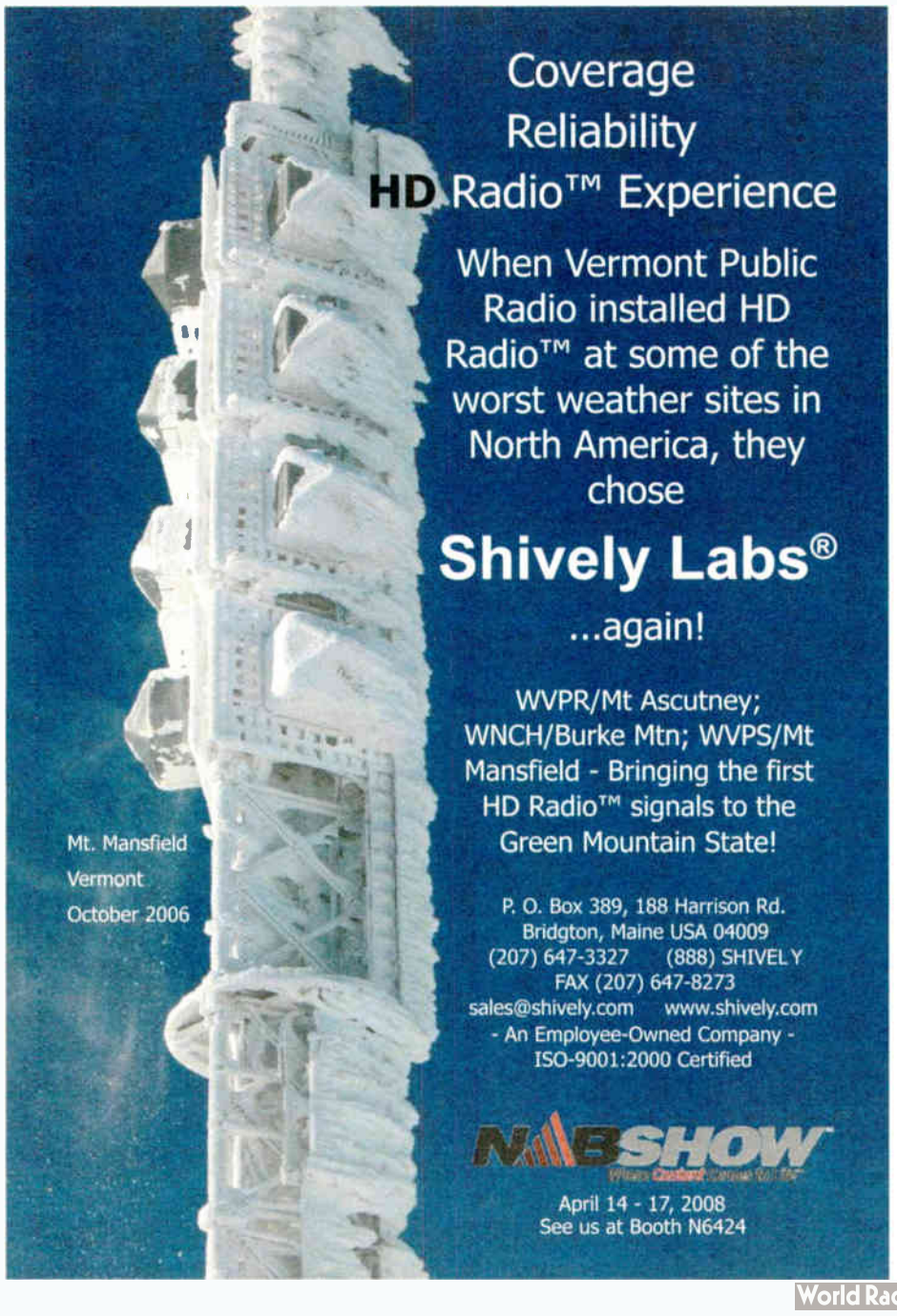
I love the way he thinks outside the box and I'm impressed by the level of success he enjoys as a stand-alone operator.

Also, I was impressed by the speech that Jeff Haley made at the RAB about moving into the future. I wasn't there, but I read about it.

I also have a great deal of respect for what Clear Channel has done with its online initiatives.

What's your full title and organization?

I'm the operations manager/program director for WPOW(FM) Miami. This and our Power Dash 2 stream are what I'm responsible for.



Bob May
Vice President/General Manager
KDKD(AM-FM)
Legend Communications
Clinton, Mo.

'We're pushing to get low-power FM for our AM station.'

Your No. 1 challenge this year?

To over-achieve on my budget. We have really pushed the envelope for '08, but we feel pretty confident we can make it with the people we have.

How can radio grow revenue, especially in the current economic mood?

We have to continue to talk up radio and its advantages; strengths against newspaper and other media. We train on this constantly.

Has your organization adopted HD Radio? If so how's it going; if not, why not?

No HD at this time. We're pushing to get low-power FM for our AM station.

Should lawmakers allow the adoption of royalties to artists, what NAB is calling a "performance tax"? Why or why not?

Good grief. Radio makes these artists famous, we help pack the arenas they perform in, we in some cases "make" them into stars. Leave us alone.

What notable capital improvement projects do you have on the calendar for this year?

We would sure like to install generators for our transmitter and studio locations. We have been fortunate not to have had many outages with ice, snow and tornados. But to continue to be a service to our local area in these situations calls for some backup plans. I could sure use a parking lot repaving too.

Who is the radio business person you admire most? Why?

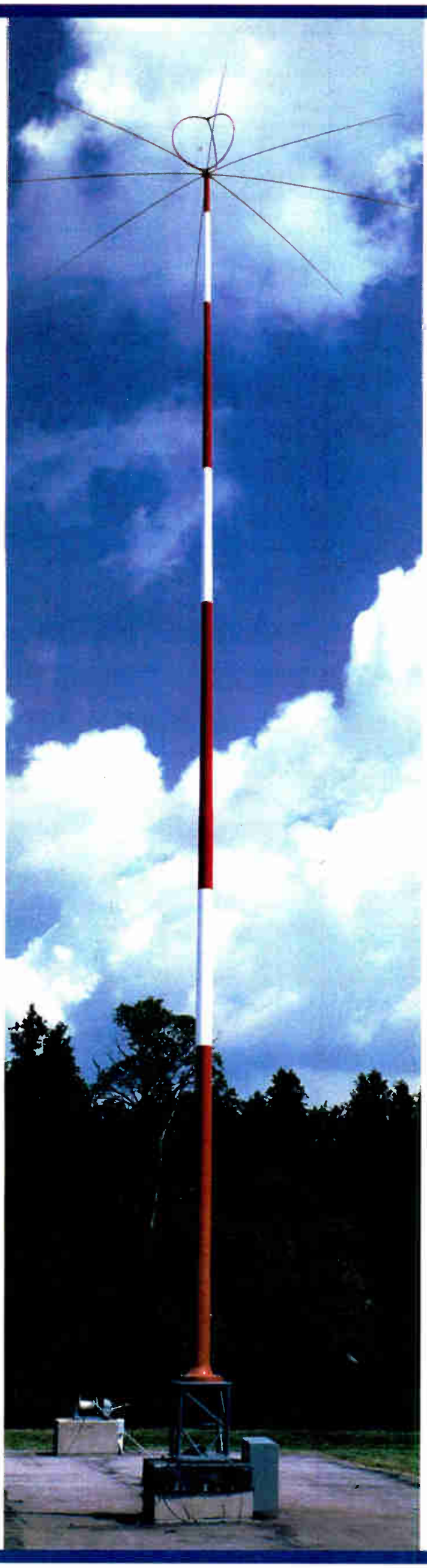
I really admire my past managers; those who helped me learn this business. David Noll, Dino Ianni, Herb James ... I also would have to include Larry Patrick in that list.

All of these gentlemen have not only given me opportunity but have taught me how to lead.

Will you attend the 2008 NAB Show?

No, but I attended the NAB Leadership Conference in Washington for the first time, the week of Feb. 25.

World Radio History



Free Standing AM Broadcasting Antenna

FCC Media Bureau Adopts Simplified Application Procedures for AM Nondirectional Valcom Antennas

By this Public Notice, the Media Bureau ("Bureau") announces simplified procedures for AM station construction permit applications which specify Valcom antennas. Based on its review of the Valcom field tests and internal reports submitted to the Commission for evaluation, the Bureau announces that it will not routinely require the submission of a proof of performance, current distribution measurements, or a formula for the vertical plane radiation characteristic for nondirectional AM facilities which utilize these antennas.

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World Radio History

Dennis Jackson

Owner/Founder
WCLX(FM)/WMEX(FM)/
WRIP(FM)/WQQQ(FM)

Jackson has built eight stations from the ground up; current holdings above are in Vermont, New Hampshire, New York and Connecticut. Non-coms are in the works for North Salem, N.Y., and elsewhere.

What's your top challenge right now?

Helping clients weather the recession strongly, and surviving the "localism" initiative. The "localism" NPRM is ill-conceived when it comes to small broadcasters. Hopefully it will never be enacted, but don't count on it.

How can radio overcome its recent flat revenue performance, particularly given the economic mood?

Our small independent stations don't seem to have that problem to the extent we hear reported elsewhere. And if we're down 3 percent some quarter, we consider it a natural cycle and don't change formats or fire anyone.

In order for the large corporate conglomerates, whose numbers dominate industry averages, to overcome floundering performance, I believe the answer is to take their losses and sell to smaller, more locally focused broadcasters. These guys know what to do to return those properties to prominence in their audiences' lives, and thereby grow them.

It has to do with talent and creative freedom, which are anathema to conglomerates. Multi-platform efforts, too, should pay off in larger markets given the growth of other media and their natural synergy with the power of radio to drive traffic. We need to think convergence.

Comment on the Portable People Meter.

It will disrupt the status quo of who can expect to be 0.3 ahead of whom in the next book, and that will vary by format, demo and ethnicity.

PPM may be an improvement, but one suspects that both systems are poor estimates of reality. There are too many anomalies, and who can swear to what's real?

Some agency business will get redirected in cases where the modus operandi is to beat down cost-per-point rather than bring about results at the cash register as we do in small markets. Some will see a small bonanza and others' oxes will be gored; but below the top tier it won't matter all that much.

'You can't easily legislate honesty and you can't force true localism.'

Has your organization adopted HD Radio?

No, because there are almost no receivers out there, and because neither consumers nor retailers really seem to care. So why should we not wait it out? Also because we will not support a for-profit standard that charges exorbitant fees.

Should regulators allow AM stations to use FM translators?

Of course. How could making an AM, especially a daytimer or nighttime-challenged signal, available 24/7 on FM possibly not be a great use of spectrum in the public interest? Especially when compared to the non-local programming that is on so many FM translators at present.

If these rules are imposed, I am concerned that we will be forced to cut back on the many public service projects we already undertake.

The problem is, how and when can an AM expect to obtain a translator if none are available for sale or that can be moved, and there's no window in sight?

Discuss your thoughts about the localism push further.

You can't easily legislate honesty and you can't force true localism. If passed as proposed, these initiatives would damage our small-market stations quite severely, and be counterproductive to the public interest.

Diminished localism in the wake of consolidation is why these initiatives are even being considered. Consolidation happened because corporate interests and their NAB were effective at lobbying Congress and the FCC. Our independent stations never lost our local focus or community service orientation. If any of the initiatives are passed, they should be surgically directed at the large, consolidated group operators whose miserly operations constitute the problem.

If these rules are indiscriminately imposed on all stations, I am concerned that our small, hard-working staffs will be forced to cut back on the many public service projects we already undertake in order to redirect their energies to unnecessary and redundant meetings, redeploy funds to overnight babysitters and utterly disruptive studio/office moves, and other window dressing that is meaningless in the context of our operations, our community relationships and our long-standing extant localism.

We also might choose to sign off overnight instead of hiring babysitters.

Should lawmakers allow the adoption of royalties to artists?

Of course not. Artists already see financial benefits from both CD sales and digital downloads, and radio airplay drives both. Shame on conglomerate operators for taking payola, but it sure proves the value of airplay.

I think what's really going on here is that the recording industry's ability to rely on CD sales for revenue is fading fast, and RIAA hasn't figured out how to morph and survive in a digital download world. They are thrashing about and trying to tap into radio industry revenues to shore up their failing model. If lawmakers allow such royalties, we may all drown together. Incidentally, the first step in saving a thrashing drowning victim is to knock them out.

Who is the radio business person you admire most?

Dick Ferguson. Dick is a great broadcaster, a creative guy and a fine human being.

It's always win-win with Dick. He built one of the first successful broadcast groups: NewCity, a precursor to Cox Radio. An industry leader, he served as radio vice president of the NAB. He has mentored many of our tribe, myself included, and he has always given back in spades to the community and everyone he works with.

Will you attend the 2008 NAB Show?

No. There's not much that's of interest to us there compared to what isn't. For meeting up with industry friends and colleagues and new contacts, we prefer the NAB Radio Show.

Joe Cassara

Operations Manager
WDNA(FM)/Bascomb Memorial
Broadcasting Foundation
Miami

Cassara says Mel Karmazin is 'the radio industry's Steve Jobs.'

What's your biggest challenge in 2008?

You've heard it before: digital, digital, digital!

At one point, I thought HD Radio was our industry's white knight. Now I'm convinced the future is "RoIP," Radio over IP, aka "Internet radio."

My new focus: How do I get my programming onto those millions of iPhones and iPod Touches — legally? Internet radio is in a holding pattern right now, especially for music pubcasters, thanks to royalty rate uncertainty. While the gracious folks at the Corporation for Public Broadcasting hammer out the details with SoundExchange, the clock ticks on.

Anyone who doesn't see the iPhone (and competing products) as the transistor radio of the 21st century has his or her eyes closed. I hear talk of making radio "relevant" again. Part of fulfilling that goal is accepting when old technologies and methodologies have become irrelevant.

How will the PPM affect our business?

The PPM is the second most exciting development in our business.

The idea that pubcasters don't care about ratings is a myth, though numbers are important to us for reasons different from those of our commercial counterparts.

Having access to almost instantaneous audience response, the kind television has enjoyed for decades, should be every programmer's dream.

Adopting electronic ratings is a hard pill to swallow for some, as programming methodologies held onto like gospel will have to fade away in favor of new strategies, and that's a tall order for the less nimble in the biz. I have no patience for the fusty, anti-PPM rhetoric being generated by some. Arbitron, and the Radio Research Consortium, is our partner, not our foe.

You mentioned HD Radio; have you adopted it?

Yes we have, and it's going wonderfully in terms of audio quality in areas where our signal suffered from pirates or building interference.

We're still toying with the notion of an HD2 stream. If we make such a commitment, we don't want to go the route of other stations and pipe in a satellite-delivered service. Our goal is to be live and local, unique to the community. But as I mentioned, RoIP may render this endeavor moot.

What impact would increased station staffing requirements have, as outlined in the FCC's "localism" initiative?

As a "Community Public Radio" station, our mission has been localism from the start.

I fail to see how staffing my overnights and late weekends with a board-op will make my station more locally focused. I'd be paying them to read the newspaper and goof off on the Web, and I'd rather channel those funds to a community outreach program, station sponsored arts events or a news division — more authentic and successful localism initiatives.

One point on which I do agree with the FCC: Community Advisement Boards are not just a good idea; they are a good business decision as well. How do you best serve your city of license? Invite it to take part in your organization. Everybody wins.

Should lawmakers allow the so-called "performance tax"?

From a jazz radio perspective, I was very disappointed to learn some of the staples of our playlist were members of the MusicFirst Coalition.

In public radio, we still believe in the symbiotic and mutually beneficial relationship between artists and stations; they generate beautiful works of art, and we promote them in the community and worldwide. No study will ever convince me that dynamic is flawed or broken.

And while I understand pubcasters will not be subject to the same royalty rates as commercial outlets, I'm still hurt to know certain jazz and blues artists, and their estates, seem to no longer believe in what radio does for them. We

World Radio History

William J. Wolfenbarger
President
Jodesha Broadcasting Inc.
KSWW(FM)/KJET(FM)/
KANY(FM)/KBKW(AM)

'We know radio works, but haven't done a good job at presenting that.'

Your biggest challenge?

In our small market, the biggest challenge is sufficient revenues to maintain an already slim staff. It's very difficult to cut corners when there was no fluff to begin with.

What do we need to do to turn around radio's recent flat revenue performance?

We need to be creative. We need to find alternative sources, including the dreaded "public service" campaigns. And we need to convert clients from Yellow Pages and other competing media.

We know radio works, but haven't done a good job at presenting that.

What do you think about the PPM?

Ho hum. We don't use ratings much anyway. The People Meter will tell us what station is being heard, but not whether it's on purpose. And not whether the person is actually listening.

Have you adopted HD Radio?

No. HD conversion will cost my small stations as much as major-market stations, yet my revenues to pay for the conversion are a very small fraction of the major-market station. Spending perhaps 30 percent or more of next year's revenue on something that may pay off after I'm retired doesn't excite me.

Should the commission allow AMs to use FM translators, as proposed?

Yes. Especially in the small markets, where the FMs have moved out to be closer to a major market, we are left with our AM teakettle battling the ever-increasing noise levels, and deteriorating ground systems which can't be rebuilt due to nearby construction or environmental issues.

The FCC is talking about tightening station staffing rules as part of its localism initiative.

Without exaggeration, this will put many small-market broadcasters out of business. With the challenges to the economy and the virtual disappearance of national revenues in the small markets, the numbers do not work.

In our case, our four stations are licensed to separate small communities. Requiring a main studio in the city of license will kill us. Requiring an on-duty operator at each control point will kill us.

The effect on a major market operator with eight stations all licensed to Seattle, for example, will be minimal.

For us it will be a death sentence.

Should lawmakers allow the so-called "performance tax"?

No. For years, radio stations have been responsible for the success of recording groups. And at least in the major markets, the labels have been willing to provide compensation, both above and under the table, for airplay.

What notable capital improvement projects do you have on the calendar for this year?

Building out our fourth station, and then waiting so see how many shoes drop.

Will you attend NAB 2008? Why or why not?

No. Cost.

certainly don't air their works for the revenue it generates, when more lucrative formats abound.

What notable improvement projects do you have on the calendar?

We're currently moving into a new multi-million dollar facility which will enable us to serve our audience and the community in ways we couldn't imagine before, including live performances, remote broadcasts of events, new cultural programming initiatives and achieving greater visibility.

A yearly music scholarship program is in the works too, generating a buzz with local underwriting clients.

Who is the radio business person you admire most? Why?

Without a doubt: Mel Karmazin.

Look at his track record, charisma and chutzpah. He is the radio industry's Steve Jobs. Speaking of which, Apple better cozy up with him and Sirius/XM when the satcaster merger goes through — and I'm hoping it will.

Wait a second, a terrestrial broadcaster cheering on the Sirius/XM merger? You bet. Call me nuts, but I cherish, not fear, competition. It keeps us all on our toes and is as American as apple pie and jazz on the radio.

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World Radio History

NAB Sessions Mirror Radio's Transition

How to Manage in a World Where Everyone Totes a Phone, Not a Radio, in Their Pocket

by Ken Deutsch

This may be radio's most confusing time since 1996, the year deregulation tore up the rulebook.

With a tsunami of competition from satellite, portable music players, the Internet and even cell phones, our industry is trying to figure out how to reconnect with our audience and its ever-changing expectations. Managers are faced with diminished human and financial resources, as well as disappointing consumer response to HD Radio.

Management sessions at the annual NAB Show provide a clear snapshot of the issues confronting the industry at any given time. Here is a preview of some of the Radio Management sessions of this year's convention in Las Vegas.

In a Sunday afternoon conference, *"The Whole Enchilada: Getting the Most Out of Your Creative,"* Doug Zanger, founder of Xhang Creative, will talk about how commercials, and the development of campaigns around them, can benefit advertiser and listener.

"We can tweak the way we say things, to make spots more casual and get away from those 30- and 60-second press releases some of us are forced to do," he said.

Doug Zanger. 'We can tweak the way we say things, to make spots more casual and get away from those 30- and 60-second press releases some of us are forced to do.'

"We also need to make spots more 'listener-centric,' and by that I mean a delivery style that plays well on one format may turn listeners off within the context of another format." When he worked at Portland, Ore.-based Rose City Radio, "we had a news station and a hip-hop station so I worked with two very different approaches to presenting the message. We tried to put ourselves in that specific listener's shoes."

The other challenge Zanger sees is trying to slow the process down.

"We have to work so fast these days, it's like making sausage," he said. "We are all familiar with the phenomenon of the '4 p.m. Friday spot.'

"But taking extra time to find the right voice and the right music can make a huge difference. And sales manager and production directors could probably benefit from working more closely together. Both have tough jobs but they need to have a little more empathy for the other guy.

"We don't need to reinvent the wheel; we just need to make a better wheel."

Is anyone there?

In a Monday morning session immediately following the state of the industry address, attendees will have a chance to weigh in on a hot topic: unattended station operation.

"I think that the greater issue is the FCC notice on localism," said Bruce Goldsen, president and general manager of Jackson Radio Works, and also moderator for this session.

"I agree that radio and TV stations should do everything they can to serve the local community, but I disagree with going back to the '70s and '80s on regulation. Regulators are struggling to figure out how to accomplish their goals but they're coming up with old-fashioned means."

Bruce Goldsen. 'I agree that radio and TV stations should do everything they can to serve the local community, but I disagree with going back to the '70s and '80s on regulation.'

Goldsen said technology has changed and legislation should reflect that.

"With computers and our ability to automate EAS, putting a minimum wage board operator on overnights (just to have someone on premises) is a worse move than making capital investments to make sure your station is covered for unattended operation," he said, echoing comments made by numerous broadcasters since the FCC proposal emerged.

"At our stations we have someone on call 24/7, so if there is an issue and we have to get information out quickly, we can do it from any location via the Internet, or we can get someone to the station within a few minutes. Just mandating that someone be sitting there doesn't mean everything will be problem-free; when you try to hire people to work those shifts you don't always get to pick from the cream of the crop."

Goldsen said one purpose of the session is to make broadcasters aware that unattended operation won't harm a station's ability to serve its community. The FCC has issued a notice of proposed rule making, but no final decision has been made.

Connecting through podcasts

Holland Cooke is a 38-year radio veteran, and has been a news talk specialist for McVay Media since 1995.

His Monday afternoon session *"Producing, Positioning and Promoting Your Podcasting"* will help managers navigate a platform that didn't even exist a few years ago.

"The very term 'podcasting' is dated," said Cooke. "When it was coined, iPod was the cool new thing. Apple intended it to be a music appliance but users figured out that they could swap non-music audio files and end-run the FCC-licensed AM/FM media gatekeepers.

People only buy radios with something else wrapped around them, like a car or an alarm clock.

— Holland Cooke

"Suddenly someone in Tacoma who's passionate about bonsai trees or Edsels could find someone in Terre Haute talking about them. But these users weren't just using iPod-brand players, and research estimates that roughly half aren't even listening in portable mode," Cooke continued.

"Everyone now totes a phone and nobody carries a radio in their pocket. People only buy radios with something else wrapped around them, like a car or an alarm clock. Radio is following, not leading, listeners' migration to the new platform and ditto for advertisers."

But now that we know how they came about, is anyone making money with podcasts, or whatever one wants to call them?

"Graperadio.com, a blog about wines, is selling out its avails at $1,300," Cooke noted. "With 15,000 registered users, that's a CPM of $86-plus. Mommycast.com did a six-figure sponsorship deal with Dixie Cups. Neither of these blogs has a transmitter. Non-station-based audio/video content is now a going concern and its biggest

See MANAGERS, page 29 ▶

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World Radio History

Rules and Regs: The Inside Story

Regulatory Conference Hears About Political Ads, Localism Implications and Other Issues

by Sharon Rae Pettigrew

Ahhhh ... it's 2008. And that — at least for broadcasters — means taking a look at political advertising rules and regs.

This is sure to be a historic year for politics. The NAB Broadcast Regulatory & Legislative Conference examines the complex ins and outs of political advertising with the April 14 session *"Political Advertising: Taming the Beast of 2008."*

Ann Bobeck, associate general counsel for NAB, will moderate a panel including Bobby Baker, head of political programming staff at the FCC; Dawn Sciarrino of Sciarrino and Associates; and Gregg Skall of Womble Carlyle Sandridge & Rice.

So what needs to be taken into consideration regarding political advertising?

Critical elements

"A radio broadcaster needs to understand and carefully apply all of the critical elements of the political broadcasting rules that stem from the Communications Act and from the Bipartisan Campaign Reform Act," said Skall.

"In a nutshell, a broadcaster must master these fundamental concepts and establish a chain of responsibility at each station for their successful implementation."

Skall outlined the following issues to be addressed at the session:

Legally Qualified Candidate: A broadcast licensee must know how to identify when a candidate is legally qualified.

Reasonable Access: A broadcast licensee must provide reasonable access to its station to all legally qualified political candidates for federal office.

Candidate "Use" and an "Exempt Program": When any legally qualified candidate makes a "use" of a broadcast facility during a "non-exempt" program, then an opposing candidate is entitled to make a request for equal opportunities.

Lowest Unit Charge: Certain candidate uses may qualify for the station's lowest unit charge.

Disclosure: Broadcasters must make full disclosure of the station's selling practices to all political advertisers.

Censorship and Sponsorship Id: All uses must be free from censorship and must bear the proper sponsorship identification.

Political File: Documentation of each request for a use of the station's facilities, together with other relevant information, must be maintained in the station's political file and access to the political file must be provided to the public.

Fairness Doctrine and Corollaries: The Fairness Doctrine and the rules governing political editorials and personal attacks have been repealed. Stations are still subject to rules regarding issue advertising and news distortion.

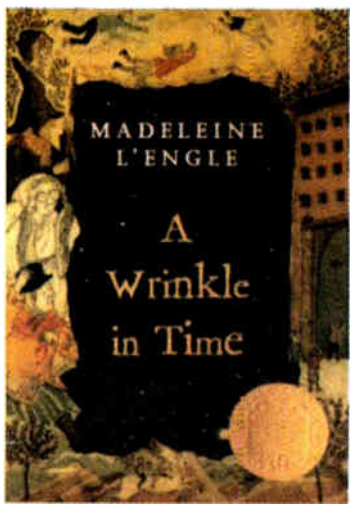
The session will provide an explanation of these concepts, in addition to related issues. At press time the organization of the panel was not complete, but Skall said other discussions are likely to revolve around how to make the most of the campaign season, including PACs and 527s and others non-candidate sources of advertising.

An image from Gregg Skall's presentation materials discussing compliance pitfalls. He's part of the session 'Political Advertising: Taming the Beast of 2008.'

Attendees will take a break on Monday from the alphabet soup of political broadcasting rules with *"GM Pizza & Beer Exchange — Back to Basics."*

Hosts Lou Vito, president of Ohio stations WBLL(AM)/WPKO(FM) and Louis Wall, president of Sagamore Hill Broadcasting, promise a fattening late-afternoon breather that focuses on the day-to-day management issues often overlooked in the new media environment.

Topics are expected to include legal costs, sales issues and time-consuming, irritating government forms.



A continuing education event focusing on broadcast law will develop themes presented in the book 'A Wrinkle in Time.'

Who, which, whatsit

Another Broadcast Regulatory & Legislative session includes the all-day *"ABA/NAB/FCBA Continuing Legal Education Seminar"* on Sunday at the Bellagio.

This will be the 27th year for this session, with a focus on daily issues facing broadcasters and their legal counsel.

NAB says the session is based on "a unique perspective suggested by the book 'A Wrinkle in Time,' in which three children travel or 'tesseract' through time and space with the help of three unusual beings they know as Mrs. Who, Mrs. Which and Mrs. Whatsit. They must go to the planet of Camazotz to rescue their father who is being held by 'IT' who seeks to impose sameness on all."

Seriously.

This session is sponsored by Dow Lohnes; Sheppard Mullin Richter & Hampton; Wilkinson Barker Knauer; and Wiley Rein. It is produced in conjunction

See REGULATORY, page 31 ▶

Managers

▶ Continued from page 28

problem is 'who knows it's there?'

"So it is imperative that stations transition to the new platform. Our biggest asset is also our most perishable: our existing audience and brand equity. Generally, podcast offerings are simply archived programming, which is fine for non-time-sensitive content.

"The smartest Internet-based content I'm seeing is that which never airs in long-form on AM/FM, but which is promoted by what we used to call 'spots.' These are commercials disguised as informative short-form features that invite the station's cume audience to hear/see/read/download more."

Holland Cooke. 'Graperadio.com, a blog about wines, is selling out its avails at $1,300. Mommycast.com did a six-figure sponsorship deal with Dixie Cups.'

Internet's new business model

Zach Braiker is president and founder of Refine+Focus, a consultancy based in Milton, Mass. In a Tuesday session, *"How to Activate Your Listeners Online,"* he will attempt to answer one of the most pressing questions managers have: "What the heck do we do with our Web site?"

"Online isn't a separate space removed from your listeners' lives," he said. "Whether they visit WebMD for health information or MapQuest for directions or your station's site for local weather, they live on the Internet. But they don't expect you to be all things to them. They expect you to provide what they can't find elsewhere."

Braiker says that one of the biggest problems with station Web sites is that they are too static.

"Part of what makes sites like FaceBook so interesting is that they function like malls where members of a community can meet," he said. "But if you have a Web site where there is nothing going on, it's like visiting a desolate strip mall."

And Braiker had two other urgent messages.

"The first is get an intern. There are tons of kids at universities looking for real experience, and they have a lot to teach you," said Braiker.

"And one more suggestion: If you have a bad Web site, don't bother to advertise it on the air. If visitors don't like it, they won't be back. It's like advertising for a bad store; you'll put it out of business. If you want to see an example of a great Web site, visit *www.virginradio.co.uk*."

Above all he tried to stress that a site is an online community where your listeners want to talk to each other and to the station.

"Encourage them to upload slide shows of their kids, their cars or their favorite concerts. You'll get more page impressions and that's good for business."

Other radio management sessions will cover the relatively new phenomenon of "radio going video," political advertising, how to sell more advertising in this changing economic environment and developing a loyal at-work audience for your Internet stream. At press time, the list of session moderators and speakers was still growing. For a description of the management track of the NAB Show, visit *www.nabshow.com/2008/conferences/radiomanagement.asp*.

Ken Deutsch is a former broadcaster. He says he knows how to bake squeaky reel-to-reel tapes, which gives you some idea how old he is.

World Radio History

LVCC Will Get an Extreme Makeover

The Convention Center to Undergo Major Renovations Through 2011

by Ken Freed

Within weeks after the NAB Show ends this year, the nearly 50-year-old Las Vegas Convention Center will start an $890 million full-facility makeover.

Construction on the LVCC "Enhancement Program" will extend through 2011 and into 2012, affecting the next three or four NAB conventions.

Since it opened in 1959 with the World Congress of Flight, the LVCC has hosted some of the largest trade shows in the world. Along with NAB and its larger cousin, the Consumer Electronics Show, shows in other industries using the entire 2 million-square-foot facility include the International Council of Shopping Centers, the Specialty Equipment Market Association, the National Association of Home Builders and the massive triennial Conexpo construction equipment show.

The project is being directed by the Las Vegas Convention and Visitors Authority, which operates the LVCC and the Cashman Center exhibition facility and AAA baseball field near downtown.

According to LVCVA Vice President of facilities Mark Haley, enhancements will include:

Illustrations courtesy Las Vegas Convention and Visitors Authority

A new transportation system along the front of the LVCC will reorganize entry and exit operations.

• Construction of a "grand lobby" that connects all three halls of the convention center behind a new street façade;

• A new meeting room concourse in the South Hall that expands on the existing 144 meeting rooms in the LVCC

• Upgraded "way finding" signage

• Enhanced video and communication technology in all meeting rooms

• Many more restrooms and "aesthetic enhancements" throughout the LVCC.

When complete, the LVCC will contain 3.8 million square feet overall with 1.9 million square feet devoted to exhibit space.

In and out

Planning for the program began in 2005, said Haley, and featured a focus group with representatives from the full-facility trade shows, such as Chris Brown from NAB.

"We asked what they wanted to see changed at the convention center, and that morphed into developing a plan for how to proceed."

All of the discussions pointed toward the same basic issues, he said.

"A lot of the conversation involved ingress and egress, getting in and out of the LVCC more effectively, such as confusion with taxi cabs, buses and private vehicles all using the same common areas." Other shared concerns included improved food services and more restrooms.

The one critical planning element that emerged, Haley said, "was the need to have something new in place before something old is taken out of inventory, such as meeting rooms and restrooms." Another element was making sure that the convention center gives as much advance notice as possible to event planners about when and where construction will be happening.

"A lot of bright people have brought a lot of good ideas to the table," said Haley. "We've anticipated as many of the majority of challenges ahead as possible, and we've communicated these to clients like NAB, so we address any concerns that they may have."

To guide the process, the LVCVA contracted for project management with MWH Global, based in Broomfield, Colo. Design duties were accepted by HNTB Architecture in Kansas City. The Chicago office of Turner Construction Co., headquartered in New York City, will handle the actual construction.

"We expect to be done with new construction of the grand lobby and meeting rooms by April 2011," said Haley. "But the entire project may not be done until early in 2012. We hope to have everything finished before NAB 2012, but when looking that long ahead, it's hard to be definitive."

HNTB Design Principal Todd Achelpohl said he's focused chiefly on improving convention center capacity and the total customer experience.

"We've responded to the need for more meeting rooms in association with trade show events, such as addressing major deficiencies in the South Hall," he said. "Another big focus is improving the front-of-the-house experience, so a grand concourse will connect all of the venues in the convention center, from the North Hall to the South Hall."

Get there from here

A new transportation system along the front of the LVCC will reorganize all entry and exit operations, Achelpohl said.

"Instead of having to go all the way to the far end of the North Hall or the South Hall to catch a cab, there will be a single point in the middle for taxis, and we've worked with the taxi commission to get more cabs in and out faster. Shuttle buses also will have a central location. The pedestrian traffic will have a separate route from the vehicular traffic. And all of it will be in front of the Central Hall, so [the] entrance is convenient to all of the venues."

When completed in 2012, the new LVCC will contain 3.8 million square feet, with 1.9 million of that devoted to exhibit space.

Once inside the lobby, a new video signage system will direct people to where they need to go.

"This way-finding system will extend to video screens outside each meeting room," said Achelpohl. "The video network will support sponsored content, like a planned NAB Channel, including video projection on the huge lobby walls that will be far more effective than a static banner."

The older areas of the LVCC will enjoy a "significant renovation," Achelpohl said.

"All the meeting rooms are going to be

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World Radio History

Regulatory

▶ Continued from page 29

with the American Bar Association and Federal Communications Bar Association, and is aimed at broadcast attorneys.

This year's featured sessions include "Year in Review (Return of Regulation) — Life in Camazotz"; "Content Regulation — Where is the Happy Medium?"; "Transactions in the New Era — Tesseracting for Fun and Profit"; "First Amendment/Newsgathering — Who Which and Whatsit"; and "Making the Transition to Digital and Beyond (DTV, HD Radio and Online/Mobile) — Like and Equal are Not the Same Thing."

This daylong session is broken up with an hour-and-a-half midday luncheon that is a session in itself: "Public Interest — What Is 'It'?" will examine how broadcasters can best serve their local communities in today's world.

"This full-day event has become one of the preeminent broadcast law conferences in the U.S., bringing together broadcast lawyers to discuss and learn more about the regulatory issues facing the communications industry," said the NAB's Dennis Wharton.

The big guys

An FCC breakfast on April 15 will address trends and topics of concern to broadcasters as well. David K. Rehr, president and CEO of NAB, moderates.

"We've extended an invitation to FCC Chairman Kevin J. Martin and look forward to having him at the NAB Show," said the Wharton.

"Needless to say, this is an important time for all broadcasters from a regulatory perspective. The localism proceeding is one that we are watching very closely, and all television broadcasters have a vested interest in a successful conclusion to the DTV transition." The breakfast gives attendees an opportunity to ask questions and hear directly from the chairman.

Later that day, *"The Regulatory Face-Off"* continues a look at "inside Washington" issues with top policy-makers.

"This session will allow face-to-face discussion with FCC commissioners on all of our issues — from content regulation to LPFM stations to interference caused by unlicensed personal-portable devices in the digital television band," said Wharton.

He called it a chance for broadcasters to "really take the measure of the FCC commissioners" and to get a better understanding of how challenging and complex the issues are that come before the FCC.

To follow, the NAB Associate General Counsel Suzanne Head moderates the session *"Coping With Copyright: From Performance Tax to Internet Streaming."*

This workshop will examine what panelist David Oxenford, partner, Davis Wright Tremaine, describes as the two biggest issues for broadcasters, "the proposals for a 'performance tax' on broadcasters and the royalties for the streaming of music on the Internet."

Royalty rates

According to Oxenford, radio broadcasters need to follow "the performance tax issue that would impose a royalty that would go to the artists and record labels, in addition to the royalties that already go to ASCAP, BMI and SESAC for the composers.

"And, using the standard proposed in the legislation that was introduced in Congress at the very end of last year, the royalty could several multiples of the amount paid to the composers."

He stressed that radio broadcasters should be informed, and be prepared to lobby their representatives on this "very bottom-line issue."

Oxenford addressed the streaming royalty issue that was decided by the Copyright Royalty Board last year.

"Between now and 2010, the rates will be two-and-a-half times what they were in 2005. Legislative and appellate efforts are underway to overturn this decision. Broadcasters who are streaming need to follow this issue, make sure that they are in compliance with the new rules and participate in lobbying efforts to undo the royalty."

Oxenford contends the record companies and artists are trying to get a significant piece of broadcasters' revenues, "perhaps as much as 20 percent of gross revenues, which would significantly change the economics of the broadcasting industry."

Other issues and trends Oxenford and fellow panelist Jennifer Tatel, associate at Sidley Austin, expect to discuss include the use of music in various digital formats by broadcasters "in podcasts, downloads and other digital devices. All present lots of questions over obtaining the proper rights when music is used," said Oxenford. "There may be some discussion of other royalty issues, such as SESAC's new royalty on multicast HD channels."

The second-to-last session of the conference is an all-encompassing *"Everything You Want to Know About FCC Regulation But Have Been Afraid to Ask."*

Moderator Jerianne Timmerman of NAB joins panelists Jack Goodman, Wilmer Cutler Pickering Hale and Dorr; Frank Jazzo, Fletcher Heald and Hildreth; and Marissa Repp, Hogan and Hartson.

The group is prepared to address issues including new regulatory initiatives and the FCC's enforcement practices, as well as zoning, localism and public interest obligations.

The full agenda for the three-day conference is at *www.nabshow.com.*

The author can be reached via e-mail at rovernewsservices@yahoo.com.

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World Radio History

LVCC

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modernized with new technology, which includes new video projection systems, new lighting and much better acoustics. There will be a wireless network through the building, including all the public areas, and all the exhibit halls will have easier access to the telecommunication backbone, which already is very robust. The challenges to electronics in the South Hall will be greatly improved."

The entire project may not be done until early in 2012. We hope to have everything finished before NAB 2012.

— Mark Haley, Las Vegas Convention and Visitors Authority

Aramark will expand the food service operations, he said. This will include a full-service club restaurant with a sophisticated menu, an upscale "multi-station venue" akin to the hotel buffets and "grab-and-go" box lunch vendors on the exhibit floor. "The convention center will continue to be the most expensive place in Las Vegas to get a hot dog," he said.

HNTB has completed the overall facility design. "And we're about halfway through the detailed facility design," Achelpohl said. "Construction will start with the onsite utility work this coming fall, well after NAB, and site mobilization will be fully under way by NAB 2009. We will be doing the excavation, construction and renovation in phases, such as building only one section of the new front entrance at a time, so the facility remains as fully functional as possible at all times."

"The key thing is that the authority is taking extraordinary measures to maintain operations during construction, so campus events do not seem significantly different than they currently are."

Watch Vegas Grow

Although renovations of the Las Vegas Convention Center will not begin until after the NAB Show, curious NAB visitors with time on their hands can look for other construction projects in the vicinity.

Construction has begun on a new Metro Police Substation and a Clark County Fire Station, according to Mark Haley, vice president of facilities for the Las Vegas Convention and Visitors Authority. Serving the LVCC and the northern end of the Strip, both units will feature state-of-the-art equipment for the Central Area Command. Currently at the steel and concrete stage, this construction project may affect the bus route to the east entrance of the South Hall.

These LVCVA projects are a direct response to a citywide boom in hotel and casino construction slated for completion by the end of 2012 and valued at more than $40 billion. Some of the largest are near the convention center.

Catercorner from the Hilton Hotel adjacent to the LVCC, construction continues on the $2.2 billion Encore expansion of the Wynn Las Vegas on Las Vegas Boulevard. The Encore is set for completion in December.

Three blocks away, across from Circus Circus on Las Vegas Boulevard, is one of the larger hotel-casino projects in the city's history. Scheduled for opening in late 2009 is the Fontainebleau, a $2.9 billion project that will add 3,800 hotel rooms and 400,000 square feet of meeting space to the existing city inventory of more than 133,000 guest rooms and 9.5 million square feet of convention and exhibit space.

Dwarfing this venture, however, is the new Echelon Place on the former Stardust Hotel site on Las Vegas Boulevard and Convention Center Drive. With completion set for the third quarter of 2010, this $4.8 billion hotel and casino project features the Hotel Echelon, The Suites at Echelon, The Meeting Center, the Shangri-La, the Delano and the Mondrian.

"This project may cause some traffic obstruction on the Strip," Haley noted.

Even more massive is the MGM Mirage "Project CityCenter" on 76 acres between the Bellagio and the Monte Carlo. Aiming for completion in November 2009, this $8 billion project will boast a 4,000 room resort hotel along with the Mandarin Oriental and Harmon hotel and residences, each with 400 units, plus the new Vdara Condo Hotel.

"The CityCenter project," said Haley, "is the largest construction project ever in Las Vegas."

— *Ken Freed*

Las Vegas News Bureau

Construction continues on the massive MGM Mirage City Center, the largest construction project ever in Las Vegas, according to the LVCVA.

More at NAB Show 2008

The stories in this issue focus on topics of interest to radio within the Radio Management and Broadcast Law and Regulatory Conferences. For a full agenda see *www.nabshow.com.*

Registration provides access to sessions in the Broadcast Engineering and Television Management Conferences as well.

Here are selected other events of interest at the show:

SUNDAY

✓ 8 a.m.–1 p.m.
"Focus on Leadership"
Rob Curley of Washington Post Newsweek Interactive on how broadcasters can take advantage of their online space and other platforms "to create hyper-local content to drive audience, viewers and advertisers."

Rob Curley

MONDAY

✓ 9–10:15 a.m.
State of the Industry Address and NAB Distinguished Service Award Presentation
David Rehr speaks, Charles Osgood is honored.

Charles Osgood

✓ 11:30 a.m.–12:20 p.m.
"Radio Goes Video: The New Business Model of Monetizing Online Video"
Features Thom Callahan of the Radio Division of the Associated Press Broadcast News Center and Dan Halyburton of Emmis.

✓ 3:30–5 p.m.
"Social Networking and the Democratization of Broadcasting," Super Session
Peggy Miles of Intervox moderates, John Gage of Sun Microsystems keynotes, others discuss.

TUESDAY

✓ 12:15–2 p.m.
Radio Luncheon
Crystal Radio Award winners are announced; Larry Lujack is inducted into NAB Broadcasting Hall of Fame. Robert W. Pittman speaks. NAB gives the first Crystal Heritage Award for long-term commitment to community service to WUSL (FM) in Philadelphia.

✓ 4:15–5:30 p.m.
"Regulatory Face-Off"
FCC Commissioners Tate and Adelstein.

Deborah Taylor Tate

WEDNESDAY

✓ 7 a.m.
Broadcasters Foundation of America Pioneers Breakfast
Now named the Ward L. Quaal Pioneer Awards, they'll be given to Ed Christian, Robert "Doc" Fuller, Bruce Morrow, Larry Bentson, Stanley S. Hubbard and Tom Oakley. RSVP to *ghhbcast@aol.com*

✓ 9–10 a.m.
"Conversation with Alvin Toffler — The Future of Digital Media," with the author of "Future Shock"

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World Radio History

Rack Shelf Adds a Second Pair of Hands

by John Bisset

Keith Jentoft is president of RSI Video Technologies in White Bear Lake, Minn. He has been following the comments about copper theft at transmitter sites and writes that his company has developed an affordable solution that is being used by Duke Energy, AT&T and many homeowners.

The solution is a wireless portable video security system that runs on batteries.

When an intruder trips the motion sensor, the integrated camera takes a 10 second video and sends it over the cell network to a monitoring station. Police respond faster to a crime in progress.

You can see actual apprehensions on *www.copertheft.info* if you click on "Catching a Copper Thief in the Act." You can also see a rooftop AC unit being saved in "Videos of Actual Incidents."

The site has 14 video clips of various types of theft or vandalism. My favorite is the "storage container" showing someone hammering away at the lock. You'll find the video clips fascinating.

It's obvious the system works and has a proven track record. This is certainly not the only solution to transmitter site vandalism and theft, but it is one with many applications.

★ ★ ★

Have you ever found yourself having to replace a heavy piece of equipment, like a processor or as shown in Fig. 1, a heavy CCA exciter by yourself?

Sometimes, just getting the old part out is as hard as putting the new one in. Some time ago Winston Hawkins discovered a way to make this a much easier job.

Winston carries a standard rack shelf with him in his truck. Whenever he needs to change out a piece of equipment, he installs the rack shelf, upside down, in the rack just under the old piece of gear, as seen in Fig. 2.

Using the shelf as a brace, the heavy equipment is unscrewed. With the shelf bearing the weight, the old equipment can be taken out of the rack easily, as shown in Fig. 3. The new equipment can just as easily be installed.

No more balancing equipment with one hand, and trying to unscrew rack bolts with the other. Best of all, no more cross-threaded bolts, since both hands can be used to remove or insert rack bolts. Simple, and it works.

Winston Hawkins is the technical director for Personal Achievement Radio and can be reached at *winhawk@parfm.com*.

★ ★ ★

Contract Engineer John Ragsdale had an experience where diagnosing the problem with his client's STL meant looking beyond the STL.

Collocated on the tower with KQSS(FM) in Globe, Ariz., is a pager company, with an antenna about 75 feet away from the STL antenna. The pager transmitter had quit, so John met their tech to let him into the site.

The final PA module failed on the pager transmitter and was replaced. On the way back to the studio, John noticed the station modulation going up and down in level. John couldn't really diagnose the problem from his digital STL meters, but then it dawned on him that the problem occurred after the pager tech left the site.

On a hunch, John pulled the AC plug to the pager transmitter; the problem went away. Plugged back in, the audio level began fluttering again. John switched to his backup analog STL, which wasn't affected, and called

See FILTER, page 37 ▶

Fig. 1: A tricky job — removing a heavy exciter by yourself.

Fig. 2: Screwing the shelf below the heavy equipment provides support.

Fig. 3: Rack shelf in place after the exciter is removed.

All NEW! from Inovonics!
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Model 525

AM Reference Receiver & Mod-Monitor

A wideband frequency-agile receiver for accurate off-air AM modulation measurements, even with 'hybrid digital' (IBOC) transmissions. Menu-driven operation features total-mod, RSSI and noise readouts, and a user-selectable variable audio cutoff simulates the response of consumer radios. Supplied with weatherproof loop antenna.

Model 720

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The new 720 surpasses all previous designs in ease of installation and operation. Serial and USB interface has built-in diagnostics for quick automatic connection to station automation. Supplied with self-guiding software, a front-panel LCD shows all setup and operating parameters without the need of a computer on site! Incoming data from automation can be seen on-the-fly and scrolling messages are displayed exactly as they appear to listeners. The automation command set is compatible with earlier models and a new 'no-headers' mode supports unformatted streaming text feeds.

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World Radio History

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For more information visit:
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The Big Picture

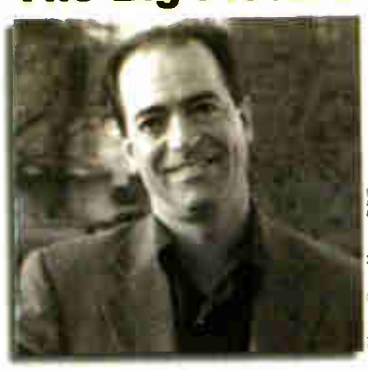
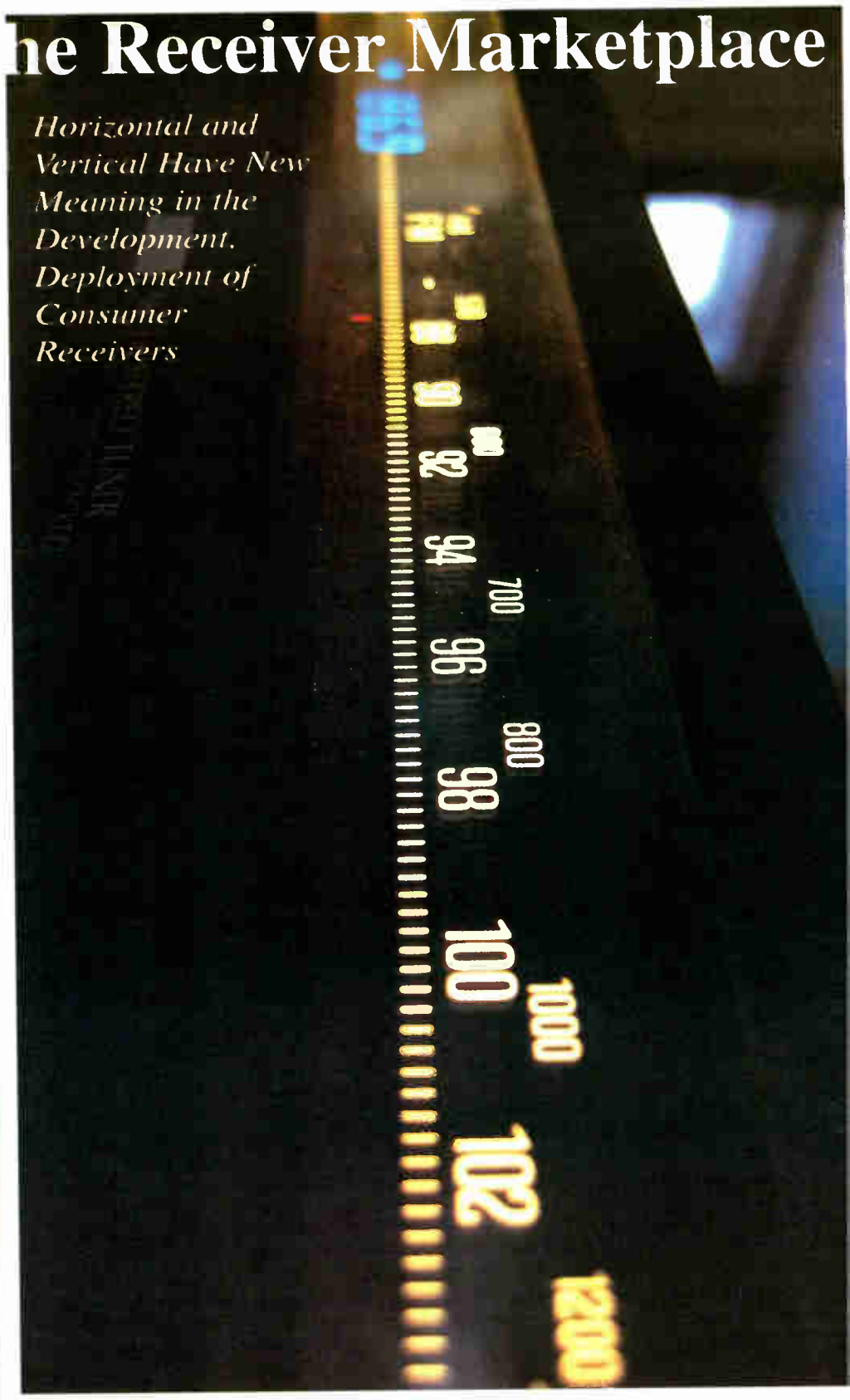


Photo: Gary Hopes, BBC

Polarizing the Receiver Marketplace

Horizontal and Vertical Have New Meaning in the Development, Deployment of Consumer Receivers



by Skip Pizzi

With continuing concern over relatively slow IBOC receiver sales, it's important to understand a relatively new element in consumer equipment deployment.

It involves the process by which devices are developed and sold, and how this process differs between broadcast receivers and other new consumer hardware classes today.

The key distinction centers on the vertical vs. horizontal business models that both exist, and how this dichotomy affects the landscape in which these types of services currently try to compete with each other.

Think of it this way: Radio (and over-the-air TV) is received "the old fashioned way" — on receivers you can buy anywhere, over a broad spectrum of price points, including a wide range of features (or included on devices that combine the receiver with other functions, from clocks to cars), limited only by the offerings of hardware manufacturers. Let's call these "horizontal" receivers.

On the other hand, a growing number of competitive devices, like satellite radios and multifunction cellular phones, have their design, features and pricing strictly dictated by the service provider with which the device is purpose-built to receive.

Even though these devices may be made by some of the same manufacturers that make the old-school receivers, their development process differs markedly. So we'll call these "vertical" receivers.

(Some might say that this distinction might be better served by calling these "open" and "closed" receivers, respectively, but these terms carry some additional baggage that muddies the specific architectural discussion here.)

The deployment to consumers of these two types of devices also follows divergent paths.

Horizontal receivers are sold by any store that wants to do so, and consumers simply buy them, turn them on and tune in a channel.

Vertical receivers generally are distributed on a more controlled or otherwise limited basis, and they require a subscription to be established with the service that the devices are designed to receive. (Some limited functionality may be provided as a baseline by the device without a service account, such as 911 calling from an unsubscribed cell phone.)

Often the service sign-up is done concurrently at the point of sale, but in some cases it can be done independently by the consumer in a separate step. Once the subscription is initialized, the receiver must be authenticated and associated with the subscriber's account, and *then* it can be used to tune in and enjoy the services offered.

Also unlike horizontal receivers, the vertical device typically is of an *addressable* variety, meaning that each unit has a unique identity.

This is primarily to allow "deauthorization" of an individual device if a subscription expires, but it can be used for other personalized service delivery, as well.

This makes them inherently more expensive than horizontal devices, but these and other cost differentials often are absorbed by the service provider through subsidies — to device developers and to consumers — that are part of the cost of doing business in the vertical device environment.

Golden rule

We're all pretty familiar with the horizontal receiver, but the vertical receiver is a relatively new animal — and one that is confusing, if not antithetical, to broadcasters.

Why is this seemingly counterintuitive strategy becoming so popular? Who would want to have to pay directly for development, deployment and promotional costs for receiver hardware, on top of the costs for creating/providing service?

The answer may lie deep within the DNA of broadcasters and telcos.

Although these sectors share much genetic material in common, there is one place in which they substantially differ: Broadcasters have always lived by the "if you build it, they will come" premise, in that if you begin to offer adequately compelling service, consumers will find their own way to receive it.

Another view of this approach is the chicken-and-egg argument, in which one party has to start the process with speculative investment, hoping that a second party eventually will reward the first's proactive step by matching the buy-in.

Telcos typically avoid such "faith-based initiatives," preferring to invest in new services that have a much more defined response rate. In other words,

See VERTICAL, page 37 ▶

World Radio History

Vertical

▶ Continued from page 36

when a telco fires up a new cellular tower, for example, it can start collecting revenue based on the new service directly, on day one.

(Some of the device subsidies mentioned above that are offered to consumers often are accompanied by long-term contract agreements, so further revenue assurances are gained by service providers in the process.)

The horizontal service model has a longer and less direct incubation process before net-positive revenue appears. While the ultimate profitability of this approach may eventually be greater, it is a riskier proposition.

In the old days, this risk was fairly slight, given that scarce spectrum meant competition among licensed broadcasters was relatively low and well defined.

But in today's multi-platform world of greatly increased competitiveness and uncertainty, returns on the speculative investment model are less assured. Thus the traditional telco approach, with a vertical (i.e., end-to-end, or "managed") transmission/reception model are of increased value within a rich service-provider world.

Perhaps the greatest advantage to the service provider of the vertical model arises from the unilateral ability it provides to determine what services will be available on the device.

In a corollary of the new Golden Rule ("He who has the gold makes the rules"), if the service provider is footing the bill for the device development, deployment and promotion, that provider can also dictate which services will be receivable on the device, and perhaps more important, which services will *not* be.

The latter proviso may allow the service provider to require the purveyors of certain content or services to "pay to play," meaning that these third parties will have to work out a deal with the service provider in order to get their wares aboard a particular device or platform.

This could particularly affect broadcasters if they wish to have AM/FM receivers (analog or IBOC digital) included on multifunction devices like satellite radios or wireless phones and PDAs.

Changing times

The conventional wisdom for broadcasters has long favored the horizontal market, where no cost or promotional burden for deployment of receivers is borne by service providers.

We are now moving to an era in which this notion may become outdated. Competitive services are pushing hard to deploy dedicated, standalone receivers for their services, and/or have their receiver chips embedded in new converged devices, in hopes that such short-term, front-end loading of costs will reap long-term revenue benefits.

So the new spin on the old premise tells us that in terms of new service-deployment success, you get what you pay for. In other words, if broadcasters continue to rely on zero investment in receiver deployment (i.e., remaining with a pure horizontal strategy), they may end up with a dwindling base of new users.

It's a new world, and one in which the old rules may no longer apply.

Skip Pizzi is contributing editor of Radio World.

Filter

▶ Continued from page 34

the pager company. The backup analog STL worked fine, which kept the station on the air until the errant PA module was replaced.

After discussing the issue with Moseley, the station invested in a bandpass filter, to further protect the digital STL input. In talking with Moseley's Bill Gould, he recommends the bandpass filter on their digital STLs, especially as more tenants occupy space on towers.

Bill Gould of Moseley can be reached at *bgould@moseleysb.com.*

★ ★ ★

Buc Fitch writes that the best ideas usually are the simplest.

Take Fig. 4. Buc used 25 cents' worth of GE clear silicon caulk to cover some bare AC connections on a terminal strip to guard against electric shock.

The silicon guards against a hot wire popping out of a crimp lug, or someone with a screwdriver accidentally shorting the terminal to ground. Fortunately, most new equipment uses an AC power cord to feed the AC, but you may still encounter the bare terminal block on older gear.

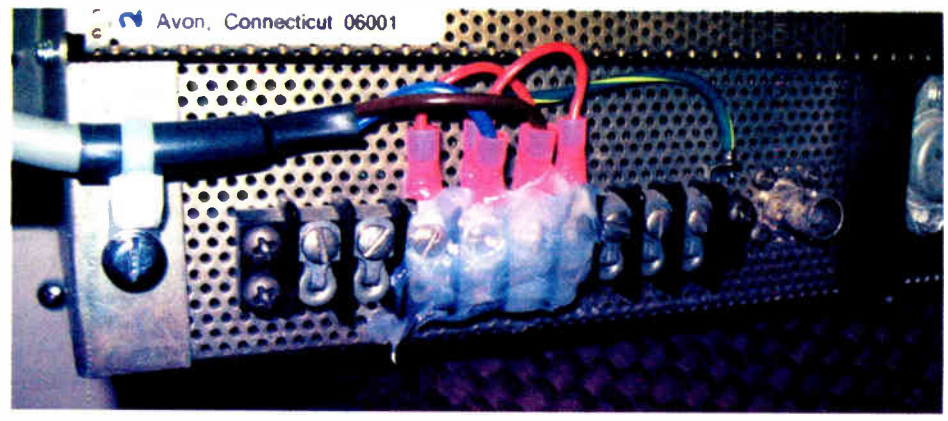


Fig. 4: Use clear silicon caulk to safeguard bare AC terminals.

Note the little overrun of caulk on the left — if you ever have to get access to the screws, this little "grab" section on the caulk helps to lift off the useful mess in one motion. This little blob of clear silicon caulk can really save you from a close encounter of the AC kind, in the back of a dark rack at 3 in the morning.

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

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

Rocky Mountain Redundancy

KVOD(FM) and Harris recently completed the install of a parallel ZD32HD+ transmitter system for the classical music station for Denver.

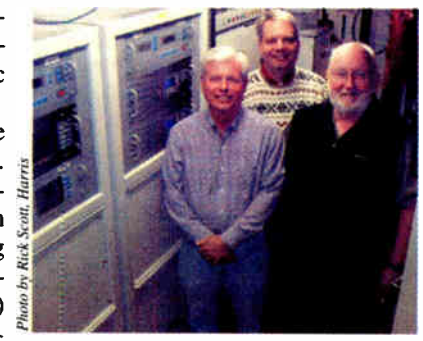


Photo by Rick Scott, Harris

The site is on Lookout Mountain in the front-range of the Rockies in Golden, Colo.

The public station had been using a single Z16 with high-level combining to an old CSI transmitter. Now it is developing full power with parallel solid-state transmitters (14 kW TPO analog + HD Radio) from 8,000 feet above sea level. Harris provided the second transmitter and the combining equipment. The design leaves the station headroom from a maximum rating of 16 kW in the event of an HD Radio carrier level increase authorization by the FCC.

The CSI remains as a working standby and can be placed on-air with a coaxial switch. Hal Kneller, then with Harris, was on-site for the project; he called the CSI backup "a godsend during the installation — no nighttime hours were required to accomplish this upgrade."

The new system is highly redundant, with two exciters, two boost amplifiers (used to drive a second transmitter from a single FlexStar exciter) and two independent transmitters. Exciters and boost amplifiers have automatic switching in case of failure.

The station also had placed the first Exgine system on the air in late 2005 when it installed the FlexStar HDx exciter.

Bob Hensler, left, is vice president of engineering for Colorado Public Radio; Al Stewart, right, is director of RF engineering. Kneller is at rear; he subsequently went to work in a business development post at Ibiquity Digital.

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World Radio History

Radio Catskill Benefits From Micropower

By a Dam Site, WJFF Calls Itself the Nation's Only Hydro-Powered Station

by Tom Vernon

Lake Jefferson in the Catskill Mountains of New York has long been a popular recreation area for area residents.

It is also the source of electricity for the only hydro-powered radio station in the country, WJFF(FM), Radio Catskill.

The story of hydro power in the Catskills, however, begins long before the advent of the radio station.

Powering up

In 1922, a dam was built near Jeffersonville by the Clark Water & Power Company, with the intent of developing a regional hydro-power distribution facility. The dam was completed, but plans for water-powered turbines eventually were abandoned in favor of coal-generated power on the site.

In 1984, Malcom Brown, a former philosophy professor turned renewable energy activist, bought the generating plant and dam and installed 45 and 25 KW turbines to provide 70 KW of clean energy.

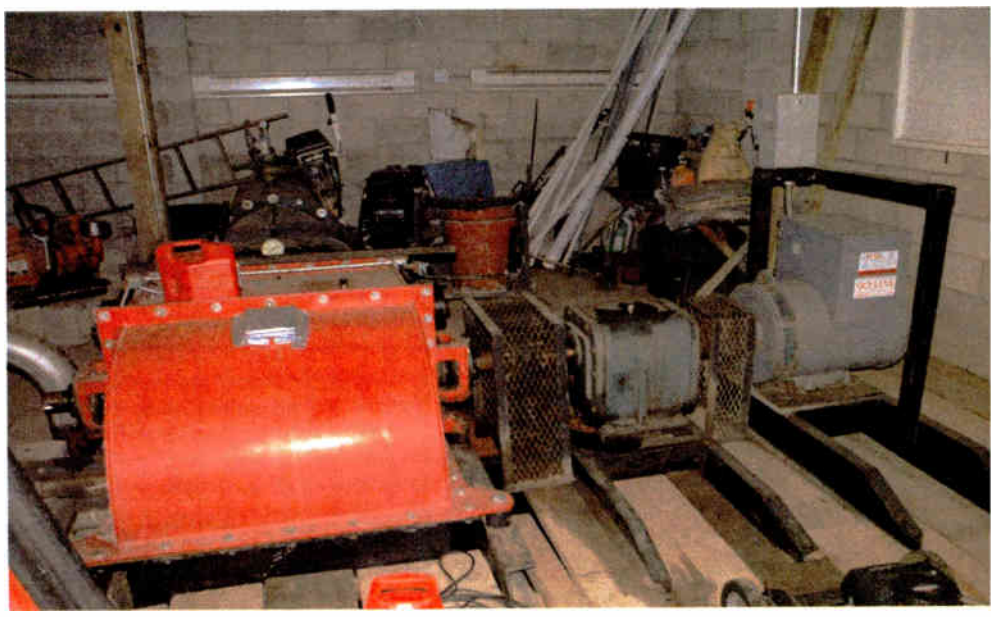
This is considered a micro-hydro power facility according to U.S. Department of Energy standards. More colloquially, this is known simply as micropower, part of a growing trend.

The facility went online in 1986 and sells excess power back to New York State Electric & Gas. When running at maximum capacity, the turbines can provide enough power for 20 to 25 homes.

Annoyed by the lack of independent public radio in the mountainous Catskill area, Brown next turned his attentions to starting WJFF.

He organized the community to get involved with the project, and the station was constructed almost entirely by volunteer labor, and connected to the turbines from the outset.

Since its sign-on in 1990, the studio building has been entirely hydro-powered and off the grid for most of the year. The only exception usually is during the month of August.



25 and 45 KW turbines in the powerhouse generate electricity to power the studio building. Excess power is sold to a utility.

WJFF signed on in February of 1990 at 90.5 MHz. Brown sold the dam and powerhouse in 2005 and left the area to spearhead the HullWind community wind power project in Hull, Mass.

Volunteer

According to station manager Mike D'Antonio, he and two others are the only paid staff at WJFF. Station operations, including on-air announcing, are managed by volunteers.

"We currently have over 100 volunteers who bring a great deal of passion to their work at the station."

Musical programming runs the spectrum from rock to classics, and most programs are produced locally by volunteers, although syndicated programs "Art of the Song" and "E-town" are aired during the overnight hours. The station also airs NPR news, plus several local news and public affairs programs.

"Many programs have an environmental emphasis," said D'Antonio, "including one hosted by a man who operates the local wind farm." Recently, the station aired reports about proposals to drill for natural gas in nearby Damascus, Pa., a strong concern of area residents.

Localism at WJFF includes airing school closings as well as lost cat and dog reports. "Community responsibility is one of our guiding principles," adds D'Antonio.

Ups and downs

The community supports WJFF in turn. During a recent seven-day fund drive the station was able to raise over $30,000. Notes D'Antonio, "People are excited to be involved with WJFF."

Since its sign-on in February of 1990, the studio building has been entirely hydro-powered and off the grid for most of the year.

The only exception is usually during the month of August, when water levels are at their lowest. Then the turbines must be turned off to avoid draining the lake too low.

While not enough water can be a problem, so can too much. During times of flooding there is a danger that the powerhouse may be submerged, and the tur-

See CATSKILL, page 39 ▶

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World Radio History

A 'penstock' at the base of the dam delivers water to the turbines in the powerhouse.

Catskill

▶ Continued from page 38

bines must be shut down. Such was the case during a flood in June of 2006, when the powerhouse was under six feet of water. There was no permanent damage, and power generation resumed once everything was dried out.

Floods can also damage the dam itself. D'Antonio adds that the high waters of 2006 spilled over the top of the dam's corewall, eroding the earth embankment on the opposite side and threatened the powerhouse.

The force of the water also caused damage to the concrete facing of the spillway. The earth bank was refilled, and the dam judged to be safe for the short-term by federal inspectors. Repairs to the spillway are pending.

WJFF occupies a unique niche in the realm of green broadcasters. Its on-air slogan is "the only hydro-powered station in the nation." One of the few other water-powered facilities in the Americas is HCJB, Quito Ecuador, which has dammed headwaters of the Amazon to power its shortwave and medium-wave transmitter site.

While its studios are off-grid most of the year, the WJFF transmitter building remains on the grid — for now.

"We're looking into wind power for that site, but the project is still in the early stages."

Articles in the Green Radio series are archived at radioworld.com. *Tom Vernon wrote about Clear Channel's KKGN(AM) in February.*

The Micropower Revolution

Say "power generation" and most people envision large nuclear or coal-driven plants owned by huge utility companies.

That vision may be changing. The new philosophy of power generation is leaning away from the monopoly of large utilities towards the open, competitive marketplace with smaller plants generating power locally: micropower. This can take the form of wind, solar, microturbines or hydro.

Several forces are combining to drive the adoption of micropower. These systems are gaining favor in the green community because they have a much smaller carbon footprint than fossil-fuel based installations.

Micropower can be adjusted to match demands, and installed more quickly than central systems. It is usually more reliable than the grid, being immune from blackouts on an aging infrastructure, either from accident or sabotage.

IT-intensive companies demand reliable, clean power and are discovering that micropower is easier to generate locally than to filter out spikes and noise from the power grid. At the same time, technology advances are making solar and wind power more affordable, and improving reliability.

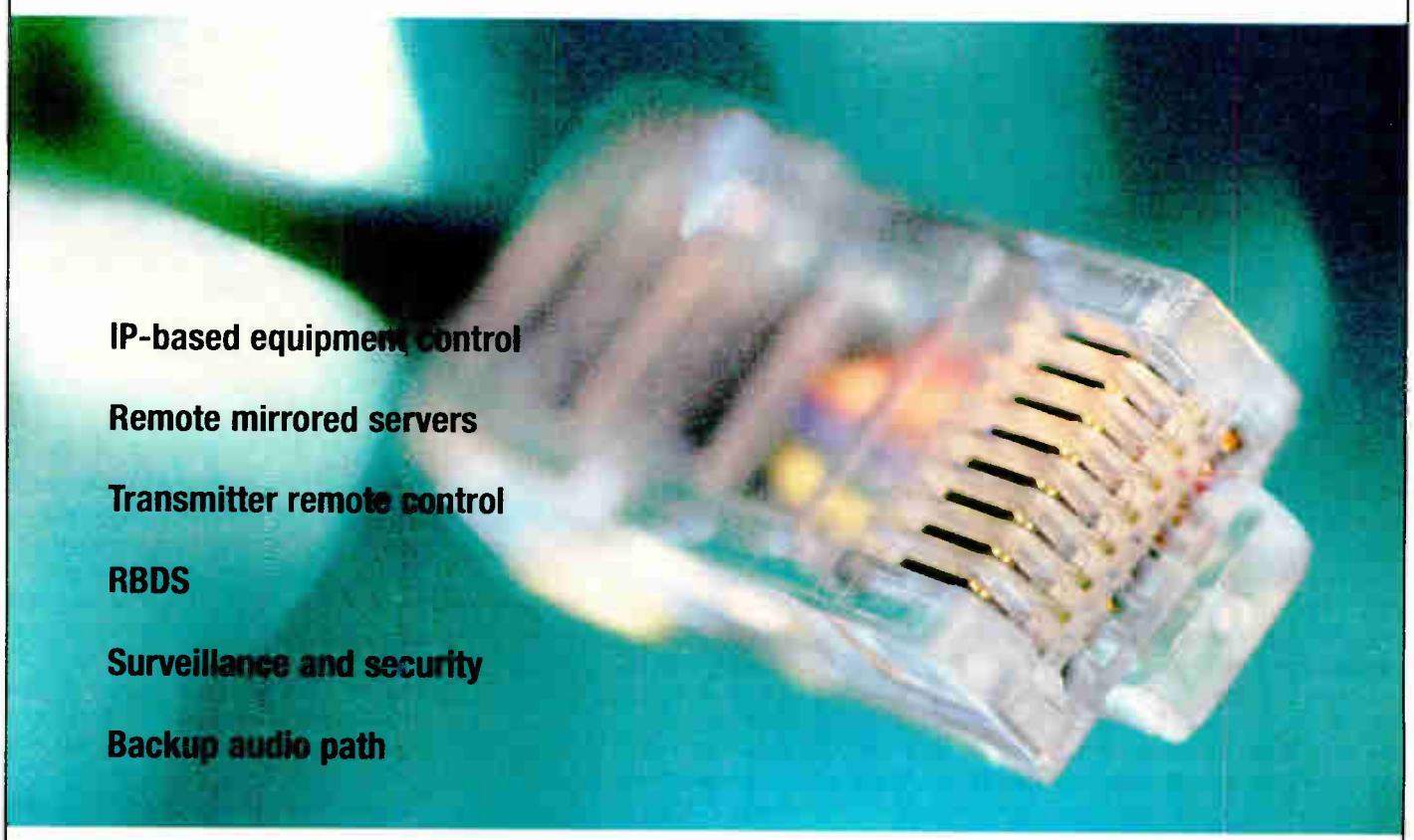
Some experts predict a tipping point as soon as costs are competitive with fossil fuel-delivered electricity — without subsidies.

Micropower really is the second coming for locally generated power. When electrical power distribution was in its infancy in the 19th century, founders such as Thomas Edison envisioned a highly decentralized system, with individual businesses generating their own electricity. Early systems such as the dam and powerhouse at Jeffersonville bore out this idea. Eventually, however, the concept of centralized power generation run by large utilities won out.

Some analysts view micropower as a disruptive technology, meaning they feel its potential is greatly underestimated at the outset but it will quickly reach critical mass, toppling unprepared companies and taking many observers by surprise.

— *Tom Vernon*

Ethernet path...



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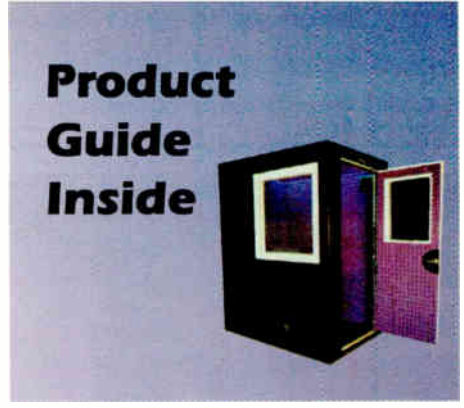


PRODUCT EVALUATION

Kowa PX-10 Ideal for the Busy Studio

Portable Flash Player Offers Audio Editing, 'Makes Good Use' of USB Drives

by Forrest Yingling

At the 2007 NAB Show, Radio World's panel of broadcast engineers awarded Kowa a Radio World "Cool Stuff" Award for the PX-10, the company's new flash memory hotkey audio player. The PX-10 is a smart, compact and dependable machine that eliminates problems caused by faulty and unreliable hard drives.

The unit plays back audio files that have been previously saved via an inserted USB flash drive or CompactFlash memory card. It is virtually impossible for the PX-10 or a USB flash drive to malfunction because neither have any moving parts like hard drives or fans.

The PX-10 is ideal for any busy studio environment, and would be useful in live settings as well. On-air talent and production staff can share the PX-10 as long as they have their own USB drive containing their cuts.

It would be easy and convenient for all station employees to have their own USB flash drive, which they could take from the studio to home to their PC to the PX-10. USB flash drives are straightforward, widely available and tiny enough to fit on a keychain or lanyard.

When I first received the PX-10, I was thinking I would need a huge capacity flash drive to save an entire show's worth of audio. However, this was not necessary — a 2 GB drive should be an ample size for the amount of audio you can allocate to the PX-10.

Both MP3 and WAV file formats are supported by the Kowa PX-10 at frequencies of either 48 kHz or 44.1 kHz. Each of the 50 numbered buttons on the front panel of the unit will play a corresponding audio file when pushed. There are six page keys and each page can store up to 50 files, giving the user a total of 300 audio files at their fingertips.

Compact, efficient

The PX-10 includes stereo and mono RCA and XLR outputs as well as a digital output and a convenient 1/4 inch stereo headphone jack. The large and brightly illuminated rubber buttons are easy to see and push. Weighing in at 7.5 lbs., the unit is portable and efficient.

The display screen of the PX-10 is bright and clear and contains a VU meter, playback counter, the filename being played and the filename on standby. The coolest element of the PX-10's display screen is the playback position bar, which clearly illustrates on a line the head and tail points, fade-ins and outs and current position of the file.

Another notable feature is the variable four-speed rewind and fast forward. This allows you to rewind or fast-forward at up to eight times the normal speed.

Additionally, the jog dial allows the user to fine tune the audio by frame advancing at 25 milliseconds per click. This is especially useful for setting head and tail points and fades.

Head and tail points as well as fade-ins and -outs can be set using the jog dial or by using the PC software. Using the software's edit screen to change these parameters is easier because the waveform can be viewed.

The PX-10 software program shows the front panel of the unit. To assign audio files to any of the 50 buttons, the user must simply drag an MP3 or WAV file onto the corresponding button on the PC screen. It doesn't get much easier.

A downside is that all files on a page must be of the same format and sampling frequency. For instance, all files on Page 1 must be 44.1 kHz MP3s. It would be much simpler if you could mix and match various file formats and frequencies on the same page.

Product Capsule:

Kowa PX-10 Flash Memory Audio Player

Thumbs Up

- ✓ Excellent use of USB flash drives
- ✓ Affordable, practical for busy studios
- ✓ Unit, software interface well and are user-friendly
- ✓ Uses MP3 and WAV file formats
- ✓ Lightweight and portable
- ✓ Backup USB slot on rear panel in case of malfunction

Thumbs Down

- ✓ Windows only; doesn't run on Mac OS
- ✓ A bit more expensive than the competition
- ✓ Can't mix file formats on same page
- ✓ Display looks slightly outdated; could be more modern

PRICE: $3,500

CONTACT: *Kowa Optimed at (310) 327-4177 or visit* www.kowa-usa.com.

At $3,500 the Kowa PX-10 is fairly priced. While there are similar pieces of gear on the market selling for under $3,000, the Kowa PX-10 is in a league of its own when it comes to the notion of not having any moving parts. I think having the peace of mind that comes with the knowledge of owning a quality piece of gear is worth the extra money.

This would be a welcome addition to a radio studio. Kowa has put USB flash drives to excellent use with this product and it is perfect for the modern broadcast world.

The PX-10 is a high-quality, easy-to-use, dependable machine. It is obvious why Japanese TV and radio stations use the Kowa line. To see the PX-10 as displayed at the 2007 NAB Show, check out the video "Coolcast" at *www.rwonline.com/coolcasts.*

Forrest Yingling is a freelance writer, producer and musician based in Washington. Reach him via e-mail at forrest.yingling@gmail.com.

See us at NAB Booth #N5523

World Radio History

TOP STUDIO BUILDOUTS

INSIDE Associated Press in Washington

by Tom Vernon

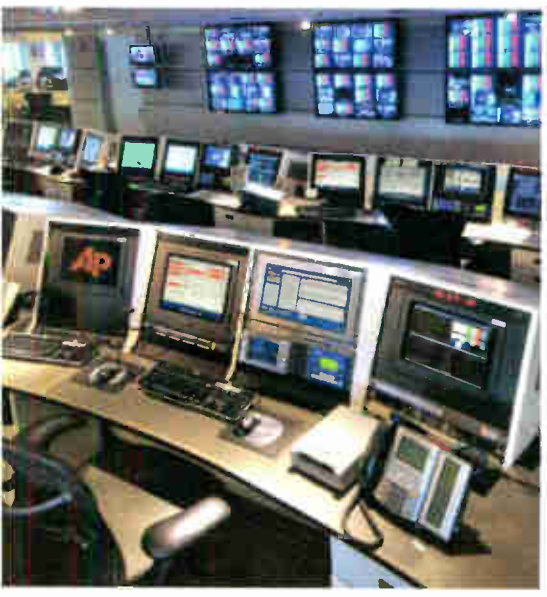
Some buildouts require quick turnaround times, others force designers to think out of the box. In this series of articles, RW profiles facilities that caught our eye due to their size, complexity or innovation.

A desire to efficiently leverage its multimedia assets led the Associated Press to consolidate its Washington operations under one roof.

The new facility contains AP radio, TV, Internet, wire and photo services. It occupies 82,314 square feet across four floors, including 55,000 square feet of raised flooring. Four hundred forty-seven people work in the new building; the move was complete around the end of 2007.

Steve Kuhn, director of broadcast engineering, said key equipment was supplied by SAS, which provided control surfaces and routing; with Netia delivering control and production software

The radio side consists of two on-air studios, two production rooms and a tracking booth. On the two news floors are more than 70 video and audio workstations and 34 networked full-resolution digital editing stations, which also can contribute audio. AP engineers have done the studio configurations, while Professional Products of Gaithersburg, Md., was the systems integrator.



Master Control Room

The satellite antenna farm on the roof is impressive. Included is a full-arc Simulsat-5 C/Ku antenna, one of the biggest in downtown Washington, capable of receiving simultaneous transmissions from dozens of satellites, along with three other large dishes.

The IT center for the complex is a 1,000 square foot area with 100 equipment racks. To this center are more than 400 multi-screen desktops connected via gigabit Ethernet. More than 1,000 television monitors are scattered throughout the building.

Although a TDM routing system such as the SAS greatly simplifies wiring, the cabling infrastructure for the AP facility is still enormous.

"There are more than three miles of 4 inch conduit, more than four miles of electrical cable, more than a mile of mechanical piping and more than 1,200 miles of data cable," Kuhn said.

Backup power comes from a generator with more than 24 hours of fuel capacity, along with two UPS systems. The AP complex has its own AC feed, separate from that used by the rest of the building. The generator was set on the roof using the largest mobile crane available on the east coast.

While the amount of equipment and infrastructure in a facility this size is

See AP, page 43 ▶

Associated Press Newsroom

World Radio History

PRODUCT EVALUATION

Built to Last and ... Made in China?

Sound Quest R-601PW Is Big, Sensitive and Takes Listeners Back to a 'Golden Era'

by Frank Beacham

For too many years, Stephen Monte's shop in Pennsylvania repaired old radios for its customers. It was not a great business because refurbishing an old radio never meant replacing every part, and sooner or later another transformer or capacitor would break.

So a couple of years ago at CES in Las Vegas, Monte met representatives from V.A.L. Audio, a Chinese company that makes tuners and speakers with built-in amplifiers. The discussion soon turned to high-quality table radios. From that conversation, perhaps the finest line of modern day table radios in America was born.

"We talked with them about building new tube radios with superb sound that looked like vintage sets," Monte said. "We came up with a design between the two of us and they sent samples back and we sent samples back. And, lo and behold, this was the baby."

Sold by Quest for Sound in Bensalem, Pa., Monte's Sound Quest radios are a remarkable example of Chinese manufacturing at its absolute best. We were sent the Sound Quest R-601PW mono tube radio, one of three basic models and five radios that Monte and V.A.L. now manufactures.

The R-601PW ("W" for solid walnut case) sells for $369, a fairly standard price for a high-end tabletop AM/FM radio. However, when the box arrived and one lifts this 15 pound behemoth out of the dual cartons, you know immediately it is no ordinary radio.

'It's a new-old radio'

At 8.5 inches high, 12 inches wide and eight inches deep, this is no tiny contender for a corner. Simply put, it's big, beautiful and built to last. It's a showstopper.

Plug in the grounded, heavy-duty electrical cord in an outlet and turn on this gorgeous radio. Then tune the massive, silky-smooth, back-lit dial, using the "magic eye" on the front panel to lock in the station. The sound you receive through the big 4 inch speaker and 10 watt amplifier tells you this radio is very special, like no modern radio you've ever heard.

Now, for a moment, forget the recent Bose, Tivoli, Polk or Boston Acoustics high-end radio you may have tried. Nice, new products, all of them — but Monte's radios pay tribute to the Zenith and Grundig designs of the past. In a way, it's a new-old radio.

"Basically we decided that instead of refurbishing all of these old radios that we'd come up with a little newer design," Monte said. "So rather than put money into an old radio and six months down the line a transformer goes dead or a cap goes bad on it, we offer our customers a new radio."

Monte said customer reaction, which has been fantastic from the beginning, is letting him know the radios are the best now sold in America.

"We get a lot of e-mail and letters that have said the same thing to us," Monte said. "We had a nice gentleman who sent us an e-mail from Virginia who said 'I really enjoy eating breakfast now. I come down and turn this on and then go upstairs and take a shower and then come down and this thing warms the whole kitchen up — music-wise and everything. I then just sit down and enjoy my breakfast.'

"That was the feeling we wanted and the feeling we got."

There are three versions of the Sound Quest R601 mono tube radio, ranging in price from $299 to $369. Then there are a couple of models of the R601S stereo radio for $369 and $429, depending on case.

And finally, there's the R801, the top-of-the-line $849 stereo tube radio that looks like a big Grundig. It picks up AM, FM and shortwave frequencies and includes an 18 watt stereo amplifier and range of inputs and outputs.

Warm and mellow

"All the radios are made of wood. They come in bakelite color, cherry and walnut," said Monte. "I must say that customers like these radios very much."

Not only are the radios a sensual delight, but they work very well. In the R-601PW radio we tested, the GaAs MES-FET cell-based design and high-quality components give the radio sensitive reception, good channel selection and strong anti-jamming capability.

The radio received all of our hard-to-reach test stations superbly in New York, and outperformed virtually any radio we put against it. Not only did it pick up stations well, but the sound is amazing. The bass and midrange are excellent performers, probably the best table radio we've heard at any price.

The unit has quality written all over it. The sound is warm and mellow. The amplifier has a frequency response of 70 Hz to 16 kHz. The wooden cabinet design is solid as a rock, and the "magic eye" and tuning circuits are precise. A front knob turns on the radio and adjusts the volume. A second knob selects between AM, FM or the Aux input.

On the back of the cabinet is an Aux mono input, a headphone output and a record output that can be used to drive a small subwoofer. AC power can be switched between 230 and 115 volts. There are built-in AM and FM antennas, and a switchable outboard jack for an included FM antenna.

The tubes can be seen glowing through slits in the side of the cabinet. There are dual 6P14 triodes and a 6F2 is used as a rectifier.

Stephen Monte and V.A.L. Audio have done something no one else in this country has done: recreate radio as it once was and should be. Yes, cheap radios are fine and newer solid-state radios have opened a new generation to radio quality. But these Sound Quest radios take us back to a golden era that gives new life to radio and great audio receivers. We've gone back to a time that allows us to focus on how much difference a great receiver can make.

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

Stephen Monte and V.A.L. Audio have done something no one else in this country has done: recreate radio as it once was and should be.

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World Radio History

AP

▶ Continued from page 41

impressive, Kuhn emphasized that it takes more than hardware to keep AP running.

Software is a vital component of the new AP facility. The one-stop front end for AP news editors and producers working on PCs is its ENPS, or Electronic Newsroom Production System. Jason Smith, ENPS project manager, said, "This software serves as a common point for all media, not just audio. With ENPS, journalists can read and write stories, and look at audio files without having to switch applications."

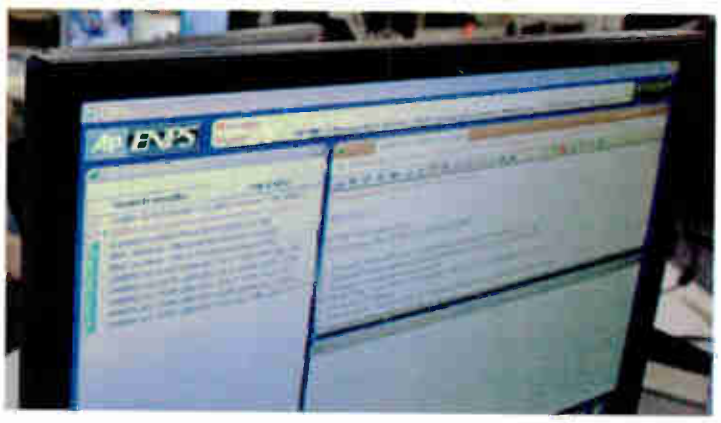
Added flexibility comes through using ENPS with MOS. Media Object Server Communications Protocol is an open-standard protocol for communications between newsroom computer systems and media object servers such as video servers, audio servers, still stores and character generators. In the case of AP, MOS connects ENPS to Netia, allowing AP producers to browse automation and edit assets in the database.

Smith said that while ENPS fully integrates different media, archives are scattered across the globe, with AP having video archives in London, New York and Washington.

Smith added that ENPS has an 11-year history, and was developed by AP in response to a request from the BBC. Now the program has more than 50,000 users in more than 50 countries. Users include the BBC, ESPN, CBS and NPR.

Tell RW about your facility project. E-mail radioworld@nbmedia.com.

Radio Studio 52



AP says more than 500 newsrooms in 48 countries use its ENPS production software to create, manage and broadcast news content.

Rack Room/Tech Core

PRODUCT GUIDE

Auralex Foam Among VocalBooth.com Upgrades

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

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

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

VocalBooth.com rooms are enclosed systems with active ventilation, lighting, cable passage and optional windows. Standard sizes range from 4 feet by 4 feet, up to 16 feet by 16 feet. VocalBooth.com also manufactures pentagonal-shaped booths for easy corner placement. The diamond-shaped series is available in four sizes.

For more information, visit www.vocalbooth.com.

World Radio History

USER REPORT

'Voice Guy' Touts Heil Sound PR 30, 40

by Dave Hines
Asst. Program Director/ Music Director
KXUS(FM)
Clear Channel Radio Springfield

Dave Hines and His Heil Sound PR 30 and 40.

SPRINGFIELD, Mo. I use two different models of **Heil** microphones in three different situations. I use a PR 30 for on-air on a classic rock station, KXUS(FM), "US 97." I use the PR 40 in the production studio at the station, and also in my personal studio at home. If you tried to take them away from me, you'd have a fight on your hands.

I'm a voice guy, not an engineer. So, immediately, I was happy when I looked at the PR 30 and 40 and found the absence of modification switches. All I had to do was plug them in and start talking; literally. The sound was so clean it caught me off guard.

These mics have a real "eyebrow-raising" factor the first time you use one. My first thought was, there's no way I can afford this for my studio. Imagine my amazement when I found out that these mics cost less than the EVs I was using.

No need to push

I chose the PR 30 for on-air because it's not as "boomy" on the low end as the PR 40. The PR 30 drops off at about 40 Hz, while the PR 40 drops around 28 Hz. With the way the station EQ is set, the PR 30 cuts right through but still delivers that "warm" sound I want. I also found that these mics require little processing, if any.

I'm much more prone to "less than perfect" mic technique on-air, and the PR 30 is pretty forgiving. I can work it nice and close with far less risk of pop than I've gotten from other studio dynamics. The clarity is so good that I never feel the need to push, which helps maintain solid fundamentals.

The rear rejection is outstanding. Simply put, it's not picking up what I don't want it to pick up, such as a noisy piece of equipment or a guest's errant cellphone on the other side of the studio.

Speaking of guests, the pickup pattern is top-notch. I almost never have to remind guests to "scoot in" to the mic. As long as they're pointed at it, and reasonably close, they'll be heard.

Also, as you move off the axis away from the "sweet spot," you only lose gain as opposed to the EQ thinning out. This is actually the first mic where I've had a guest comment on how good they thought they sounded. If I have to move the mic boom, I don't get that distracting rumble.

This thing is "battle-ready" for the studio, so you can concentrate on your content rather than tech problems. I've had the Heil PR 30 in the on-air studio for about a year, and I haven't found any negatives. I put the old RE-27 in an extra production studio and haven't looked back.

I use the Heil PR 40 in two very different setups for the same purpose.

In my production studio at the station, it's running through a few thousand dollars' worth of preamps and processors into a Digi-002 rack for ProTools. In my home studio, it's running directly into an M-Box for ProTools.

The finished product from either studio is interchangeable. I know it sounds far-fetched, but I've actually done "punch-in" revisions at home for sessions I voiced at work.

The PR 40 has the capability to produce that huge, rich, "voice of God" sound that you rarely can get from a dynamic mic. I'm able to work it in many different ways to have the large palate I need when producing spots or doing imaging voice work.

A danger I've found in having this mic in the studio is that it's like using an RE-20 with the training wheels off. I guess that's also a blessing, but what I mean is that it's easy to over-process if you start playing around with the audio in post-production. The PR 40 does have a tendency to pop if you work it too close. For me, that's a fair opportunity cost for the clarity and vast range I get.

Bottom line: For the price, you can't put a better mic in your studio than the Heil PR 40.

For more information, contact Heil Sound at (618) 257-3000 or visit www.heilsound.com.

In my production studio at the station, the PR 40 is running through a few thousand dollars' worth of preamps and processors into a Digi-002 rack for ProTools. In my home studio, it's running directly into an M-Box for ProTools.

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World Radio History

USER Q & A

ATC Moves in At WGBH

John Voci, director of radio stations for WGBH, Boston, comments on his experience with Acoustic Transducer Co.'s SCM50ASL and SCM100ASL monitors.

Tell us about WGBH.

Boston's WGBH is a national producer and distributor of programs, operates a local broadcast service and records and broadcasts live acoustic music, typically classical and jazz. WGBH produces more of the PBS prime-time lineup and Web content than any other source.

What prompted WGBH to purchase ATC's SCM100ASL midfield speakers?

WGBH recently completed the co-location of its radio and television facilities into new premises. WGBH Radio seized the opportunity to expand its complement of reference monitors, adding two new pairs of active three-way SCM100ASL midfield speakers to the two existing pairs of SCM50ASL units that were moved over from the previous broadcast studio location.

Where did you purchase them from?

LasVegasProAudio.com (ATC's U.S. distributor, a division of TransAudio Group).

Where did you put the SCM100s?

Those are now in both our music recording facility and in our mastering suite. We imagine tracking happening in the music performance control room and then projects can migrate to the mastering suite. Those two rooms also are surround rooms.

When did you begin using ATC monitors?

WGBH began using ATC SCM20 monitors more than 13 years ago at its studios at Boston's Symphony Hall, adding two pair of ATC SCM50s.

When we did our last renovation, in 1995, we went through a big speaker shootout. We listened to a lot of different types of speakers. The engineering staff really liked the ATC 50s. We had two pairs of those, one pair in the music recording room and one in another of our production facilities.

How did the SCM50s cater to your format?

Given the fact that we do a lot of acoustic music, the engineers liked the tonal quality of the SCM50s. They seemed to be a speaker that did not color the sound in a particular way, which some others did. That was a very important factor for the engineers. They felt the ATCs were true to what was going on. They weren't presenting a different picture, whether it was something that was too bright, or coloring the sound in a way that was unrealistic.

What are some of the preferred features of ATC speakers among staff?

[Audio engineer] Jim Donahue thinks ATC speakers are designed with great electronics and amplifiers, and that they are very accurate and natural-sounding. He also has always been impressed with their superb imaging. They can be listened to for hours without fatigue after a long day at Symphony Hall or in the studio.

WGBH Control Room 1

For this most recent move, what were some of your must-have features for the new monitors?

Maintaining the sonic signature of the SCM50 monitors so that projects would translate between rooms was an important criterion when selecting additional speakers for the new studios. When we were thinking about what to do in our additional control rooms at the new location for the production operations that support our local broadcast operation, where we would be taking projects from room to room, we wanted to try and have the speakers match as well as possible.

For more information, including pricing, contact Las Vegas Pro Audio at (702) 307-2700 or visit www.atc.gb.net.

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World Radio History

TECH UPDATES

RMC, HiQnet Ease 5.1 Setup for LSR4300

JBL Professional says its LSR4300 series 5.1 studio monitor systems incorporate Room Mode Correction technology and Harman HiQnet network functionality for accuracy and to ease setup of 5.1 surround sound monitoring.

Each speaker and the LSR4312SP subwoofer has an analyzer that measures and automatically compensates for low-frequency problems caused by the room's standing waves and boundaries.

Calibration of the system is accomplished by connecting a supplied calibration microphone to the speaker and pressing a button. The RMC system can be calibrated and settings can be viewed on the computer desktop using LSR4300 Control Center Software.

JBL says the LSR4300 system is designed to be "surround smart." The Harman HiQnet network, along with LSR4300 Control Center software, eases setup and control of large surround systems with up to eight LSR4326P or LSR4328P monitors (with 6-inch and 8-inch woofers, respectively) and two LSR4312SP subwoofers in a single system.

Additional highlights include a tri-color meter display on the speaker's front panel that lets broadcasters monitor system levels.

For more information, including pricing, contact (818) 894-8850 or visit www.jblpro.com.

QuietPoint Headphones Use Mini Mic to Monitor Noise

Audio-Technica's ATH-ANC7 QuietPoint active noise-canceling headphones use a miniature recording microphone in each earpiece that monitors ambient noise, and creates a sound-canceling signal that reduces distracting background noise by up to 85 percent.

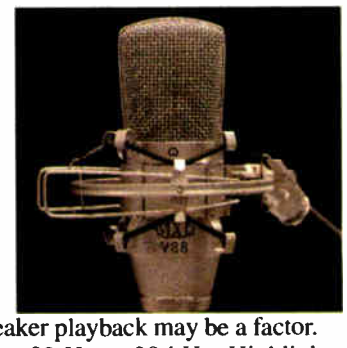
Suitable for use with MP3, CD and DVD, the ATH-ANC7 QuietPoint headphones offer comfort in a closed-neck, streamlined design, according to the company. They feature large-aperture 40 mm drivers with neodymium magnet systems for deeper bass and extended treble, and have a frequency response of 10–25,000 Hz.

Audio-Technica's ATH-ANC7 headphones retail for $219.95.

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

MXL V88 Studio Mic Captures Human Voice

MXL Microphones, the audio division of **Marshall Electronics**, introduced its V88 studio microphone.



The large-diaphragm, pressure-gradient condenser microphone offers a fully balanced transformerless input; the company says it creates a warm, open sound that captures the human voice in addition to being suitable for other acoustic sources.

Internally wired with Mogami cable for clean signal transfer, the V88 features a large 32 mm capsule with a gold-sputtered diaphragm. The cardioid polar pattern enables off-axis instruments to remain natural sounding, and the capsule provides feedback suppression during the recording of live performances where loudspeaker playback may be a factor.

The V88's capsule delivers frequency response from 20 Hz to 20 kHz. Highlights include a nickel-plated finish and a low-profile form factor of less than 6 inches in overall height. The V88 ships with a protective aluminum flight case. A shock-mount adapter also is included as part of the package.

The MXL V88 carries an MSRP of $349, and is now shipping.

For more information, contact Marshall Electronics at (310) 333-0606 or visit www.mxlmics.com.

Holophone, Rycote Collaborate on Windscreens

Surround microphone manufacturer **Holophone**, and **Rycote**, provider of audio windshielding and shockmounting systems, have developed windscreen systems for Holophone's line of surround microphones: H2-Pro, H3-D and H4 SuperMini.

The Rycote windshield systems are available in standalone fuzzy and fuzzy/windscreen pairs, providing 10–12 dB extra protection for Holophone's surround microphones compared to a standard windshield. Holophone says the windscreens are made from special materials that offer virtually no adverse effect on sound level or quality. To allow for a snug fit, the windscreens feature a drawstring and toggle.

Holophone recommends that the fuzzy shield be used in conjunction with the windscreen for optimal sound quality. The H2-Pro fuzzy retails for $150, the H3-D for $150 and the H4 SuperMini for $100. The H2-Pro fuzzy/windscreen set retails for $475, H3-D $475 and H4 SuperMini for $275. The windscreens will be sold through Holophone and its dealers.

For more information, contact Holophone at (416) 362-7790 or visit www.holophone.com.

USER Q&A

Clear Channel Minneapolis Taps EV for Upgrade

Rob Goldberg, chief engineer for Clear Channel Minneapolis, and Brian Thomas, performance recording engineer, comment on their experience with ***Electro-Voice*** *sound systems. The Twin Cities cluster recently upgraded its "Studio C" performance theatre.*

Tell us about Studio C's new sound system.

QRx153/75 mains are mounted over QRx218 subs, along with four SxA250 stage monitors, all powered by CP-series amplifiers. EV RE410, N/D767a and Raven microphones handle the input end of the signal chain. It adds up to provide a comfortable space for hassle-free, high-quality live performance and recording.

What prompted the upgrade?

Rather than an improvised studio on the fourth floor of an office building, we wanted the studio to be a welcoming space with an intimate vibe and warm sound quality, suitable for everything from a rap performance to a political discussion.

Why did you select Electro-Voice?

We knew we wanted high-end equipment for the best possible live performance and recording experience. EV was the brand of choice for a number of reasons. Their broadcast industry-standard RE-20 microphones are installed at more than 1,200 of our stations; and all the engineers here were familiar with EV sound from clubs and live venues.

The EV system is equipped with tons of headroom and sonic power, and lends a warm, transparent sound to all performances, whatever the genre. Listeners feel like they're in the same room with the artist. The sound quality is so good that Trisha Yearwood actually used a couple of tracks recorded right here for a CD release, which reaffirmed we did it right.

Studio C

Which stations in the cluster use this space?

Each of the six stations broadcasting out of the building take advantage of this production space.

For KTCZ(FM) "Cities 97," a AAA format, there are more than 100 interviews and performances annually in "Studio C." For KEEY(FM) "KK102," which is country, the room becomes re-branded "The Roadhouse."

For KFAN(AM), sports, it becomes "The Press Box." For KDWB(FM), it becomes the "Sky Room."

Do you think listeners can hear the difference?

Our listeners love hearing and participating in the live performances, and the intimate setting and hi-fi audio quality translate well across the airwaves. Rather than just hearing a track from a CD, they hear a real live performance, which goes back to the roots of radio — something unique and exciting.

And obviously, it's a great promotional resource for visiting artists, a real added value that steers them toward the Twin Cities when planning their promo tours.

Other thoughts about your EV-outfitted Studio C?

Our annual Cities 97 sampler CD is sounding better than ever. Almost everything on it is recorded here. A better-sounding room invariably yields a better-sounding performance from the artist and a better response from the audience; this room can accommodate an audience of around 100. The applause you hear on-air is for the sound quality as well as for the show.

Studio C has quickly become an important resource for all our stations.

For more information, including pricing, contact Bosch Communications Systems at (952) 736-3935 or visit www.boschcommunications.com.

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TECH UPDATES

ADAM Expands Series With Smaller Monitors, Sub

ADAM Audio is expanding its A series with the A5 powered monitor, which offers compact size and $699 retail price.

ADAM A5

The A5 is, technically, a smaller version of the A7, according to the company, and can be used either in stereo or to fill out a 5.1 surround system.

Powered by two 25 W on-board amplifiers, the A5 combines ADAM's Accelerated Ribbon Technology folded ribbon tweeter with a 5 inch woofer constructed of a carbon fiber and Rohacell sandwich. The front of the A5 sports dual ports for low frequency response down to 55 Hz (this can be extended to 30 Hz with the addition of the compact Sub7 subwoofer), and metal grills for added durability, as well as power and gain controls.

The rear includes balanced XLR jacks, unbalanced RCA jacks and ADAM's Stereolink technology, which connects speakers with input and output jacks allowing the user to control the overall volume of the system from a speaker's gain control, making the A5 suitable for desktop recording systems.

The A5 comes in traditional ADAM matte black ($699) or glossy "piano" finishes in black or white ($769). Optional wedge-like stands allow the A5 to be positioned at an upward angle.

ADAM Audio also is introducing the Sub7 ($479 matte black, $529 glossy black/white), a compact subwoofer to match the A5. It is capable of extending the frequency reproduction of the A5 down to 30 Hz.

Features include multiple inputs (both XLR and RCA) and controls that allow the system to be fine-tuned to various listening environments; and a wireless remote control for adjusting the volume and crossover frequency from the listening position.

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

VXT Series Cabinet, Faceplate Widen 'Sweet Spot'

KRK Systems released its VXT series of studio monitors, saying they are suitable for use by engineers, musicians and DJs.

The VXT series has proprietary woofers and tweeters, a curved faceplate for imaging, a cabinet design that provides low resonance, improved structural integrity and extended low-end and slotted ports that reduce port turbulence, according to KRK.

The curved cabinet and faceplate provide imaging characteristics and a wider "sweet spot." The use of ABS structural foam as the cabinet material provides damping characteristics and extended low end due to more internal volume. The ABS foam also absorbs shocks so the cabinet is impact-resistant.

The tweeter's dome is made of silk as opposed to cloth, which the company says translates to fast transient response, excellent imaging and extended frequency response. The woofer inside the VXT series has improved transient response by using a stiffer, lighter cone that provides low distortion and extended low end.

Additional highlights include tamper-resistant switch covers to protect against others changing personal settings; integrated Omnimount support for wall or corner mounting; ground lift; defeatable limiter and auto mute controls; and high- and low- frequency adjust switches on the VXT6 and VXT8.

The KRK Systems VXT series monitors will be in stores in late May, and retail for: $399 (VXT4); $599 (VXT6); and $799 (VXT8).

For more information, contact KRK Systems at (954) 316-1580 or visit www.krksys.com.

AKG MKII Headphones Add Varimotion Diaphragm

AKG says it decided to incorporate diaphragm and cosmetic improvements into its studio headphones, and developed the MK II model.

MK II studio headphones use the Varimotion diaphragm. The design features a molded diaphragm that is very thin at its edge to give it good excursion capability for solid low-end response; and is increasingly thick toward its voice coil for resonance-free, low-distortion mids and highs, according to the company.

The line consists of two closed-back models, the around-ear K271 MKII and the on-ear K171 MKII; as well as two semi-open models, the around-ear K240 MKII and the on-ear K141 MKII.

The K271 MKII also features an automatic on/off switch that mutes the audio when it's taken off.

AKG says it wanted to give the MK II user more custom options, so all models feature detachable input cables with a locking mini-XLR connector, and come with a 10-foot straight cable and a 16.5-foot coiled cable so the user can pick the best one for their application.

MK II models also come with leatherette ear pads as well as an extra set of soft velour pads.

Additionally, each model features high sensitivity and 55 ohm impedance for compatibility with any output device; and is backed by a two-year warranty.

For more information, including pricing, contact AKG Acoustics in California at (818) 920-3212 or visit www.akgusa.com.

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The Band Scanner is a tool to evaluate FM broadcast band congestion and to log station identification parameters. The system is powered by the USB port of any Windows PC. Supplied free of charge Windows software sweeps the receiver across the FM band, logging every carrier and generating a spectrum display of carrier level vs. frequency. It then analyzes each carrier and creates a station list. Stations with an RDS presence are further refined to show all the radio data groups being transmitted. Its interface is like a portable radio: It may be tuned manually through the receiver screen or by double-clicking a point on the spectrum plot or an entry on the station list. Spectrum plots may be saved as jpg or bmp files. The RDS data error level is graphed in a separate window on the receiver screen. The program can be monitored with headphones plugged into a standard 1/8" jack.

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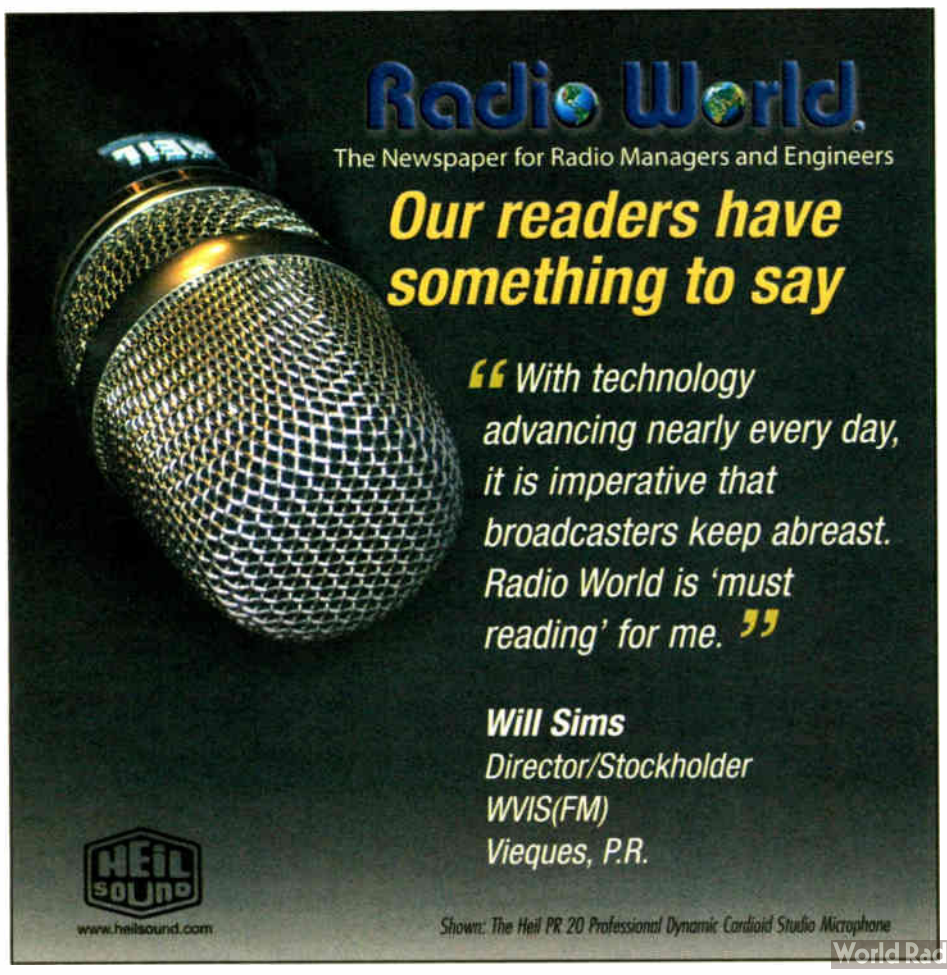


◆READER'S FORUM◆

Get It Right

In reading your Feb. 22 online news item referencing the Engineering Achievement Awards announced by NAB, I was struck by the inaccuracy of your comments concerning ERI and the antenna systems at the Conde-Nast building, 4 Times Square: "ERI antenna and combining systems are used at major sites around the country including the recent Four Times Square installation in New York City."

I know Tom Silliman well and he would be the first to admit, I am sure, that there are no ERI master antenna/combiner systems at 4 Times Square. The new tower structure was designed by ERI, but the master antenna systems were collectively supplied by Dielectric Communications (TV) and Shively Labs (FM). There are no ERI channel combining systems at this site; rather they were supplied by Myat Inc. (UHF TV) and Shively Labs (FM). Ironically, the previous master radio antenna systems installed at 4 Times Square prior to the 2003 upgrade were not supplied by ERI either.

I applaud Tom's varied antenna-related accomplishments but you should be aware that in printing inadequately fact-checked articles, you effectively negate previous advertisements featuring 4 Times Square placed in your magazine by Shively Labs, among others.

Fact must be separated from perception; otherwise the latter becomes the former and for many, the latter is then reality.

Martyn Gregory
Shively Labs,
div. Howell Laboratories Inc.
Bridgton, Maine

The article in question repeated wording from the NAB newsletter that announced the awards and was posted briefly using NAB's wording on the Radio World Web site.

Tom Silliman of ERI confirms that the wording in the announcement contained an error, one that did not originate with ERI.

"ERI designed and built the tower that Mr. Durst had installed on that building, but the antennas were designed and manufactured by Andrew, Dielectric and Shively," Silliman said. "ERI designed the support structure, the feed line layout and the install plan and supplied the gin pole. I supervised the install and continue to work for John Lyons on inspections and analysis of the tower for new tenants. Myat supplied most if not all of the TV filters in the building. Shively supplied the FM combiners, the FM main antenna and the FM aux antenna. Dielectric supplied the two UHF TV antennas, the high-band VHF TV antenna and feed line. Andrew supplied the Channel 68 UHF top-mounted TV antenna and a run of cylindrical waveguide."

Silliman said that ERI has notable combiner projects in Miami, at Senior Road, Empire, Tiger Mountain, Chicago Hancock, Boston Pru and others but that 4TS is not an ERI combined system site, though he described the latter as "one of the best projects that I have had the pleasure of working on" thanks to the cooperation among Dielectric, Tishman, Andrew, Shively, ERI and 4TS management. "Shively had to custom-design the FM master antenna in order to allow access for feed lines and climbing, and Andrew required custom mechanical beam tilt (I designed custom shims for that antenna) as well as custom elbows (I used vector cross products of unity vectors to come up with the special design of that feed)."

Making the List

It's no surprise that the ARRL Handbook is considered a required book on the broadcast engineer's bookshelf ("Engineering Books You Can't Live Without," Feb. 13). I was an engineer for a number of stations beginning with KPFT(FM) in Houston. Later at KBOR(AM) in Brownsville, Texas, and built KDUV(FM) and KMBS in Brownsville and Harlingen, respectively as chief engineer. The ARRL Handbook was always on my bench, usually open to the section I was currently referring to.

Other well-read books include the "ARRL Antenna Book," one the best antenna references around; The "ARRL Electronics DataBook," for the wealth of data it contained that made plowing through a mass of other data books unnecessary; and a book titled "Radio Communications" that I studied for my second and first phone tests as well as my radar endorsement.

I also subscribed at that time to QST from the ARRL, 73 Magazine and CQ. Between these three and the books mentioned above, I built a good deal of my own test equipment for use at the stations and in my ham shack. Hams are a resourceful lot and although most of my rigs are now store-bought, I still get on occasionally with some of the old QRP rigs I've built over the years.

Again, no surprises on the Handbook making the list. Mine is always on the desk near where I am building projects.

Dr. Richard Price
RCP Consulting
Atlanta

Pass It On

I had to chuckle as I read with interest John Bisset's article regarding the incorrectly installed Austin Ring Transformer ball gaps (*Workbench*, Jan. 2). To old timers like myself, the problem was immediately evident. Unfortunately, to many a young engineer it certainly would not be so evident.

Having been in the business for more than 43 years, and operated some of the largest transmitters (1 million watt AMs in the Philippines and Thailand) in the world for Voice of America, it is always interesting to reflect on the vast amount of technical knowledge that individuals such as John and I possess.

It's always heartening to see someone such as him attempting to pass it along to the younger generation so they too will know that there is more to broadcasting than CPUs, LANs and Internet streaming.

Walt Konetsco
Deputy Manager
Greenville Transmitting Station
International Broadcasting Bureau
Greenville, N.C.

World Radio History

GUEST COMMENTARY

Free Local Radio: Time to Get Tough

Instead of Panicking about Satellite, Work Together to Make Signals Available Online

by Dave Wilson

Satellite radio is here to stay. Those who think they can throw enough regulatory obstacles in its way to make it fail and disappear are mistaken.

Even if free local radio were to succeed in driving one or both of the satellite radio companies into bankruptcy, which I don't predict, the only people who would suffer would be satellite radio's investors and creditors. The service would live on. Free local radio should be using the time and money it is spending to fight satellite radio on making its own service more valuable to modern consumers instead.

Not only is satellite radio service going to live on, but I predict it's going to become an even more direct competitor to free local radio as time goes on. As more and more vehicles roll out onto America's highways with factory-installed satellite receivers, there is going to come a day when it will be more profitable for the satellite radio companies to make a number of their channels available for free, using an advertising-based business model.

If I were a satellite radio company and 100 million receivers that could receive my service were on the road, but only 30 million of them were subscribers, I would activate the other 70 million with advertiser-supported programming. I might keep 60 commercial-free channels available for subscribers, and make 60 advertising supported channels available to everyone. Then where would free local radio be?

There is nothing that free local radio can do to stop this scenario from happening. It's just a matter of time. And at some point there could be enough people listening to free satellite radio that automakers decide to make AM/FM receivers optional equipment. That would be the end of free local radio.

Free local radio should be focusing its energy on strengthening itself for the future, when satellite radio will be an even more formidable competitor. Instead it seems obsessed with its futile effort to drag satellite radio backwards. Just imagine what free local radio could do if it were to spend as much time and as many resources advocating in favor of its own future, as it wastes lobbying against satellite radio's future.

Show your stuff

It is incredible that, this far into the Internet Age with each satellite radio company offering more than 100 channels, free local radio hasn't banded together on the Internet to fight back. Every spring the broadcast industry migrates to Las Vegas for the NAB Show. The business model for the show is one where exhibitors rent floor space from NAB to present their products and services to show attendees.

The radio industry should apply this same model to "exhibiting" its programming to consumers over the Internet. It should band together to form a common Website where streams from all free local radio stations can be found. Were an organization like NAB to do this it might charge members one rate and non-members a higher rate, thus making it available to all AM and FM radio stations. The end result would be an easy-to-use Web site that lets consumers tune in to thousands of free local radio stations.

I recognize that there are services that try to do this now, but I'm talking about a service focused specifically on making the content provided by AM and FM broadcasters available online so consumers know exactly where to go to find free local radio content. And I'm talking about a service controlled by AM and FM broadcasters that emphasizes their own content, not a service that throws free local radio programming in with that from thousands of Internet-only radio stations.

There are roughly 14,000 free local radio stations in the United States. Instead of panicking about the possibility that two satellite radio companies, each with 100+ channels, might become one satellite radio company with 200+ channels, they should be working together to make their 14,000 signals easily available to consumers in one place. Fourteen thousand channels shouldn't be afraid of 200.

Over the past year or two I've heard it said repeatedly that free local radio needs to get "a tuner in every portable device." As I see it, the only reason there aren't portable handheld devices with 14,000 easily tunable free local radio stations on them is that the free local radio industry hasn't done its part. The industry in general seems obsessed with trying to block competition from satellite radio, and is paying far too little attention to strengthening its own competitive position.

If only the industry as a whole acted like WFMU(FM). WFMU makes it very easy to tune into its live program feed with an iPhone.

Every radio broadcaster with an iPhone should go to *iPhone.WFMU.org* and check it out. Instead of complaining about there not being enough free local radio tuners in portable media devices, why doesn't the radio industry pool its online streaming resources to create a single site where consumers can go today to get their streams? Any free local radio station that's frustrated about its signal not being available on iPhones and other wireless devices has only itself to blame.

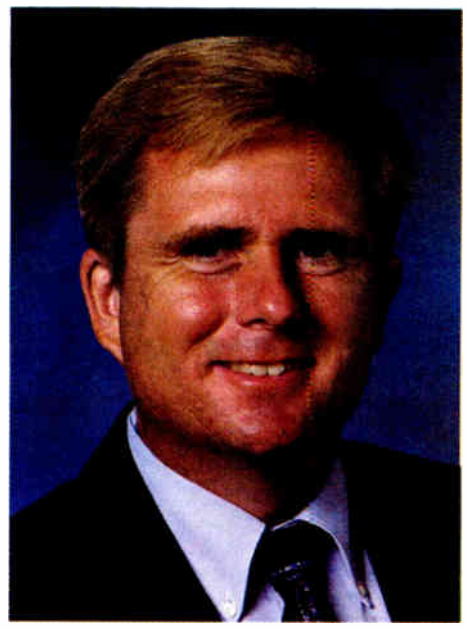
By banding together and using a common codec at a single Web site free local radio could instantly put itself on millions of portable media players. Such a Web site would almost certainly have such widespread appeal that portable device manufacturers would want to make it easily reachable from the main screens of their devices. I would imagine that companies like Apple and AT&T would love this, for it would encourage people to buy wireless enabled devices instead of more basic media players with no connectivity.

So what role would AM and FM signals play if everyone were listening to free local radio over the Internet? They would play a very important role. These signals are what give free local radio a competitive advantage over other Internet radio stations. Spectrum is limited, and people who are not within range of a broadband wireless access point have to listen to Internet radio over one of the wireless networks.

The number of simultaneous listeners that can be served by these networks is limited. The number of simultaneous listeners that can be served by AM and FM signals is not. Thus, their RF signals give free local radio broadcasters a competitive advantage over other Internet broadcasters.

Not only is satellite radio service going to live on, but I predict it's going to become an even more direct competitor to free local radio as time goes on.

Although free local radio's RF infrastructure gives it a significant competitive advantage over Internet-only radio, this infrastructure needs to be improved to compete more effectively with satellite radio. The good news is that the first major step in this improvement, the establishment of a digital transmission system, has already been accomplished. The bad news is other important steps must be taken, and there's no evidence that the industry is even thinking about them.



Dave Wilson

To more effectively compete with satellite radio for listeners who are not connected to the Internet, free local radio needs to dramatically increase its over-the-air offerings. It should consider the possibility of re-farming the FM band and creating 50 channels spaced 400 kHz apart instead of 100 channels spaced 200 kHz apart.

Up the ante

These channels would be identical to the channels that exist today. There would just be fewer of them and more space between adjacent channels. This could enable collocation of every signal in the band at each transmitter site. If this were coupled with single frequency network technology, it would be possible to provide 50 HD Radio signals to every receiver, everywhere.

Each HD Radio signal is capable of easily carrying at least two audio streams, so this would mean a minimum of 100 audio streams available on each receiver, providing consumers with an attractive alternative to satellite radio.

See ONLINE, page 54 ▶

◆READER'S FORUM◆

'Mystery' Delano Technicians

The two unknown VOA technicians shown in a photo from my article, "Last of VOA Wartime Stations Goes Dark," (March 1) have been identified. According to John Perkins, a Delano retiree, the person seated behind the console wearing glasses is J.T. Burgess. Jack Quinn identified the tech seated in front of the console as Jimmy Russell.

James O'Neal
Alexandria, Va.

The Dream Job

Mr. O'Neal, thank you for the fantastic story on the Delano facility. What a shame to see this wonderful site fall to the wayside of "modern technology."

I think this has to be one of the most informative articles I have ever read on the history of Delano. Wouldn't that have been the dream job, to work at a facility like that instead of sitting in front of a computer all day like we do now? Thanks again for the fantastic story.

Tim Moore
Biloxi, Miss.

James, thank you for a great story in history. You should put this in [ARRL's monthly journal] QST also. This is very important history and should not be lost in time and forgotten.

Thank you.

Ed Valentine, W2YPM
New Bern, N.C.

Just a terrific article — and so well researched! I hope there is a place in the Smithsonian, or perhaps a more specialized museum, for your work and some of the Delano memorabilia.

Thanks so much for your article.

Ned Rubin, N3SGD
Baltimore

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NewBay Media

Arrested Development

A Speedy Settlement in the Royalty Fight Would Benefit All Parties

NAB has recently upped the ante in the music royalty game, with a filing that challenges the Copyright Royalty Board's judgment on performance royalty rates for online streaming of music.

That's likely just the opening act on this stage, with a real battle over possible new terrestrial-radio broadcast royalties looming.

Some legal observers expect that radio's addition of digital delivery via IBOC will be pivotal in this proceeding, and a possible outcome might involve a pro-rata royalty schedule somehow extrapolated from the current conversion of broadcasters and consumers to digital radio.

Under such a scheme, as more stations and listeners convert to digital radio, or simply over time, levies on broadcasters for digital transmission rights would increase.

Consumer electronics manufacturers may also be involved here. There are statutory and voluntary precedents (in the U.S. and elsewhere) for the payment of music royalties by device or storage-media manufacturers, specifically when those devices can capture and store published musical content.

The storage-equipped IBOC receiver (i.e., a TiVo-like, radio + digital recorder) has been discussed for years, yet it has failed to reach the American market in earnest to date. We wonder how much unsettled royalty questions are to blame for this. Such devices have been popular for some time in the U.K. DAB marketplace, but in the United States, even a radio with a pause-buffer remains hard to find.

We also worry that uncertainty over possible levies associated with IBOC services or devices may have a chilling effect on U.S. radio's digital transition in general. While it's not the only factor holding things back, it has piled on, and may continue to discourage participation from parties considering their entrance or expansion into the IBOC field, further stifling innovation there — much-needed innovation.

This problem could only worsen as the terrestrial-radio royalty proceedings escalate, which they no doubt will in the coming months.

Regardless of the outcome of those proceedings, we implore those involved to seek a speedy settlement, so that the U.S. transition to digital radio is not held hostage in the process.

There have been enough obstacles and delays placed on IBOC's path already — don't let the quest for an equitable solution to the performance-royalty issue add yet another.

— RW

Online

▶ Continued from page 53

Yes, this would require a good bit of work, both technical and regulatory. However, unless it starts thinking outside the box and building an improved service for modern consumers, free local radio faces a slow, steady decline.

With or without re-farmed spectrum, radio also should be working toward implementing technology that enables listeners to customize their experiences. It should consider abandoning the real-time audio stream in favor of targeted packets of audio content.

A radio station with a real-time audio stream might do a one-minute "traffic and weather" segment every 10 minutes. That's six minutes of traffic and weather every hour. But each one-minute report has to cover an entire metro area, so the information provided is very limited, and a lot of it is of no interest to a large part of the audience because people generally don't care about the traffic on any road except for the one they're on.

If free local radio were to abandon the real-time audio stream, stop trying to compete with the content on portable media players and instead start complementing the content on portable media players, both it and its customers could benefit immensely. Instead of spending just six minutes an hour on traffic and weather, a station could spend all 60.

However, it wouldn't be 60 minutes of real-time audio. Instead it would be 60 one-minute updates broadcast to receivers in the form of audio files, each with header information indicating for whom the file is intended. Listeners who have indicated a preference for receiving files of that type would have the content automatically loaded onto their devices. Other consumers' devices would simply ignore the content.

For example, listeners who travel home on the southbound interstate in the evening would have their devices programmed to receive traffic updates for that road. Listeners who commute home on the westbound interstate, however, would have their devices programmed to receive updates for that road. This sort of customized experience where consumers get the information they want without having to listen to a lot of other information they don't want would be more in line with what people have come to expect in the Internet Age.

At some point there could be enough people listening to free satellite radio that automakers decide to make AM/FM receivers optional equipment. That would be the end of free local radio.

While I used traffic as an example, the same concept works well for any type of information. A system like this would dramatically improve free local radio's ability to provide timely programming that is personally relevant to its listeners. A system like this would enable consumers to personalize their connection with free local radio, making the relationship more valuable for the consumer and the broadcaster alike.

The bottom line is this: it's obvious to everyone that the media landscape has changed dramatically since radio first developed its traditional way of doing business. The rate of change has accelerated in the past 10 years. Free local radio needs to step back, look at the world today and develop a clearer picture of what its path forward will be.

I believe its future is all-digital HD Radio, and specifically digital radio broadcasts that deliver small, locally focused audio packages to targeted audiences. I believe its future is programming that complements the other content consumers have on their portable media players, not programming that tries to compete with the content on these players. And I also believe its future is one where free local radio super serves its local communities to better distinguish itself from satellite radio.

I can see a very bright future for free local radio, but it's a future that requires radio to let go of the past and take some bold steps forward.

If you'd like to hear more on this subject I'll be presenting a paper titled, "The Future of Radio in a Changing World" on April 13 as part of the Broadcast Engineering Conference at the NAB Show.

Dave Wilson is director, technology and standards, Consumer Electronics Association.

Letters to the Editor

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

Letters should be 100 to 300 words long; the shorter the letter, the better chance it will be published in full. We reserve the right to edit material for space. Longer commentaries are welcome but may not reach print as quickly.

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

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