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**'Fair and Balanced'**

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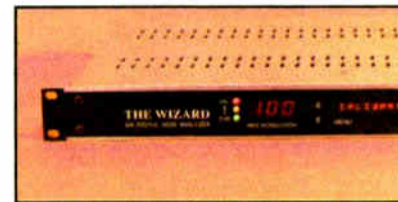
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**Measuring With Precision**

We try out Belar's new digital AM mod monitor.

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# Radio World



\$2.50

The Newspaper for Radio Managers and Engineers

January 14, 2004

**INSIDE**

**NEWS & ENGINEERING**

▼ How to save money on thermal paper.

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▼ Skip Pizzi says his four-year-old RDS car radio suddenly has come to life.

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**GM JOURNAL**

▼ Tim Brown wants to provide an alternative to big radio in Denver, and he's got the money.

Page 19

**POWERED UP**

▼ Tools for protection, power conditioning and backup, in *Buyer's Guide*.



**OPINION**

▼ Translators; remembering Adrian DeVries; and your letters.

## Stations Rebuild After Fire

*In California, Cooperation Among Broadcasters Helps in Wildfire Recovery Process*

by Randy J. Stine

**SAN BERNARDINO, Calif.** Three radio stations here are still working to put their transmitter sites back together after they were ravaged by wildfires in late October. The disaster challenged the ingenuity of engineering staffs and triggered emergency preparedness plans.

Local engineers say cooperation from rival broadcasters and help from equipment suppliers have aided each station's recovery.

The massive wildfires threatened several southern California broadcast transmission installations. But hardest hit were FM stations KFRG, KCAL and KSGN, which lost main and auxiliary transmitters when fire destroyed their transmitter buildings in the foothills of San Bernardino, doing hundreds of thousands of dollars in damage. The loss sent engineers scrambling for alternative locations and equipment.

In the days following the wildfires, all

See FIRES, page 8 ▶



KFRG Chief Engineer Kevin Scott inspects fire damage at the transmitter site.

**NEWS ANALYSIS**

## Could Low-Power Morph to AM?

by Naina Narayana Chernoff

**WASHINGTON** Low-power advocates are now eyeing the AM band.

The concept of putting low-power stations on AM was proposed earlier to the FCC in the late 1990s. Now, low-power advocates are again calling on the commission to establish a new commercial service in the expanded portion of the AM band.

FCC staff declined to address the petition's specifics. They are reviewing a petition for rulemaking for a proposed LPAM service submitted by engineer Fred Baumgartner.

Baumgartner is a former broadcast engineer who serves as director of engineering at the Comcast Media Center in Littleton, Colo. He filed his petition privately — not on behalf of Comcast — for a commercial low-power AM service in a docket created to solicit comments for the FCC's Localism Task Force.

The proposed service, he said, could offer an option for increasing local broadcasting outlets and another way for communities to get on the air

See LPAM, page 6 ▶



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# Arbitron: PPM Is 'When,' Not 'If'

by Leslie Stimson

**COLUMBIA, Md.** Arbitron is prepared to go forward with its Portable People Meter project with or without participation from Nielsen. Several tests are underway to help the audience measurement service tweak PPM for radio use and, eventually, quantify costs.

Although the audience measurement firm would prefer to have Nielsen's monetary and resource support for the PPM, it did not yet have a commitment from the TV measurement company as of the end of 2003.

"For something as important as audience measurement, we can't leave that

decision to somebody else," said Arbitron President of U.S. Media Services Owen Charlebois.

The rollout of PPM in this country is more a matter of "when" not "if," he said. This, he added, assumes Arbitron radio customers will support it going forward.

In general, stations, while supporting the idea of improving ratings research, want to know more about the costs involved with PPM. How much stations would pay for the PPM approach vs. the familiar diary approach is unknown. Arbitron says sample size and methodology are cost factors for PPM, which measures audience for radio, TV and cable.

The potential for PPM is enormous,

some radio program consultants believe, because it puts radio on the same measurement platform as TV, allowing overnight estimates, measurement of children ages 6 through 11, and eventually, measurement of retail stores, print and outdoor advertising.

For example, PPM could give a radio station subscriber a list of the TV programs its listeners watched the night before, in turn helping the morning show hosts know what their P1 and P2 listeners want to hear as "chatter." PPM also could help stations learn more about the media and buying habits of less-loyal listeners, to help stations convert them.

Also with PPM, a PD can tell whether

there's additional tune-in and tune-out for a specific part of a program. It could tell programmers the effectiveness of cross on-air promotions for other stations in their clusters.

The audience measurement company conducted a retail encoding test in Philadelphia through the end of December. The idea is to monitor where a radio listener shops, for how long and what he or she purchases so that stations can provide clients with more quantifiable information about how their spots work.

Arbitron said it was close to announcing its second PPM test market. Programmers had requested a market with a significant Hispanic population. That test, comparing PPM listening to traditional diary listening, is slated to begin at the end of 2004.

If Nielsen participates, Arbitron hopes to begin commercial rollout of PPM beginning in markets 11 and smaller in 2006. Arbitron may go it alone in the top 10 radio markets. Arbitron station customers in converted markets would have a choice of measurement systems: PPM-only or a combination of PPM and diaries.

## Diary too

Previous tests in Philadelphia, Wilmington, Del., and Manchester, England yielded response rates that were less than adequate, Arbitron executives said at the company's annual consultant meeting in December. New tests show more promise.

Arbitron has been seeking to market the Portable People Meter overseas. Now, it's formalized an agreement with market information and TV audience measurement company TNS to use the PPM for radio and TV audience measurement in portions of Europe, Asia-Pacific, the Middle East and Africa. TNS and Arbitron said they have been working together to market the PPM for nearly four years.

Despite plans for a PPM rollout in some markets, the traditional diary will not go

See PPM, page 3 ▶

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# Clear Channel Shuffles Tech Deck

by Leslie Stimson

**SAN ANTONIO, Texas** Clear Channel Radio has created a new regional engineering operating structure, promoting its 10 regional engineers to vice president, giving them more responsibilities, including supervising the HD Radio rollout for the big broadcasters' stations.

The engineers now have the title regional vice president of engineering. Promoted were Allan Brace, Ben Brintzer, Tom Cox, Gil Garcia, Mike Gideon, Mike Guidotti, Paul Jellison, Ken Jones, Dan Mettler and Randy Mullinax.

Commenting after the announcement, Mullinax stated, "With a majority of the studio consolidation projects completed in my region, most of my projects for 2004 will be to improve the coverage of our stations (both AM and FM) wherever possible to better serve our listeners. I am particularly

excited about the new 'community antenna' system that is under construction at the American Tower Corporation site in Miami which will



Gil Garcia



Ben Brintzer



Dan Mettler



Randy Mullinax

provide an easy path (low level insertion) for the conversion to HD Radio. We own 4 of the 10 stations at this site."

ATC owns the tower in Miami and is doing the construction for the 10-station

- Increasing payments to 25-34-year-old males;
- Adding an additional call/interview center in the southwestern United States, doubling the company's capacity;
- Testing an e-consent form as well as an e-diary;
- Paying for diary pre-placement;
- Experimenting with alternatives to telephone placement due to the Federal Trade Commission's "do not call" list and some migration to mobile phones;
- Hispanic language preference reporting.

group, he said.

The move comes partly as a result Clear Channel's layoff of Al Kenyon, former senior vice president for pro-

jects and technology. His departure, in turn, was spurred by a decreasing number of planned capital projects for the group as the consolidation process matures and acquired properties are integrated into operating units.

The new RVPs, who were already involved in buildouts, now are responsible for assisting local engineers and other staffs with RF projects, capital budgets, etc., according to Jeff Littlejohn, vice president of engineering for Clear Channel Radio. The company will be turning over roughly two projects each to the RVPs, instead of assigning them all to one person.

"The alignment of our engineering

operations is now consistent with the decentralized structure of our station group," stated John Hogan, CEO of Clear Channel Radio.

"Clear Channel is the industry leader in investing in technology, facilities and system upgrades. Under this new structure, the RVPs of engineering will serve as a valuable resource for local station managers, ensuring they have the latest technology at their fingertips along with the highest-quality equipment and signals."

The regions for which the regional vice presidents of engineering are responsible are:

- Allan Brace — Minnesota, Wisconsin, North and South Dakota, Nebraska, Michigan
- Ben Brintzer — North and South Carolina, Georgia, eastern Tennessee
- Tom Cox — California, Arizona, Nevada, Oregon, Alaska, Hawaii
- Gil Garcia — Texas, Oklahoma, Kansas
- Paul Jellison — New Mexico, Colorado, Wyoming, Montana, Idaho, Utah
- Ken Jones — New England / New York State
- Mike Gideon — Western Tennessee, Arkansas, Missouri, Mississippi
- Mike Guidotti — Pennsylvania, Virginia, the District of Columbia, Maryland, New Jersey, New York City, Boston, Long Island
- Dan Mettler — Indiana, Ohio, Kentucky, West Virginia
- Randy Mullinax — Florida, Alabama, Louisiana

## PPM

► Continued from page 2 away, and the company would continue to support that product, said Arbitron Radio Senior Vice President/General Manager Scott Musgrave.

He announced several diary enhancements:

- Attempting to increase response rates through financial incentives for blacks and Hispanics in all markets;

## In-Car Listening

Radio needs to invest in data services and reach out to young listeners. Those are some of the lessons revealed by a recent survey, research said.

Edison Media Research and Arbitron in December shared more information from their "In-Car" study, which was released last fall.

Among the new highlights:

- In-car listening is growing, while at-home and at-work listening have suffered 10 percent losses over the past four years.
- In-car listening is not just a major-market phenomenon. For example, 42 percent of listening in Elizabeth City-Nags Head, N.C., is in done in the car. This market is ranked in the top 10 for in-car listening. By comparison, Los Angeles is No. 251 with 30 percent of the listening in-car. Los Angeles has a large number of Hispanic listeners, and whites spend more time listening to radio in the car than do blacks and Hispanics, said Larry Rosin, president, Edison Media Research.
- Thirty-five percent of respondents said they have no AM station pre-set on their car radios. The average numbers of pre-sets were five FM stations and one AM; and most people don't change those once they are set. The question new stations or those with new formats would want to know is how can a particular station become one of those pre-sets.
- Two of five consumers decide while they're in the car to shop on the way home from work, and 77 percent of those stops are to the grocery store. And more than half of all in-car listening is between 5 and 6 p.m. These statistics should persuade station sales staff to promote afternoon drive to advertisers, Rosin said.
- Twenty-four percent were familiar with Sirius, and 34 percent with XM Satellite Radio.
- Although 15 percent said they were interested in having satellite radio pre-installed in their vehicle, few — 2 percent — said they were likely to subscribe within the next 12 months.

Radio needs to increase its investment in in-car technology to defend its turf against other delivery systems for entertainment such as CDs and MP3, Rosin said. "The number-one pet peeve about radio is, 'They don't tell me the song and artist.'"

That's why radio needs to consider investing in radio data services, he said.

"Today's 12- to 24-year-olds are not learning the radio habit" in the same numbers as previous generations, he said.

A summary of the study is at [www.arbitron.com](http://www.arbitron.com) under the Radio Stations link. The summary includes information on use of on-air traffic reports and the impact of advertising on those who listen in their cars.

— Leslie Stimson

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# Repeat Business for NAB and XM

Now that the NAB and XM Satellite Radio have kissed and made up, what next? Maybe we'll see Eddie Fritts and Hugh Panero meet halfway between N Street and Eckington Place in Washington to smoke a ceremonial peace pipe.

In case you missed it in the holiday rush, the FCC two days before Christmas received an unusual communication in its "IN" box: a letter to the FCC signed by Lon C. Levin, senior vice president of XM, and Jack N.

Goodman, senior VP and general counsel for the NAB.

Unusual, because those two organizations have been sniping at each other for a long time over XM's intentions for its terrestrial repeaters. The NAB had argued that the satellite company might use its infrastructure to originate local programming and in fact that XM intended to do so, thus getting into localism through a back door that the FCC had never intended to allow.

But after "several months of negotia-

tions," according to a spokesman, NAB reached agreement with XM on rules to limit the use of SDARS repeaters.

Commenting on the commission's proceeding in the matter, the companies jointly asked that the FCC adopt this language:

"SDARS repeaters are restricted to the simultaneous transmission of the complete programming, and only that programming, transmitted by the satellite directly to SDARS subscribers' receivers, and may not be used to distribute any information not also transmitted to all subscribers' receivers.

"This language assures that the repeaters transmit the same content to all receivers," the letter continued. "XM Radio and NAB do not intend the term 'transmitted to all subscribers' receivers' to mean 'received by all subscribers' receivers.' Accordingly, this language allows the provision of services that are transmitted to all subscribers' receivers by both the SDARS satellites and repeaters, but are not necessarily processed by a subscriber's receiver if the subscriber has not paid an additional fee for additional services or the content is otherwise filtered or blocked.

"The proposed language is also intended to permit repeaters to transmit data intended solely for the internal monitoring and control of the repeater network."

Got all that? Bottom line, the NAB spokesman said this rule would prevent XM or any other satellite radio licensee from originating content from a terrestrial repeater and from using repeaters in any way to divide content provided over satellites into localized programming.

"XM, therefore, has given up the right to use the patent it developed to enable locally differentiated programming using geographic signals over repeaters," the NAB spokesman stated. "With this agreement, we hope that the FCC will proceed to adopt a final rule on this matter."

I would have enjoyed being a fly on the wall during the negotiations that led

## From the Editor



**Paul J. McLane**

up to *this* agreement. It sure seems like NAB won its point. I also wonder if one of XM's strategic investors — namely, NAB's biggest radio group, Clear Channel — influenced the settlement.

Meantime, I love the idea of Eddie and Hugh getting together for a sit-down peace pipe. But I wonder what they'd put on the radio for entertainment.

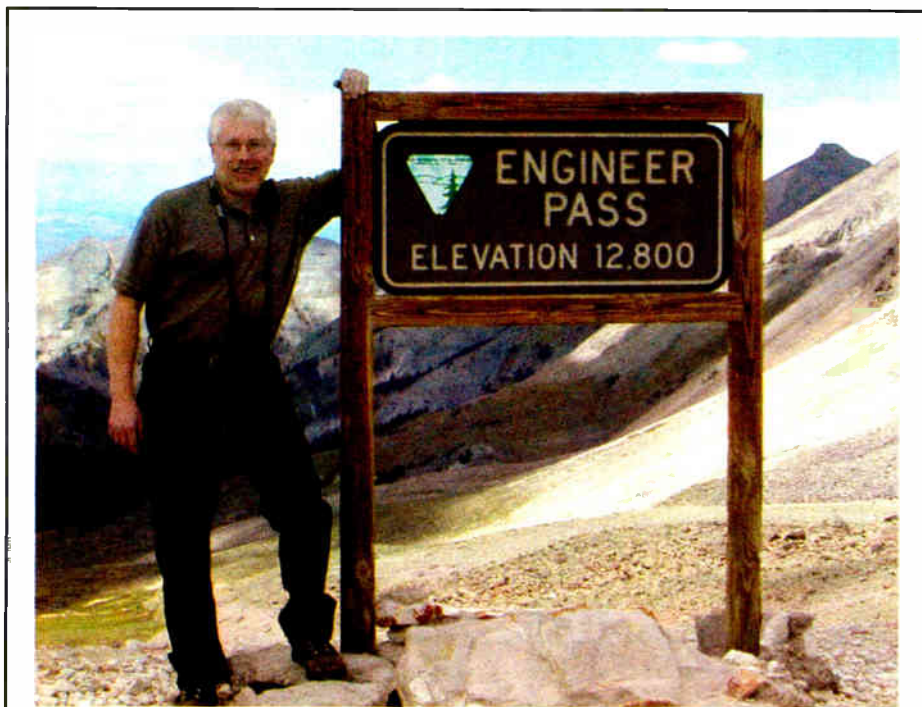
★ ★ ★

I took heat from a colleague who works at NPR over a comment I made here last month. I recommended a three-CD set from NPR as a suitable gift "for the flaming liberal on your shopping list."

I had my tongue in cheek when I wrote the original column, intending to comment more on the *perception* of NPR as a bastion of liberals than about its actual slant. But my remark didn't set well with this particular friend.

"The NPR Driveway Moments are not just for bleeding liberals, they're stories for everyone," he wrote to me. "Please, we're trying to bury the 'effete East-Coast-based liberal media network' image because, well, it isn't accurate. When certain types of people read your column with the 'bleeding liberal' stuff, it reinforces stupid stereotypes in their head."

This is a good reminder to me that the printed word may not convey irony well — as I also know from sending many a misconstrued e-mail. 🌐



Radio World contributor Cris Alexander sent in this photo, taken by his daughter Amanda on Engineer Pass last summer.

"We vacation every year in the San Juan Mountains of southwest Colorado, and on that particular day, we took a Jeep trip around what the locals call the Alpine Loop," the DOE of Crawford Broadcasting told me.

"It is a Jeep trail that runs from Lake City southwest over Cinnamon Pass, down through Animas Forks (an old mining settlement with lots of ruins) and up over Engineer Pass back to Lake City. It is an all-day trip.

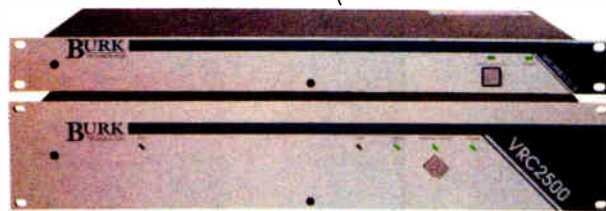
"The passes are 12,000+ feet and there are a number of 'shelf roads' where you spend a lot of time praying, 'Please, please don't let anyone be coming the other way!' You sometimes have to back up a long distance with only inches of clearance to let someone by."

Send me your fun photos, to [radioworld@imaspub.com](mailto:radioworld@imaspub.com).

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# ◆ NEWS WATCH ◆

## FCC Seeks Input On Separate FM IBOC Antennas

**WASHINGTON** The FCC is taking comments about an NAB report on how stations might use separate antennas for the FM analog and digital signals transmitted with HD Radio. Comments (MM Docket 99-325) were due Jan. 8; replies are due Jan. 23.

An ad hoc NAB committee submitted a report to the commission this summer, with suggestions for criteria under which stations could use separate antennas and thus save money and increase efficiency for HD Radio implementation.

FM stations going on the air now with the hybrid analog/digital signals are restricted to a single antenna. When the commission authorized IBOC, it had no data on whether separate antennas could be used without causing interference to the host or neighboring stations.

NAB stated that separate antennas for digital transmission would work if certain criteria were met: The digital transmission must use a licensed auxiliary antenna; the auxiliary antenna must be within three seconds of latitude and longitude of the main antenna; and the height above average terrain of the auxiliary antennas must be between 70 and 100 percent of the HAAT of the main antenna.

The report also recommends that the commission authorize use of antennas specially designed with interleaved or stacked elements for analog and digital signals.

## High Court Upholds Political Ad Changes

**WASHINGTON** The Supreme Court upheld many of the provisions of the McCain-Feingold campaign finance reform bill, meant to limit the influence of donations in federal politics. The new law prevents corporations, trade unions and interest groups from airing broadcast ads that

name candidates 30 days before a primary and 60 days before a general election. By a 5-4 vote, the justices declared this and other portions of the law constitutional.

"The decision by the Supreme Court will cause substantial changes in the manner in which federal candidates utilize broadcasting to reach the voters. This is a complex 300-page opinion that will require extensive evaluation before its full impact is understood," said NAB President and CEO Eddie Fritts in a statement after the vote.

## Euro Group Discovers Digital Radio

**BRUSSELS, Belgium** For the first time, DAB digital radio is on the radar of the Intergroup Audiovisual Policy.

The group is part of the European Parliament and meets in Brussels to discuss audiovisual issues relevant to Europe. Previous discussions have focused on TV and film.

The meeting in December was a significant one for digital radio in Europe, sending a positive political signal that the importance of DAB is growing within the EP, according to the World DAB Forum, which promotes the Eureka-147 technology.

Representatives from the BBC and WorldDAB, along with the head of engineering of Sweden's public radio broadcaster, Swedish Radio, argued that while digital radio via various platforms is a reality in some European countries, in others it has reached a vulnerable point where the implementation of strong legislation, regulation and spectrum issues are crucial.

Group Chair Ruth Hieronymi stressed the importance of digital radio and national promotion schemes in order to achieve digital radio switchover in member states.

From Swedish Radio, Kjell Engstrom demonstrated that DAB could benefit European citizens, not simply via enhanced audio services, but through its capacity to deliver data and video to a variety of receivers (including mobile phones).

Simon Nelson, Controller of Radio &

Music Interactive for the BBC, demonstrated how the broadcaster is turning radio into a more interactive experience across several platforms, using scrolling text and on-demand digital services.

## 'Spidey' Gets WDRQ Fined

**WASHINGTON** The commission found ABC licensee WDRQ(FM) in Detroit apparently liable for violating its contest rules and fined the station \$4,000.

After receiving a complaint from a contestant, the agency found that the station did not adequately reveal the terms of the contest "War of the Sexes." Contestant Joe Lucker won a pass for the movie "Spiderman," for one night, but couldn't see it because the theater was too crowded. The FCC said it wasn't clear to winners that they might not get into the movie and that other prizes might be substituted.

WDRQ argued that when it awarded Lucker the prize, he was told that admission to the movie was not guaranteed. The station offered him tickets for another night and gave him several station promotion items. WDRQ stated it also told listeners on the air afterwards that movie passes did not guarantee admission.

ABC said that the station now airs generic contest rules "that note the station reserves the right to substitute a prize for equal or greater value in the event that the

announcement prize is unavailable."

The agency stated that WDRQ failed to broadcast the nature and value of the contest prize — the fact that the movie passes did not guarantee admission. Although the station took remedial actions, the commission found a penalty was warranted.

## Radio Experience Augments RDS

**BELLEVUE, Wash.** The Radio Experience has updated its RDS applications to give stations the ability to scroll an eight-character descriptor across the receiver faceplate, rather than have a static display. The application is part of a new product, The RDS Accelerator.

The company says the product "will immediately impact countless RDS radios in the marketplace today. It will also protect the investment that many radio stations already have in RDS equipment as they move to expand their RDS capabilities."

For stations new to RDS, it will make for less expensive RDS implementation, according to the company. The scrolling text messages can mirror what is sent to RadioText or be programmed independently using the company's Now Playing software, or RBDS.net architecture.

The product adds group scheduling that means that Now Playing messages arrive to RDS radios in less time, claims The Radio Experience.

Groups with pilot stations testing the new technology include Entercom, Susquehanna, Infinity, Bonneville, Jefferson Pilot, SBS and Radio One.

## Getting Clinical in Madison

Digital radio and pocket recording were among the topics as SBE Chapter 24 in Madison, Wis., held its annual meeting last fall.

Panel discussions included HD Radio, recording using a Personal Digital Assistant, advancements in microphone technology and evaluating an AM antenna system for digital capability. This year's national SBE membership meeting and awards banquet capped the engineering clinic.

Shown in the Broadcasters Clinic 2003 Exhibit hall are Lonnie Cooks, SBE Chapter 24 special events coordinator and engineer at Wisconsin Educational Communications Board; Angel Bates, SBE national membership services director; and Linda Baun, SBE certification chair.



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# LPAM

► Continued from page 1 without huge expense.

Prospective broadcasters, he feels, would not have to undergo an involved technical application process or pay for the studies of consulting engineers, because protections against full-power broadcasters would already be instituted.

His proposal calls for a specified maximum antenna system size and type-accepted transmitters with integral limits on out-of-band emissions, frequency and power-level.

"For LPFM, the biggest limitation for the community is paying for the engineering work up front." LPAM, he said, "wouldn't require a study by applicants and it would be simple and straightforward."

NAB, which had protested the creation of the LPFM service because of projected interference, said it is reviewing the petition for LPAM. A spokesman said the organization would monitor the FCC's Localism Task Force actions on the petition.

Nicholas Leggett, who filed a petition advocating a low-power AM service in

Creating a service like this would move the expanded band that way."

The petition represents a compromise by several unnamed interest groups, engineers and individuals who offered input on the proposal, according to Baumgartner.

He is proposing a service in the AM band between 1610 and 1700 kHz, an

WILW(AM) Radio in WaKeeney, Kan., support the commercial aspect of the petition. He believes some supporters will balk at the suggestion because of the non-profit nature of community radio.

"What they fail to realize is that if we put up stations that reach small areas with mom-and-pop businesses that can't afford to advertise on full-power stations,

ing, should be eliminated as well because it would be onerous on station volunteers. If necessary, the group said, restrictions similar to the LPFM service could be instituted. The FCC requires LPFM broadcasters to produce at least eight hours per day of local programming.

The affiliate group also recommended to change LPAM from a secondary to a primary service to avoid displacement by full-power AM stations attempting to change frequencies and future long-distance AM translators. Schellhardt believes the rule is needed particularly in crowded urban markets such as Detroit and Boston, where few frequencies might be available.


"The idea of having two or three guaranteed spots in major urban areas is reasonable," he said. "Otherwise, the chances of keeping a low-power frequency if a full-power station wants to move is low."

Microradio advocates made a similar suggestion during the LPFM proceedings but were denied.

The LPAM Team also proposed that the FCC consider allowing higher power levels — up to 200 watts — for stations in rural areas and larger mileage separations for areas of lower ground conductivity, which is used to predict the propagation of AM signals.

The Baumgartner petition suggests that 100-watt licenses be assigned only in areas where 20,000 or fewer people live within a five-mile radius of the transmitter. Schellhardt's group said its analysis indicates that there are enough open frequencies to double the number without creating additional interference.

The mileage separation of 225 miles for 100-watt stations could be reduced by reevaluating the average ground conductivity in the continental United States, the team stated. The Baumgartner petition assumes a ground conductivity reading of 30, which is found in large areas of Kansas, Oklahoma, North Dakota and Texas and small isolated pockets of South Dakota, Nebraska, Utah, Minnesota, Missouri, Iowa, Louisiana and California. The national average level falls between 4 to 8.

Among the other recommendations by the team is for LPAM to be formally declared as a service that broadcasts at 5 watts or more to avoid the inadvertent creation of a licensing requirement for Part 15 systems. The team also unanimously requests that the FCC create a formal agency framework for resolving any LPAM-to-LPAM interference disputes. 

## Considering that we're talking about setting up a nationwide low-power service, I think the changes are not that radical.

— Don Schellhardt

area he and his fellow contributors believe would support a secondary service with a minimum of interference to existing and proposed full-power stations. The petition suggests that the FCC sets power levels at 30 and 100 watts, with a maximum tower height of 40 feet for both.

Baumgartner's petition also suggests that proposed LPAM licensees be allowed on the air between eight hours

they might be able to afford it," he said. "The more you favor non-commercial, the more you're supporting the Wal-Marts of the world."

Walker encouraged others to submit comments supporting Baumgartner's proposal.

Many have responded, including some members of the Amherst Alliance, an advocacy group for media reform and low-power radio. In December, an affiliate group made up of some alliance members and community radio supporters that calls itself the LPAM Team filed comments with the FCC supporting the Baumgartner petition. The filing also offered suggestions to improve the proposed service.

Don Schellhardt said the affiliate group's comments aim to enhance the service, not to negate the work of those who worked on the Baumgartner petition.

"It was understood from the beginning that not everyone agreed on all the parts," he said. "We'd be willing to take it as it is, but we'd like to make some improvements."

### Major modifications

The LPAM Team would like to change two major parts of the petition: the limited airtime restrictions and the minimum percentage of manned airtime.

The group wants to remove the proposed 85-hour limit, Schellhardt said, to give licensees as much air time as possible to develop a financial base in which they can sell ad time. Time-sharing, he said, should only be used in situations where there are two applicants competing for the same frequency, similar to the LPFM application process.

The 60 percent ceiling on manned airtime, according to the affiliate group's fil-

— WILW's William Walker

minimum and up to 85 hours a week maximum, a proposal aimed at encouraging time-sharing by community groups. To further encourage local broadcasting, LPAM stations would be required to be staffed live by an operator 60 percent of the time, similar to a requirement for LPFM licensees.

But unlike LPFM, the plan for LPAM would allow for such broadcasters to support their operations by selling airtime and permitting underwriting.

"Small communities have no financially reasonable way to do this otherwise," Baumgartner said. "It's not something that they'll get rich doing."

### On-air advertising

Some community broadcast activists, including William Walker, proprietor of

## The more you favor non-commercial, the more you're supporting the Wal-Marts of the world.

the late 1990s following the earliest LPAM petition by attorney Christopher DiPaola, said the current political environment seems more open to a petition such as Baumgartner's.

"Because of the furor over the ownership issues, LPFM got a kick in the pants. It became a counterweight," Leggett said. "That furor is a real motivator to look at low-power, localized broadcast systems."

But consulting engineer Ron Rackley said adding new stations on the AM band would not help alleviate the problem of shrinking local broadcast outlets. "Creating a service where interference could be caused hundreds of miles away...that's not localism," said Rackley, a consulting engineer at DiTreil, Lundin and Rackley, Inc. "There's a degradation of the signal in the AM band already.

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## DIGITAL NEWS

## South Korea To Launch Digital Media

**LONDON** South Korea is set to launch a national digital multimedia-broadcasting (DMB) platform, using the Eureka-147 digital standard. South Korea would be the first country to do this, according to the World DAB Forum, a marketing group for Eureka-147.

The South Korean government will invest around \$41.5 million to develop DMB receiver technology over five years to bring mobile radio, TV and data services to the country.

"With an impressive timetable for rolling out DMB, we believe South Korea will be the first to take mobile video streaming commercially forward," stated World DAB President Annika Nyberg.

Three national multiplexes will be on air in South Korea by the end of 2004. Along with audio services, South Korea's DAB multiplexes eventually will be able to deliver video and data streaming to consumers who can tune in on handheld mobile devices.

## ALPS Readies HD Radio Tuner

**TOKYO** Receiver component manufacturer ALPS Electric Co. has developed an HD Radio front-end tuner — the first in its product category, according to the company, to be certified by Ibiqity Digital. ALPS says all the HD Radio front-end tuners that it manufactures, including automotive and home-use tuners, have received certification.

The TDGA 1 Series tuners feature a programmable automatic gain control.

ALPS' line of modular products includes front-end tuner units and base-band units such as stereo decoders, analog/digital-digital/analog converters and acoustic processors. Mass production of these modules is slated for 2004.

## Sirius Tries to Expand North

**OTTOWA** Canada's national public broadcaster CBC/Radio-Canada and Sirius are exploring the possibility of bringing the satellite digital radio service to that country.

The broadcaster and Sirius plan to file an application with Canada's version of the FCC for a license. The companies said the service would give Canadians access to a variety of programming including Canadian content. Sirius would distribute two CBC/Radio-Canada channels, one

English and one French.

XM Satellite Radio also is seeking permission to sell its service to Canadians.

## Canada Cuts DAB Receiver Costs

**OTTOWA** Canadians are trying to move their digital rollout to the next phase.

The group formed to oversee the process has decided to move away from its marketing focus and address remaining policy and regulatory issues to foster more adoption of Eureka-147.

"Our experience with the implementation of DAB in Canada has revealed that the resolution of important policy and regulatory issues must now take precedence in the determination of Canada's digital

radio initiative," said Digital Radio Rollout Inc. President Duff Roman.

DRRI will operate under the auspices of the Canadian Association of Broadcasters and be structured to provide a partnership between private broadcasters, the Canadian Broadcasting Corp. and Communications Research Centre Canada.

Roman said cost-effective receivers have been adapted for the Canadian marketplace and are expected to ship soon.

In terms of expanding the number of digital radio markets in Canada, O.K. Radio Group Ltd. has applied for a transitional digital radio license associated with its existing stations CJZN(FM) and CKKQ(FM) in Victoria.

Since launch several years ago, some 60 stations in Canada are transmitting a digital signal, reaching listeners in the Vancouver, Toronto, Windsor, Montreal,

and Ottawa markets. Seven Halifax digital signals are being field-tested.

## Sirius, Hertz Stretch Partnership

Hertz has expanded the number of cities it offers Sirius as an option in its rental cars. The satellite radio service is available in 29 vehicle models at 53 Hertz airport locations.

Also, Hertz customers can request Sirius through their travel agent by calling the Hertz reservation center (800) 654-3131, or at rental counters at participating Hertz locations. The additional cost for renting a vehicle equipped with Sirius is \$3 per day.

—Leslie Stimson



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## How to Submit Letters

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



# Fires

► Continued from page 1



The interior of the KSGN transmitter building after the fires.

three were forced to broadcast from alternate locations, relying on the goodwill of rival and sister stations for help. In the weeks since the wildfires, the stations have been sharing a generator and operating out of makeshift transmitter buildings at the burned-out site, sometimes at reduced power. They're looking at ways to make their transmitter buildings more fire-retardant when they are rebuilt.

## Intense fire

The unmanned transmitter sites for the stations, located within 100 feet of each other on Cloudland Mountain, are approximately six miles north of downtown San Bernardino. Engineers for the stations said they were surprised fire took out the sites.

"There were really no trees out at the site, mostly just California sagebrush. The building walls were cinder block, but the roofs were a wood composite material. We figure either a hot ember hit the roof, or the heat from the fire itself was so intense it started the fire," said John Artal, co-contract engineer along with John Patterson at Anaheim Broadcasting's KCAL. "The wood roof caved in turning the buildings into giant kilns, more or less." All transmission and broadcast gear at the sites was lost, though no injuries were reported, according to Artal. "Everything was burned or



The exterior of the KSGN building.

melted. We also lost a good section of our transmission line."

Artal estimated the equipment loss and the cost of rebuilding to be approximately \$150,000.

He said he borrowed a Bext exciter from Magic Broadcasting's KWRP(FM) in San Jacinto, Calif., one of his client stations, to get KCAL back on the air about 30 hours after the fire.

"We hooked the frequency-agile exciter up to a standby antenna for KCAL's sister station KOLA(FM) on Box Springs Mountain. It wasn't the best signal, but we were back on the air," he said.

KCAL and KFRG are sharing a 16-foot cargo trailer to store their transmitters temporarily at the Cloudland site. Backup power continues to be used. Both stations are using KFRG's 1,000-gallon Onan diesel generator, Artal said.

KCAL purchased a Bext 2 kW solid-state transmitter to replace the destroyed unit. KFRG is using a Broadcast Electronics 10 kW transmitter.

Non-commercial KSGN is in the cargo trailer-mode, too, but is operating at full power, said Bruce Potterton, chief engineer for the station.

"We purchased a new Nautel 5 kW trans-

"We dispatched a strike team of Infinity engineers from our Los Angeles stations. We put together a package of some things we thought KFRG would need, like frequency-agile exciters and a power amplifier," Mason said.

Infinity's disaster plan is flexible, depending on the size of the disaster, Mason said.

"We've looked closer and closer at disaster planning since 9/11 and the big power failure in the east last summer. We look at it as if we are a public agency handling a disaster. This was a disaster to us," Mason said.

One tip that Mason offers is to designate someone to keep a log of events.

"When you look back at it you can determine dates and times of things. Like when did we power up to x amount of power and when did we power up to y amount of power. That way you can keep management advised."

KFRG used the aux. transmitter site of Clear Channel Radio's KGGI(FM) on Box Springs to resume broadcasting the first week, Mason said.

The fact that KFRG is the region's LPI station for the Emergency Alert System added to the importance of returning to the air in short fashion, Mason said. "We wanted to keep serving the community," he said.

KGGI filled the role of originating EAS evacuation warnings while KFRG was off the air, he added.

Mason said the final cost of replacing equipment and rebuilding the transmitter site may come in close to a half-million dollars.

As the stations rebuild their transmitter



KSGN has its own trailer hauler. KFRG and KCAL are sharing another trailer.

mitter and have been using the trailer as a transmitter room since mid-November — a portable transmitter enclosure, if you will. Originally we borrowed an exciter and STL from Amaro Group. They even loaned us a 200-watt transmitter we set up in a U-Haul trailer," Potterton said.

KSGN, licensed by Good News Radio, was back on the air 48 hours after the inferno, Potterton said.

## Strike team swarmed

Potterton pegged the station's equipment loss at close to \$120,000.

He credited Infinity's KFRG for its generosity in assisting the non-commercial station. "We are using (KFRG's) generator until the power company can drop lines off the poles again. Being a non-com, I think we are seen as less of a threat to the commercial stations."

KFRG launched its disaster plan immediately after learning of the seriousness of the situation, said Scott Mason, the west coast director of engineering for Infinity.

sites, all are looking at ways to design buildings to withstand firestorms.

"Proper brush clearing and a cement roof probably could have saved us," said Mason. "I'm just looking at a non-burning building."

Artal said KCAL will go with a metal mini storage unit and have the interior insulated and drywalled.

"In California, we also have to be concerned with building things to meet earthquake safety standards. I'm not sure about an all-cement building passing local building code," Artal said.

KSGN is looking at fire-retardant roofing material for its new building, said Potterton. "We also want to make sure any new ventilation system cannot suck in hot embers to set the inside on fire."

All three stations needed their towers reguyed, engineers said, but suffered no structural damage to their towers or antennas as a result of the wildfires.

At year's end, the stations were still in the process of filing insurance claims seeking reimbursement for their losses.

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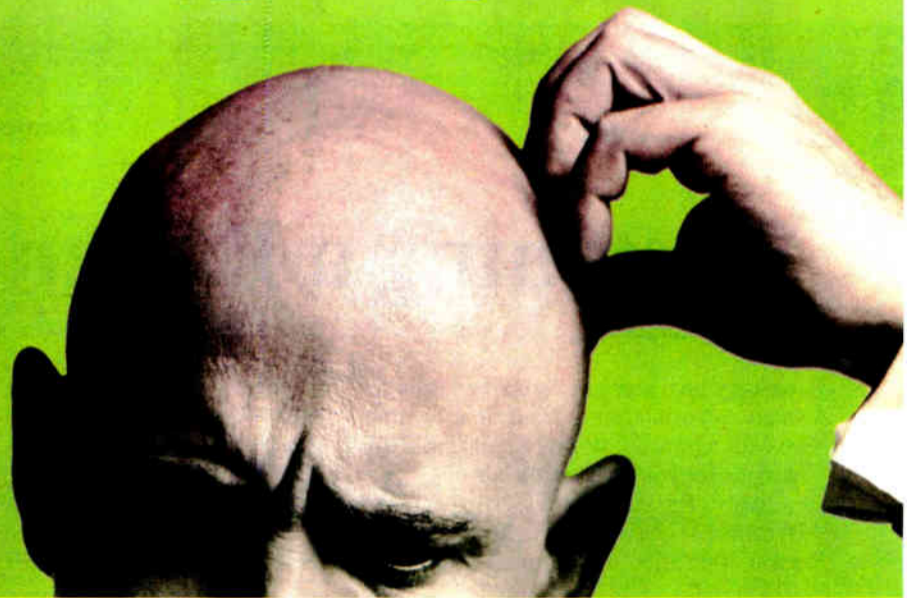
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The new Omnia-6EX won't short-change your listeners. We've built Omnias with sampling rates of 48kHz and higher from the start. All along, we've needed the sampling headroom to keep analog FM audio grunge-free. Now it's essential for HD Radio. Even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

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

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



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

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# Workbench

Radio World, January 14, 2004 Past columns are archived at [www.rwonline.com/reference-room](http://www.rwonline.com/reference-room)

## Stretching a Dollar in a New Year

by John Bisset

Every engineer has recurring needs for small electronic parts from time to time, as well as an occasional urgent need for parts to get you back on the air.

John Petter works for Clarke Broadcasting in Sonora, Calif. He writes that they are fortunate to have a

Radio Shack store in their small community, but it doesn't always have what is needed. To help fill the gap, John established open accounts with Mouser Electronics and Digi-Key.

Ordering online from either company is a snap. You provide "profile" information once; from then on, it's basically "click and go." Credit card

orders are just as easy. They e-mail confirmation and tracking info, which is handy; and their Web sites seem to always know stock status.

Admittedly, it can be difficult to wade through one of their big catalogues (online is slower, in John's opinion) to locate the part you want. Another source that John adds is

The only drawback to using the store-bought paper is its width. The printers used in most of the EAS boxes have a narrower width than the standard "cash register" or "adding machine" thermal paper rolls.

The solution is as simple as a band saw. You can pare the width of the rolls quickly to the proper measurement using a band saw. The heat from this trimming process causes the black band along the right edge of the paper, as seen in Fig. 2. There is ample margin,



Fig. 1: Here's a slick way to counteract the cost of thermal paper used in most EAS encoder/decoders.

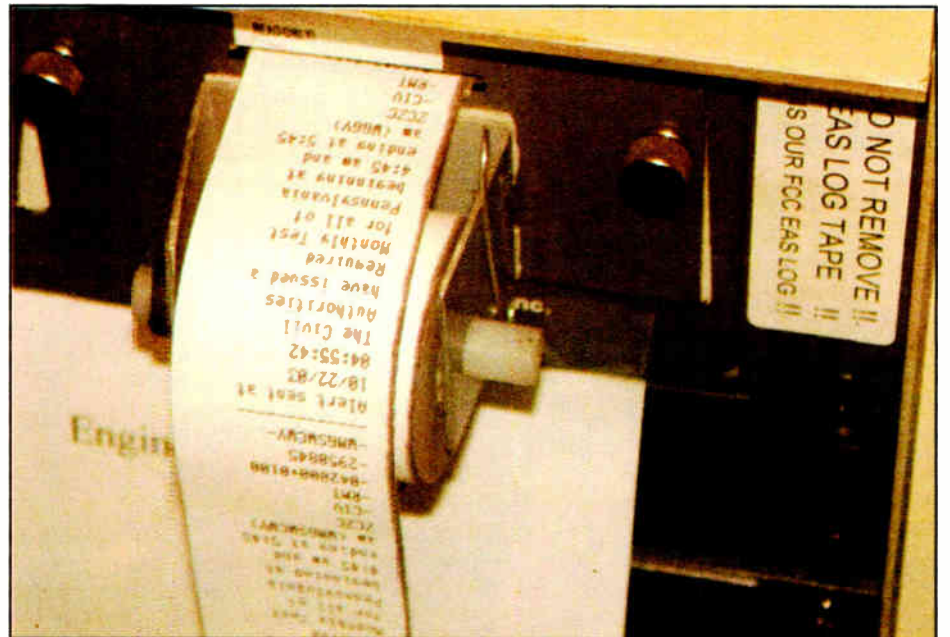


Fig. 2: You might get a little blackening when you trim your EAS paper with a band saw; but no harm done.

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Newark Electronics, which recently sent a mailer specifically aimed at broadcast technical types. Their prices are just as competitive.

Any companies you recommend? The key here is to have an established account, so when you need something, the order is just a phone call — or click or two — away.

\*\*\*

Fig. 1 shows a slick way to counteract the high cost of thermal paper used in most EAS encoder/decoders.

Lamar Smith, the market engineer for Scranton's Entercom stations, inherited the modification to the printer modules of his EAS boxes. A former engineer punched and bent the metal bracket that was fastened to the front of the EAS unit. A plastic dowel holds the thermal paper roll.

This modification offers several advantages. First, less expensive rolls of thermal paper can be purchased from an office supply store like Staples or Office Depot, in bulk supply. In addition to a lower overall cost, these rolls are larger in diameter than the ones supplied by the manufacturer, meaning your paper supply lasts longer.

however, that this blackening of the thermal paper doesn't interfere with the area used for the printed messaged text.

To get the paper into the printer feeder, the faceplate is spaced away from the front panel with two small pieces of double-stick tape. The tape has the protective cover left in place on the side facing the EAS box, so the cover panel can be removed easily. I suppose washers could be used on the thumb nuts to achieve the same spacing, but washers can fall out and get lost. The tape seems to work better.

The two strips of tape are affixed to the left and right edges of the faceplate. This spacing permits the thermal paper to pass through the bottom of the faceplate and into the printer, and prevents drilling or cutting a slot into the unit.

The time and cost of the modification are minimal, and for a group of several stations with multiple EAS boxes, the savings can be substantial.

Lamar Smith can be reached at [lasmith@entercom.com](mailto:lasmith@entercom.com).

\*\*\*





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## PRODUCT EVALUATION

# Belar AM Mod Monitor Measures Up

by Mario Hieb, P.E.

The AMMA-2, the new digital AM modulation monitor from Belar, may look like an ordinary piece of broadcast equipment. It's one rack unit tall and has the typical buttons and LEDs on the front panel.

But don't let its looks deceive you; this unit can help increase coverage and improve dial presence.

old MW-10; this was immediately apparent on the AMMA-2. With better audio performance, it was possible for me to process the audio more aggressively, increasing average modulation. Also, the AMMA-2 reads complex waveforms more accurately, which adds to the increase in modulation.

Both of these improvements yielded greater signal strength and better coverage for KLO.

of the 100 percent modulated carrier is twice the amplitude of the unmodulated carrier. Because power is proportional to voltage squared, when you double the voltage (as with 100 percent modulation), you quadruple the power emitted by the transmitter.

## No overshoots

Increasing negative modulation by 100 percent clips the waveform, but increasing the positive modulation to the FCC legal limit of 125 percent will increase peak power by a factor of 5 compared to the unmodulated carrier. Fig. 3 shows an AM carrier modulated to 125 percent positive peaks. Stations wishing to increase signal coverage will process their audio so that average modulation is as high as possible without having posi-

See BELAR, page 14 ▶



## Obvious difference

I had the opportunity to test the AMMA-2 during the remodeling of the transmitter facility of KLO, Ogden, Utah. A four-tower directional facility, KLO installed a new Harris DX-10 transmitter to improve on-air sound and improve fringe area coverage.

The new transmitter had substantially better modulation performance than the

Here's how it was done.

AM radio differs from FM radio in many ways; one important difference is the way modulation affects signal strength. The FCC allows peak modulation of 125 percent and negative modulation of 100 percent. Fig. 1 on page 14 shows an unmodulated AM carrier. Fig. 2 shows a carrier modulated at 100 percent peaks, positive and negative. The peak amplitude

## Product Capsule:

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AM Modulation Monitor

### Thumbs Up

- ✓ Precise monitoring capability
- ✓ Measurement of many parameters
- ✓ Many configuration modes

### Thumbs Down

- ✓ Interface software not yet available

Price: \$3,500

For information, contact Belar in Pennsylvania at (610) 687-5550 or visit [www.belar.com](http://www.belar.com).

## Workbench

▶ Continued from page 10

This is the time of year that lines and antennas burn up because there is no pressure on the system. Let Fig. 3 be a reminder to check your nitrogen tanks or dehydrators regularly; if the system is leaking, get it fixed, pronto! If you suspect water in your line, it must be drained.

Consider this scenario: the VSWR is rising on this FM station, where the line has been left unpressurized for several months. When the engineer unfastens the elbow at the building entry point, only a few drops of moisture are noted. The connection is wiped clean and reassembled. High VSWR is noted again as the transmitter power is applied.

caused by the thumb kept the water inside the straw. When you removed your thumb and released the vacuum, the water poured out — hopefully into your mouth.

The same principle applies. If the leak occurred near the bottom of the line, and the top end connector is sealed, not much water will be released until that upper connector is removed. This problem is common with long twisting runs of line coming off a tower and going into the transmitter building. Low spots, causing the cable to sag, are prone to collecting water when a system is left unpressurized. Keep a watch out for moisture-related problems, and correct any problems.

Phartronics Engineering has a slick device that monitors your line pressure and gives you a DC voltage that can be fed into a remote control system. The PSI-V3 Pressure Sensor Interface is inserted at the gas port or manifold and converts line



Fig. 3: Check your nitrogen tanks or dehydrators regularly; if the system is leaking, get it fixed.

Suspecting the antenna, the engineer brings in a tower rigger. The antenna checks out fine, but just for grins, the rigger asks the engineer to take apart the elbow assembly at the building entry point. When it's apart and the coax cable going up to the antenna is open at ground level, the rigger disconnects the antenna from the coax. With a whoosh, a bucket full of water douses the engineer! What happened?

As kids, many of us played a game in which we held a thumb over the end of a soda straw sticking out of a glass of water. You could lift the straw, and the vacuum

pressure into a linear voltage. For around \$200, this device is cheap insurance.

More information can be obtained from your broadcast equipment distributor or online at [www.tekwav.com/phartronics](http://www.tekwav.com/phartronics).

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

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

## BROADCAST TOOLS® *new* "Rack-Ables"



The upgraded SS 2.1/TERM III & BNC III switcher/routers are improved with new front panel switches. They may be used as a desktop device, and are equipped with mounting holes for wall mount installation or may be installed on the new RA-1 "Rack-Able" 1RU mounting shelf.

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

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

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

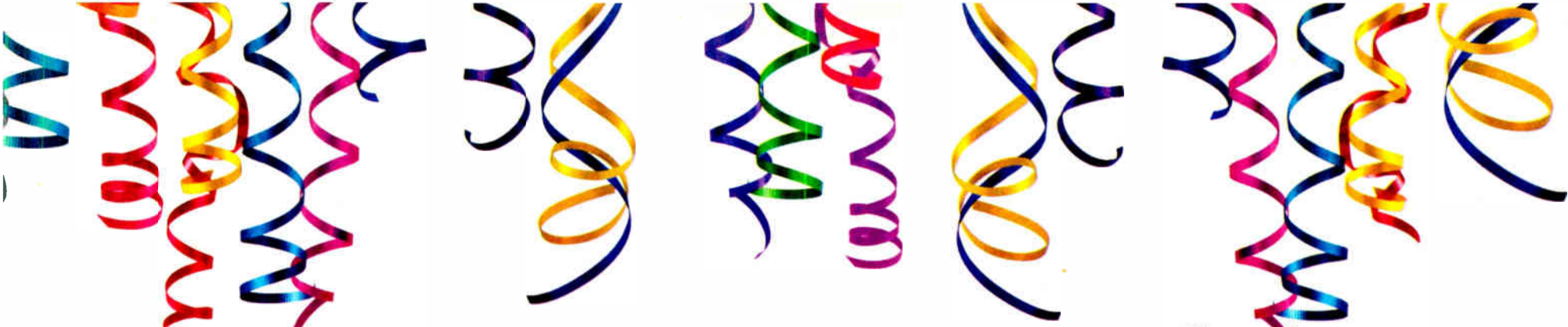
The new RA-1 (1-RU rack shelf) provides mounting for three tri-rack or two half-rack "Rack-Able" configured products. The RA-1 is pre-drilled for flush and recessed product mounting. The RA-1 is furnished with filler panels and mounting hardware.

Look for additional  
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...Upgrade to the Ultimate Remote Bundle: a rack-mount Zephyr Xstream for the studio and a portable Zephyr Xstream MXP with 4-channel DSP mixer and onboard audio processing by Omnia, for only \$7,294 US MSRP.

When we first married MP3 with ISDN in 1993, we had no idea that their offspring would grow up to be the most-loved audio codec ever. But it has, and its popularity keeps growing – there are now more than 10,000 Zephyr codecs in radio stations and production studios around the globe.

A birthday this significant deserves a special present, so here it is: the Zephyr 10th Birthday Bundle, a complete codec package at a once-in-a-decade price.

You'll get the best-selling Zephyr Xstream for your studio, and the satisfaction of knowing you can make CD-quality ISDN connections to virtually anywhere using industry-standard MPEG Layer 3 or MPEG AAC coding. And for your remote kit, the award-winning Zephyr Xport with built-in two channel mixer — perfect for sponsored remotes, sporting events, interviews and live appearances. Just plug in to any POTS phone line for an *aacPlus*™ link to your Zephyr Xstream; you'll get stunning audio and rock-solid connections.

Best of all, you'll receive your Zephyr 10th Birthday Bundle for the special price of just \$4,995 US MSRP. (There are more special Zephyr bundles to fit specific needs; just ask your Telos dealer.) But don't delay — this special offer is only good through February, 2004.



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# Belar

► Continued from page 12  
tive peaks that exceed 125 percent.

This is where the AMMA-2 comes in. The AMMA-2 is a DSP-based AM modulation monitor/analyzer that precisely measures positive and negative peak modulation, peaks per minute, average peak modulation, modulation density and more. Because it uses digital signal processing, problems inherent in older modulation monitors, such as overshoots,

**With the AMMA-2, the AM waveform can be measured in ways never before possible.**

don't exist in the AMMA-2.

According to Arno Meyer of Belar, these overshoots could relate to modulation under-readings of up to 10 percent. By using the AMMA-2, the user could measure modulation more accurately, realizing higher modulation, which yields greater power levels and better coverage.

The AMMA-2 also features user-defined parameters and settings for maxi-

imum flexibility. Two large Up/Down Menu keys are used to cycle the 16-character alphanumeric display to the desired menu; the Up/Down parameter keys then are used to select the desired setting. The unit configuration may be saved to the on-board non-volatile memory so the settings are retained in the event of the power loss.

A noise menu selection displays RMS-detected signal-to-noise ratio in decibels (flat or de-emphasized) on the front panel. A carrier cutoff indicator consisting of three front-panel LEDs continuously monitors the approach of negative modulation to carrier cutoff.

A unique "Normal Modulation" indicator shows when modulation is falling within user-defined parameters. A built-in Audio Sentry audio failure alarm alerts you to loss of modulation or drops in modulation level.

An RS-232/RS-422 port allows the AMMA-2 to be accessed via personal computer. The ASCII command set provides an easy way for users to write their own command and control software. Alternately, the AMMA-2 will be supported in the future by software, which provides unit control, graphing and logging capability for the AMMA-2 measurements.

A remote alarm connector consisting of eight pairs of relay contacts provides alarm status information for hand-wired applications. NRSC de-emphasis may be selected internally by moving a jumper plug.

In addition to monitoring standard AM modulation, AMMA-2 accurately monitors modulation dependent carrier level (MDCL) AM transmissions. During

MDCL broadcasts, the RF carrier level becomes a dynamic component of the AM signal. The AMMA-2 tracks the carrier, capturing the highest and lowest values of the carrier level appropriate for the MDCL system in use. The optional remote meter panel lets the user display positive modulation, negative modulation and carrier level simultaneously on three large analog meters.

(Ed. Note: Belar also states that the AMMA-2 has two FIR filters, 8 kHz and 5 kHz, that can be enabled so that digital broadcasts will not interfere with the peak modulation readings of the analog signal. The digital shows up as noise and can add significantly to the peak modulation readings.)

What might Belar do to improve this product?

Unfortunately, interface software is not yet available for the AMMA-2. This would allow the user to view and record several parameters at the same time and view them on a computer monitor.

But with the AMMA-2, the AM waveform can be measured in ways never before possible. Combined with the latest in audio processing and transmission gear, AM radio stations can increase coverage and improve dial presence and on-air sound.

Mario Hieb, P.E., is a Salt Lake City-based consulting broadcast engineer.

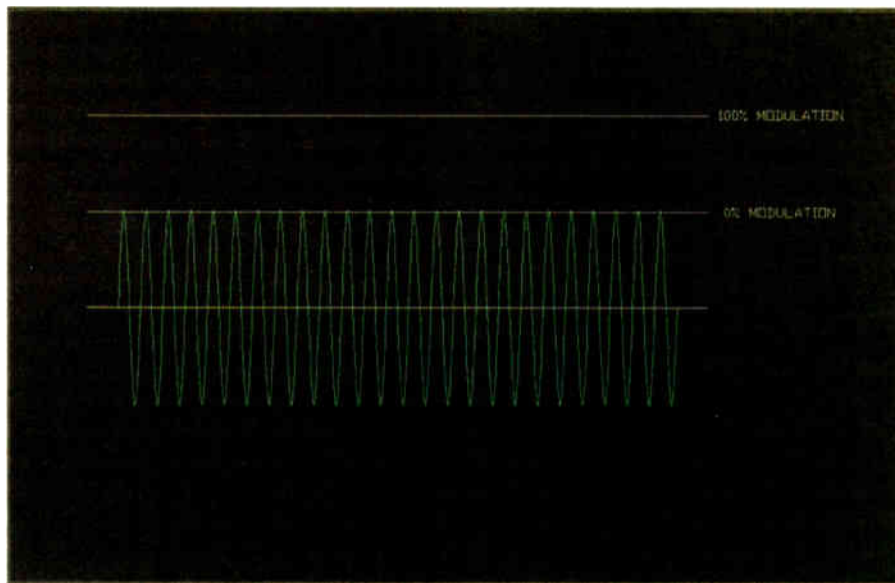


Fig. 1

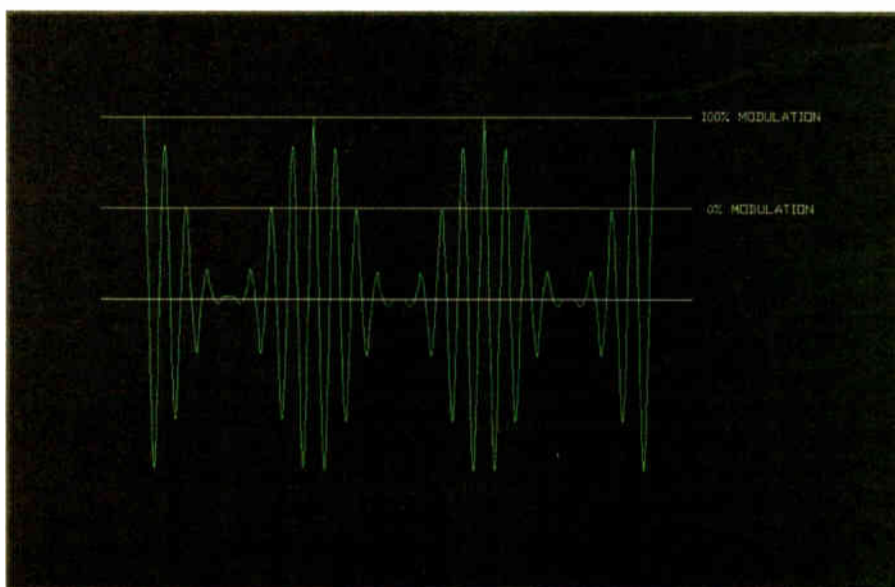


Fig. 2

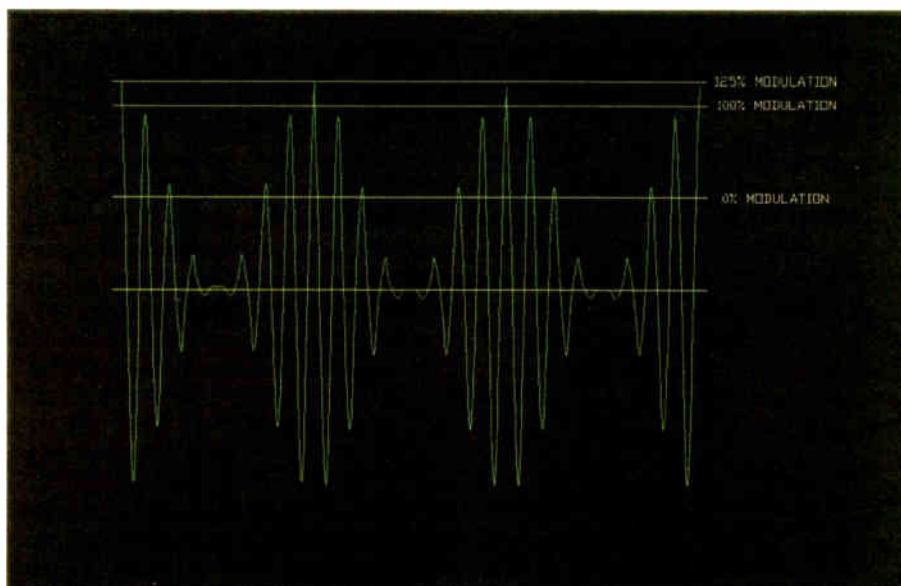


Fig. 3

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# Sleepers Awake!

*A New Scrolling Display Livens Up RDS Radios*

by Skip Pizzi

My four-year-old RDS car radio has suddenly come to life.

I'd gotten used to its relatively inert display, which occasionally provided call letters or other service-name labels for a few stations; but it was otherwise just an ordinary radio. Recently, however, when tuned to several stations, the radio's normally static display has leapt into action and scrolled a now-playing title and artist display, along with the station ID.

**Without me doing or buying anything, my radio has suddenly added stunning new functionality.**

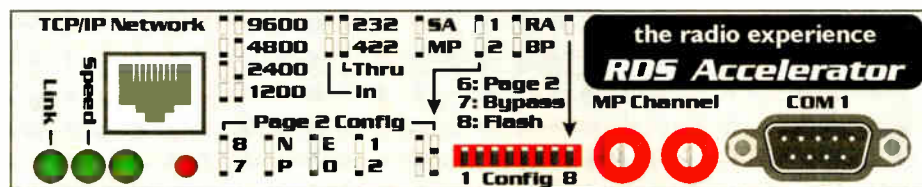
Without me doing or buying anything, my radio has suddenly emerged from its permanent vegetative state and added stunning new functionality. Prior to this time, the most interesting features of my car's audio system were its CD changer and surround-sound playback. Now the radio has eclipsed these in at least one respect, offering the first dynamic metadata ever seen inside my car.

The CD player's display seems suddenly dull and boring, providing only cut numbers and nothing more. Radio listening is more fun, and I'm finding myself choosing the radio more often over the

CD player. I'm also exploring the dial like I haven't for a long time, trying to find the stations that offer the new service, and staying longer with the ones that do.

## Compared to what

Before XM and Sirius, the only radio-style service providing this data was cable radio, which is now provided as a value-added feature in digital cable and satellite TV systems. In the latter incarnations, the metadata is displayed on the television's screen, as opposed to the original cable radio systems, which provided a dedicated display on a set-top box or remote. But it seems a little strange to have to turn the TV on only to see artist and title information in the lower left corner of the screen, especially on a big-screen display. (To put a twist on an old saying, cable radio is like television without pictures.)



A view of the connection options on the RDS Accelerator.

Cable radio's metadata is also slow to load, often taking 10 or 15 seconds to fully display after a song begins. In contrast, this new scrolling RDS display exhibits minimal latency, changing almost in exact synchrony with a new song's starting, and starting up nearly immediately upon tuning in a station that offers the service.

Today, of course, satellite radio services provide this feature on their receivers' displays, but even these devices can exhibit a few seconds of latency.

I must give credit for the initial discovery of this service to my 15-year-old son, who demands complete control of all media when in my car. (I shouldn't complain; pretty soon he'll want the entire car.)

## Credit where it's due

He first pointed out that one of his favorite stations — not one I usually listen to — had begun to scroll song title and artist data, but it only appeared on the radio in my car. I explained that this was the only radio he was exposed to having RDS capability, but also that this was a brand-new feature being added to some stations' RDS encoding.

My excitement at the latter point was lost on my son, given his generation's deep experience with music via the Internet, MP3 players and MiniDisc, all of which have always included such data. This is now expected as a standard and essential feature of any music format by these younger consumers.

His rapid-fire channel surfing habits also quickly indicated to me how fast the new RDS display was changing, keeping up with his every move on the stations

offering the service. (I have often mused whether he and his similarly fast-fingered friends will ever hear much of HD Radio's digital audio quality in the future, given that they rarely stay on a single station for more a few seconds after tuning in.)

In any case, as I've driven around the country in the meantime, I've begun to see the service appearing on more stations every week.

Much of the real credit for the service goes to the RDS Accelerator from a Bellevue, Wash.-based company called The Radio Experience, which is enabling many of these stations to provide the new feature. This clever system enables a scrolling text display to be displayed in the PS (Program Service) field of an RDS/RBDS radio, a feature that nearly all such receivers include, and which most display in their default condition, without any user intervention or receiver settings required. Previously such text display was only possible via the RDS RT (RadioText) feature, which is not supported on all RDS radios, and which often must be manually selected for display by the user on receivers that support it.

The RDS Accelerator also optimizes RBDS Group Scheduling in the encoder to enable the fast display characteristics I experienced.

The system involves both hardware and service from The Radio Experience. The hardware includes a IRU studio unit (or a PC-based equivalent) that interfaces with most radio automation systems via serial, TCP or text files, and multiplexes up to six stations' programming data into a single serial or TCP stream. This signal is fed to the auxiliary data input of one or more STLs (or otherwise sent to the transmission site) and demuxed by a second IRU device at the transmitter into individual RS-232 streams, each fed to the appropriate station's RBDS encoder. Ethernet feeds to IBOC encoders are also

## The Big Picture



Photo: Gary Hayes, BBC

by Skip Pizzi

enabled.

Meanwhile, the studio unit also sends its signal to The Radio Experience's data center via the Internet, where a station's content is identified and additional data (text, graphics and links) is added from the service's database for simultaneous display on the station's "now playing" Web page. This data can include CD artwork and e-commerce features for music purchase or other services.

The service can also use the Internet return path to the studio unit to adjust the data sent to the RBDS encoders, as well. This can include simply correcting typos or formatting, or it can involve the insertion of additional information from the service's database (such as album titles), at the station's option.

A station's scrolling RDS message can be customized to routinely include other intermediate text — e.g., "by" between title and artist, or "on" between artist and call sign, etc.; and an "idle" message — e.g., station ID and slogan — can be set to display or scroll during commercial breaks. The latter can vary with dayparts, so a show title or other schedule-based data could be shown.

The system can also be programmed to scroll a special message whenever specified content is played, for example "appearing tonight at XYZ Club." The interface to the service's central database can also be used to map other custom messages to stations' RDS streams, and coordinate them across multiple stations and groups.

The scrolling parameters can be adjusted for duration and character-advance of each sequential iteration of the PS display. (This is not a "true" scroll from receiver memory, but simply a series of PS display refreshes. Not all RDS receivers can handle rapid refreshes of the PS field, since it was expected to remain fairly static, so some practical limits on these parameters exist, and are still being discovered as the service is deployed.) The Radio Experience's service also treats scrolling PS and RT fields independently (along with other RBDS feature management), and optimizes display of any scrolling data to the requirements of each field.

It's important to note that a similar scrolling PS display feature has recently been enabled internally at least one other RBDS encoder that is not involved with The Radio Experience's system, and which is now being deployed by at least one large station group.

While it produces a similar result on RDS radios, the data fed to this encoder must be interfaced and managed unilaterally by each station, and it does not include the optimization and multiplicity

Continued on page 17 ►

## Interactive RDS/RBDS

Model 711 - \$1350

### LINK IT TO STATION AUTOMATION!

This multi-featured encoder communicates with station automation to send song titles, phone numbers, contest results and promo or advertising messages for immediate display on listeners' radios. It also features the "TA flag," capable of temporarily overriding other program choices—even tapes and CDs—when your station broadcasts a traffic alert.

The 711 is quickly programmed with the usual format identifiers, translator frequencies and other static data. Its RS-232 serial interface connects with any PC, and with most automation systems for dynamic messaging. Giving access to all the most-used RadioData groups and features, this versatile encoder complies with both NRSC and CENELEC RadioData standards.



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of integrated services offered by The Radio Experience's back-office approach. On the other hand, such independent station usage could apply scrolling PS to other, non-program associated data (NPAD) uses, such as advertising or other messaging, which some stations apparently intend to explore.

**New legs for FM**

As RDS radios finally begin to proliferate in U.S. automotive audio systems, this feature will provide an exciting and valuable new service to FM radio.

It may also reduce the value of one of HD Radio's differentiators. With an FM radio that displays dynamic digital data and sounds great when playing in a modern multi-speaker car audio system, the up-sell to an HD-Radio may be even harder to achieve among mainstream consumers.

**A**s RDS radios finally proliferate, this feature will provide an exciting new service to FM.

On the other hand, a scrolling PS display of title and artist data technically violates both the European RDS and U.S. RBDS specifications, which call for that field to remain essentially static and to be used only for service-ID purposes.

Driver distraction is also a hot-button issue in the United States at present, and it would be sad if car manufacturers decided to halt their nascent growth of RDS radio offerings as a result of this trend, particularly if NPAD is widely displayed via scrolling PS. (This is why most car receivers do not include the RT feature, and why The Radio Experience offers only artist and title info, but Detroit may feel such concerns are now being circumvented by unintended use of PS.) Watch for more discussion of this topic in future issues.

Scrolling PS is appearing quickly across the United States as more stations and groups enable the service, using either The Radio Experience's integrated service or unilateral implementations. The Radio Experience is marketing its package as the Dynamic Data Initiative, or DDI. The company's founder and president, Allen Hartle, is an RDS pioneer who co-chairs the recently revitalized NRSC RBDS Subcommittee.

The DDI's integration of online, FM and IBOC metadata services by a third-party aggregator, customized to the station and optimized for each delivery service, seems like an idea whose time has come for radio.

If nothing else, it's certainly provided a welcome wake-up call to my dashboard.

*Skip Pizzi is contributing editor of Radio World.*

**MARKET PLACE**

**Calendar Recalls  
Mt. Washington Fire**

Here's a snapshot from the 2004 Tower Site Calendar produced by Scott Fybush, an RW contributor who also operates the "Tower Site of the Week" and NorthEast Radio Watch. The photo is by Garrett Wollman.

The picture is of New Hampshire's Mount Washington, the highest point in the Northeast. A fire in February of last year destroyed the WMTW transmission facility, shown in 2002. WHOM's main and backup antennas are at left, with WMTW's former backup antenna and main antenna are at right.

Other photos include Radio Towers Park in Hamden, Conn.; WTEM (formerly WRC) in Washington; and Denver's Lookout Mountain. The calendar is costs \$16 postpaid.

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# Acacia, Eolas: IP Landmarks

*U.S. Patent Law Is Under Review, Spurred Largely by Recent Trends in Digital Media*

by Skip Pizzi

They may sound like lovable characters from "The Lord of the Rings," but to those in the intellectual property business, Acacia and Eolas represent two nasty cases that are giving fits to the world of patent law.

The IP actions of these two companies both involve digital media, but they are among several landmarks in a process that is likely to create fundamental changes in the workings of the entire U.S. patent process in general.

This may seem an arcane discussion to broadcasters. Yet it has critical impact on anyone involved in media technology, because the workings of IP law have profound effect on innovation. If companies cannot collect a fair return on

their investment in technological development, or their legal burdens become onerous, they will be less likely to perform such work, and the industry as a whole — not to mention consumers — will suffer.

## The Acacia case

Acacia represents a type of patent abuse that could become rampant, due to two primary factors.

The first involves the quality of patents granted to software developers by the U.S. Patent and Trademark Office. The PTO only began issuing software patents in the 1980s, so the level of experience among examiners in this area remains somewhat shallow and the database of prior art is relatively small. This means the PTO has granted numerous software

patents that it probably shouldn't have.

In fairness, it would have been hard to envision some of the changes that the Internet and digital media boom have subsequently brought about, and concepts that seem obvious now may not have been so when first filed. In any case, there are companies holding quite broad or vaguely defined patents filed during these earlier years that would never be granted today.

The second basis of the Acacia case stems from the attitude of the so-called "IP terrorist." This refers to a company that holds patents but has no intention of developing products using them. Instead,

education and training field, including some university extension programs. These operators also relied heavily on streaming media for their revenue, but they would have a far more positive reaction in the courts than the adult content industry were they to challenge Acacia. So Acacia's strategy was a bit different, contacting the operators with simple business correspondence rather than slapping them with an infringement suit.

In this case, the targets were generally averse to litigation based purely on its cost, so many agreed to pay royalties to Acacia as a straight business deal, without official legal action taken by either party. Naturally, this raised the net benefit to Acacia, which incurred minimal legal expenses in these actions.

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**This has critical impact on media technology, because the workings of IP law have profound effect on innovation.**

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*"Who's Buying What" is printed as a service to readers who are interested in how their peers choose equipment and services. Information is provided by suppliers.*

John Buckham ordered 18 **Audion** VoxPro systems for **Entravision** stations in Campbell, Calif. The order was made through **Broadcasters General Store**. ...

**Clear Channel** will consolidate its Las Vegas stations into one building and tapped **Sierra Automated Systems** for the wiring and installation job, which involves four FM control rooms, three production studios, several smaller studios and a technical ops center. The order was for \$250,000; gear includes seven SAS Rubicon consoles and a SAS 32KD routing system with nine RIOlink remote I/O chassis. ...

New commercial FM services have taken to the air in the Indian cities of Kolkata, Delhi and Chennai, involving a broadcast development program supported by **Radio Frequency Systems**, which designed three FM installations to share All-India Radio's tower structures. ...

Among U.S. voiceover artists and post-production companies using the **APT** WorldNet Tokyo ISDN audio codec are **Wolff Bros. Post** in Atlanta, actor **Debbie Grattan** in Los Angeles and the **Dallas Audio Post Group**. The **European Broadcasting Union** purchased an **APT** apt-X ISDN codec for deployment with its Euroradio satellite network.

Also, the **Adventure Radio Group** uses **APT's** plug-in for **Cool Edit Pro**. Its pro-

gram directors can rip, convert or edit .dss files from their desks, freeing up studio time, the supplier stated.

"Following Adobe's acquisition of Syntrillium, the plug-in now works equally well with Adobe Audition, which has been upgraded to incorporate Cool Edit Pro," **APT** stated. C.B. Gaffney is manager of engineering and information systems for **Adventure Radio**. ...

**Taylor-Made Productions** in New Jersey retrofitted a studio with a 48-input **Amek** Media 51 desk. Glenn Taylor produces radio spots and works with recording artists and musical scores. ...

**Nautel** said its DRM-compatible **NA200**, a 200 kW AM transmitter, began DRM service when **VT Merlin Communications** launched DRM for the **BBC World Service**. The **NA200** was installed at a **VT Merlin** site in England and commissioned prior to the World Radiocommunications Conference in Geneva. ...

**Harris Corp.** said several companies purchased **Harris** Intraplex STL Plus HD systems, including **WALK(FM)** on Long Island in New York, **KQED Public Radio** in San Francisco and **KDWB(FM)** in Minneapolis/St. Paul.

Separately, **TRT**, Turkey's public television broadcaster, chose **Harris** for the second phase of a launch into DAB. **Harris** will provide head-end products for two audio programs, data insertion, IP insertion and a 100-watt **Harris** DAB 665 transmitter to be installed in Istanbul.

the IP terrorist simply notifies other companies that it believes are infringing on its patent(s), and seeks licensing deals with them.

The clever IP terrorist seeks out target companies that have built their entire businesses around a technology in which the terrorist holds patents, so that in order to stay in business, the target company has to pay attention to the terrorist's demands. The terrorist also seeks out companies that are technology "users" and not "developers," so there is little likelihood that the target can come up with viable, non-infringing alternatives. (In some cases, the patents are so overly broad that no such alternative could exist.)

Other criteria for target selection used by IP terrorists include companies that are excessively risk-averse or otherwise unlikely to challenge the terrorists in court due to shortage of funds, concerns over potential negative publicity, fear of scaring off other deals in play or other reasons.

Careful target selection is critical to the IP terrorist's strategy, because an overly broad patent may stand a good chance of subsequently being invalidated by a court. But this could only occur if a targeted company challenged or countersued the terrorist and the case went to trial, a process that could cost millions of dollars and take years.

The specifics of the Acacia case are a classic example of this process. The company was granted a patent for which it had applied many years earlier. Its claims cover the broad area of providing media content on demand over a digital network, so the company now feels that all Internet streaming media infringes its IP.

Acacia first targeted what it considered easy marks in the Internet adult content industry. These companies have built their businesses almost entirely on streaming media, and have become quite profitable at it. They were also unlikely to challenge an infringement claim because they would not be considered sympathetic plaintiffs in most courts, and generally preferred to stay below the radar in the legal environment. Acacia therefore was able quickly to collect licensing revenues on a per-user basis from the dozens of companies that it sued in this sector.

Interesting, Acacia also targeted another, different set of users in the online

Buoyed by these successes, Acacia raised its sights to bigger game, targeting major players in the mainstream online entertainment field such as **Virgin Music** and **Universal Music Group**. Here again, Acacia has realized some victories, with **Virgin** reportedly settling with Acacia on a 2 percent royalty. To date, Acacia apparently has secured around 50 licensing deals, and continues to pursue its actions in the streaming media content industry.

## The Eolas case

**Eolas** is another company that has filed infringement suits over online technology, in this case claiming broad rights over any feature on a Web site that launches an embedded application.

Unlike Acacia's approach of nibbling away at small online content providers, **Eolas** has gone straight for the jugular, and filed infringement suits against browser companies such as **Microsoft** (for whom this columnist works). **Eolas** succeeded in its case, and **Microsoft** was ordered to pay **Eolas**, essentially a one-man shop, \$520 million. **Microsoft** appealed, but somewhat surprisingly, the **World Wide Web Consortium** — **W3C**, the standards body for Web content specifications — petitioned the PTO for re-examination of the **Eolas** patent. Even more surprisingly, the PTO agreed to do so, and that re-examination is now underway.

Such revisionist action by the PTO is not unheard of. In fact, an oft-cited precedent dates back to 1895, when the PTO awarded **George Selden** a patent for attaching the newly developed internal combustion engine to a chassis. **Selden** exercised the patent to collect royalties from all the early automobile manufacturers until **Henry Ford** and other implementers petitioned the PTO for relief, citing the "obviousness" of **Selden's** patent and its cost burden on purchasers of cars. In 1911, the PTO substantially narrowed the scope of **Selden's** patent, resulting in greatly reduced royalties paid by manufacturers, and thus, less expensive cars.

The battles now brewing in the software patent world indeed loom **Tolkienesque**, and the road goes ever onward. More on this epic saga and its possible resolutions next time.

*Skip Pizzi is contributing editor of Radio World* 🌐



## Tim Brown: Denver's Little Big Man

*He Wants to Provide an Alternative to Radio Behemoths, And He's Got the Money to Do It*

by Michael Roberts

Tim Brown, chief executive officer of NRC Broadcasting, is normally an upbeat fellow, and why wouldn't he be?

On Dec. 5, he filed paperwork with the Federal Communications Commission to buy NRC's twelfth radio station in just over 18 months. KKHI(FM) at 105.5 MHz, currently held by Laramie Mountain Broadcasting, is located in Timnath, Colo., between Loveland and Fort Collins, yet when it opens for business under the NRC banner, probably next

generated by a manifesto Brown recently posted on [www.kcuvradio.com](http://www.kcuvradio.com), the Web site linked to KCUV(AM) at 1510 kHz, another fairly new item in the NRC portfolio.

In it, Brown talks about a crosstown drive in May 2001 when the scales fell from his eyes and he was able to see the sorry state of radio with remarkable clarity.

"I noticed that the variety of songs had disappeared, that there was no longer a local feel to the radio," he writes. "The DJs had stopped taking listener requests, contests were 1-800 numbers and every radio station I listened to 'mysteriously' ran commercials simultaneously."

He realized that he had "become a disenfranchised listener with radio and had no intention of returning." He changed his mind after doing some research into the inner workings of the radio business, specifically the 1996 Telecommunications Act, which led to corporate media consolidation on an unprecedented level. Brown writes that this law not only caused companies such as Clear Channel to mushroom in size, but it also fueled the sort of profit pressure that's led to phenomena like voice-tracking, a method that lets a single disc jockey host multiple shows tailored to different, often far-flung markets.

As Brown puts it, "The large radio groups, by design, have become analogous to the fast-food industry. They know how to make programming that is cookie-cutter, generic and homogenized enough to be mass appeal. All formats are scientifically researched to provide a taste that's palatable to the greatest number possible. Do you want fries with that?"

Brown poses other questions as well: "Isn't radio supposed to be a local medium? Is local defined as having a station licensed by the FCC to operate in Denver? It shouldn't be, but that's basically what it's become. Are all parts of the U.S. culturally the same? No, but you're getting the same programming as Boston and Atlanta are. When's the last time you heard a local artist getting local airplay? That's only some of the art that's now missing from your radio

station."

Hearing such comments from someone in Brown's position is rarer than a Paris Hilton video in which she *doesn't* have sex. No doubt many of his fellow radio-station owners would consider his remarks to be heresy, in part because he seems as if he should be on their side. After all, he's the son-in-law of über-capitalist Phil Anschutz, who owns a more than 50 percent stake in NRC Broadcasting. This connection gives his disapproving words a lot more oomph than if they came from typical anti-consolidationists, since he's got the financial means to do more than complain. "I want to walk the walk," he says.

### AM moves

He began doing so in May 2002, when NRC paid \$2.7 million for KDKO, an R&B purveyor fronted by Jim "Daddio" Walker that had long operated at 1510 AM. Afterward, Brown and company launched KNRC, which features a news-talk approach, a direct challenge to the hegemony of Clear Channel's KOA, which has loomed over the Denver news-talk landscape for the better part of a century.

Despite some quality programming exemplified by the efforts of morning-drive host Greg Dobbs, the station has struggled in the ratings, as Brown acknowledges.

"KOA has been on the air since the 1920s," he says. "Try competing with a news-talk station that's been on the air

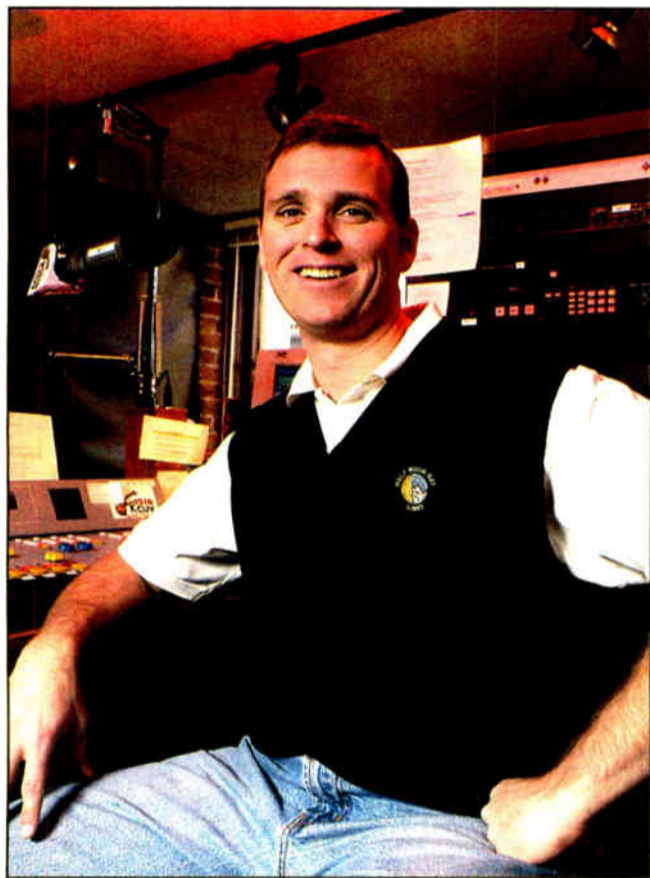
for 80 more years than you. And we really took a step out with KNRC. There's never really been a news-talk station that offers both sides the way we do. No one's done it that way before, but I wanted to give listeners the benefit of the doubt that if they heard both sides, they could make up their own mind."

To make sure more individuals had a chance to hear KNRC, Brown took the unconventional approach of buying

**B**rown says the large radio groups, by design, 'have become analogous to the fast-food industry.'

another outlet, KCUV(AM) at 1150, for \$3 million and moving the talk-station onto it. That left the 1510 frequency open, and Brown did his best to sell it.

See NRC, page 22 ▶



Tim Brown

spring, Brown expects that its signal will cover a swath of the region from Cheyenne to Castle Rock.

Better yet, the price was \$15 million, a relative bargain when it comes to FMs. As Brown points out, the sum is less than a third of the \$47.5 million Entravision Communications Corp. paid to purchase a station KXPK at 96.5 MHz, just last year.

"Is the signal as good as the Peak's?" Brown asks. "No. But is it 90 percent as good? Yes. And was it worth saving \$31.5 million and being able to program it like I want? Absolutely."

### Missing the 'local feel'

Amid this celebratory moment, however, Brown tosses out a pensive aside. "I'm really starting to get hated," he says.

If such animosity exists, it was likely

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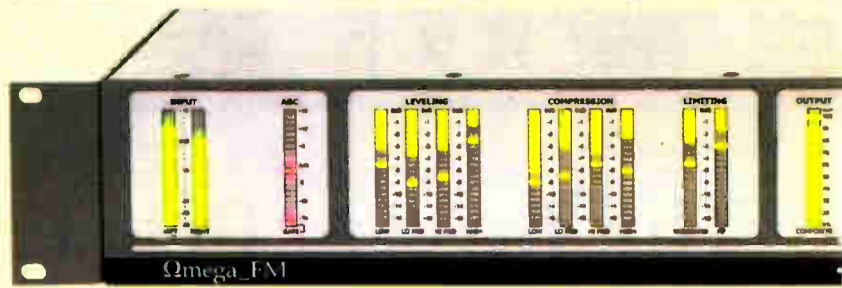
# BSW's 2004 Source Book has



BSW's 2004 Winter/Spring Broadcast Equipment Source Book has mailed and is bigger than ever before, with 216 pages packed full of the best and latest audio equipment. Like always, it's full of helpful back panel photos, technical articles and a huge selection of broadcast gear at unbeatable prices. If you have not received your catalog by the end of January, call us at 800-426-8434 to get your free issue mailed to you.

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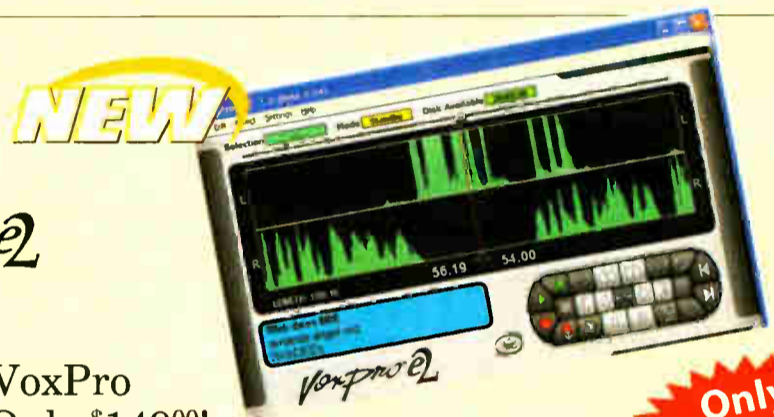
running the suppl  
under local (or rer

Of particular sig  
This keeps progra  
delay, allowing dir

Other features i  
leveling; wide-ran  
split-spectrum fin

Despite its mod  
performance of an

OMEGAFM List



VoxPro 

## Powerful VoxPro Software Only \$149<sup>00</sup>!

Audion Labs, the makers of VoxPro PC, now have a great introductory, two-track digital audio recording software package that can be used on any laptop or desktop PC using most sound cards, for fast, easy editing! VoxPro E2 lets you cut your audio and get it on the air right away, at a great low price. **Features:** records instantly in any mode; shows file most recently recorded in sound window ready to edit; imports and exports most popular file types including .wav and .mp3; records and plays back in stereo and mono; in two-track mode automatically separates host/caller talk-over with "Voiceslip"; much more.


VOXPROE2 List 179<sup>00</sup>

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Artist's conception of BSW's proposed new dust-free, hermetically-sealed distribution center. The warehouse staff had reservations about the suits until we told them they could jump around and play "Moon Landing" on breaks.



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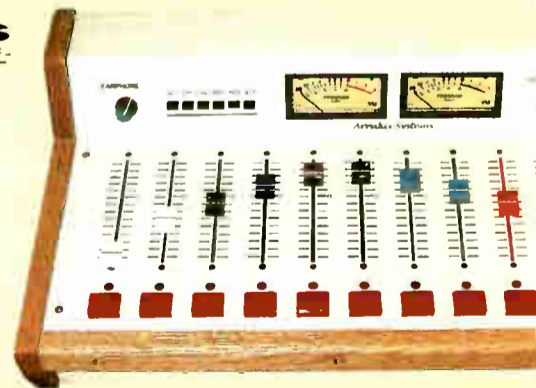
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### Active Crosspoint Switching with 8 Stereo Inputs

The Broadcast Tools SS8.2 provides active crosspoint switching with 8 stereo inputs, 2 stereo plus 2 mono outputs. **Features:** remote control and status via contact closures and RS232 serial ports as well as input and output level control and active balanced I/O; internal stereo silence sensor with LED indicators; LED VU

meters; stereo headphone amplifier with front panel output selection switch, headphone jack and level control; stereo powered speaker output with front panel level control, output selection switch with remote and software mute control; electronically balanced stereo inputs and outputs.

SS8.2 List 879<sup>00</sup> **699<sup>00</sup>** **BROADCAST tools inc.**



### Affordable AM/FM Stereo Tuner with XLR Output

The affordable Rolls RS79 has 12 AM and 18 FM presets that are retained when the power goes off. Its large LCD display remains visible even in bright daylight. Other features include balanced XLR outputs, a signal strength meter and headphone jack, all packed into a compact 1RU chassis. The RS79 includes a remote control. Order today.

RS79 List 247<sup>99</sup> **199<sup>00</sup>** **ROLLS**



### 24-bit Profanity Delay with Automation Control Interface

The AirTools 6000AT is a 24-bit digital delay unit for live broadcast that prevents unwanted profanity or comments from reaching the airwaves. Engineered by Symetrix, the AirTools 6000 offers advanced delay technology with up to 20 seconds of user-definable delay at a full 20 kHz range of stereo bandwidth, digitally stretching the broadcast audio so that when unwanted comments are dumped from the air,

the programming continues on, uninterrupted and without a gap with no unwanted pitch shifting. The 6000's Automation Control Interface offers the ability to trigger automation changes or control a router with 'delayed' contact closures. The AirTools 6000 brings world class profanity delay within the reach of any broadcaster. Call for BSW sale price.

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# NRC

► Continued from page 19

Two deals fell through, including one involving Boulder public-radio favorite KGNU, which wanted to reach deeper into Denver. Another outlying public-radio station, Greeley's KUNC, has found another way to achieve this goal. It has received FCC approval to increase the height of its antenna by over 100 feet, which should help improve its signal in the metro area.

In the end, Brown decided that rather

Hayden, with over \$3.3 million going to American General Media for facilities in Glenwood Springs, Vail, Hayden and Breckenridge.

The latter, KSMT(FM), has got Brown most excited. "I want to make KSMT the best indie-rock station in the country," he declares. "I'm going to put so much energy into making it a model of what KTCL used to sound like back in the '80s. I want all the people in Denver to know that there's a beacon of great alternative music as soon as you go through the Eisenhower Tunnel."

The other mountain stations sport a range of sounds, from classic rock and country to adult album alternative. As

**I want all the people in Denver to know that there's a beacon of great alternative music as soon as you go through the Eisenhower Tunnel.**

— Tim Brown

than letting 1510 AM sit idle, he'd use the KCUV call letters he already owned to promote music that wasn't being widely heard. Dubbing itself "Colorado's Underground Voice," the station specializes in Americana, which encompasses genres such as country, roots, bluegrass and the blues. To play it, Brown hired some expatriates from Radio 1190, a University of Colorado broadcaster whose sound he loves, as well as employing the Denver Post's G. Brown immediately after the veteran rock critic resigned in the face of plagiarism accusations.

"I think G. is very talented," says the other Brown. "I understand that (Post editor) Greg Moore made a decision based on how he wants to operate, but even though I think G. may have been sloppy, I'm not prepared to give him the scarlet letter because of that. He adds a lot to the station with his background and his knowledge."

To get even more mileage out of these abilities, KCUV has added a Web page on its site called "What Can G. Brown Do For You?" The cyber-zone is slated to feature articles, profiles, reviews and the like about artists the station plays; the first two focus upon Lyle Lovett and 16 Horsepower.

That's not all. Last May, Brown acquired nine stations in Colorado mountain and resort communities in a pair of transactions: NRC shelled out nearly \$4.7 million to Salisbury Broadcasting Corp. for properties in Eagle, Oak Creek, Basalt, Aspen and

for KKHI, his newest baby, he hasn't yet decided what he wants to do with it, but he says he won't be driven by the desire to maximize revenue.

### Boutique

At the same time, Brown doesn't want anyone to think NRC is simply a plaything given him by a generous father-in-law.

"It's absolutely a business," he stresses. "Quite frankly, Phil has expectations of us being self-sustaining, and today, we're not profitable. I'll be the first to admit that — although we're getting better. It just takes a while." Still, he's satisfied being "a boutique broadcaster. I don't want to be a 7-share FM (a rating comparable with the city's top performers). I'd much rather be a 3 share and have very, very passionate and dedicated listeners."

If the response to his essay is any indication, he's headed in the right direction. According to Brown, his memo was downloaded 1,231 times in the first three and a half weeks it was available online, and he's gotten plenty of e-mails from readers who sense a kindred spirit.

"They've said, 'Now I know why I'm feeling the way I am about radio,'" he recounts. "It's good for me to know that I wasn't the only guy in 2001 who felt that way — nice to know you're not alone in the world."

*This story originally appeared in the Denver publication Westword and is reprinted with permission.*

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Experience: Five years in radio, a year directing public TV, 23 years running a successful jingle/production recording studio and one book, "The Jingle Book," released in 2002.

Mentor: Journalism teacher Fred Marlo

Learning Experiences: playing keyboards in bad rock bands in the 1960s, getting fired from several radio stations

Quote: "Life is a parade staged for my amusement."



**Radio World's** pages are home to the finest writers and columnists in the industry. Like Ken R. Just one more reason we're the newspaper for radio managers and engineers.



# Fox Expands Foray Into Radio

*Company Hopes to Make a Splash With Its 'Fair and Balanced' Brand*

by Steve Sullivan

The fine folks at Fox are hoping that what works for cable will work for radio.

Fox Radio News Service expanded to around-the-clock on-minute hourly news updates on Dec. 1. The expansion followed several months of an abbreviated version of the service that debuted last spring. And while conservative patter has been a radio mainstay for years, Fox thinks there's room for more.

In addition to the headline service, Fox News Radio is lining up a selection of talkers who will bring to the dial the same swagger that has turned the company's cable news channel into a force.

## Riding the wave

In October 1996 Fox joined the cable news channel landscape, competing with CNN and the month-old MSNBC. Seven years later, Fox News Channel outdraws the other two competitors combined. October's prime-time Nielsen ratings showed Fox leading the news channel pack with a 1.0 rating and 1.1 million viewers. CNN rated 0.7, with 773,000 viewers, while MSNBC had a 0.3 rating with 258,000 viewers.

**It will be interesting to see if Fox is prepared to do what CNN doesn't do.**

— Allan Loudell

Whether stations will be switching to Fox, or just adding it to complement one of the other services, it has a long way to go before it catches up in radio the way it did on cable. As of December, Fox had received commitments from approximately 150 stations, including 16 of the top 25 markets. This puts it well behind ABC News Radio, with more than 2,300 affiliates, and Westwood One with nearly 2,750 affiliates for its CBS Radio News, CNN Radio and NBC News Radio services.

Bob Finnerty, vice president for Fox News Radio, says there are no targets on how many stations will pick up the service by the end of this year. But he is confident that the market is there.

"What we're looking for are good stations that want to build a partnership with us and that are interested in 'Fair and Balanced' news. In many cases, particularly with some talk stations that tend to be a little bit more conservative, there's a disconnect with the audience when you go to the anchors from ABC or CBS in that some think it's less than fair and bal-

anced. So these stations are very attracted to us for that reason."

"Fox is known as a conservative voice in the news media," said Duke Brooks, a former group chief operator and station manager who is now a radio consultant on Maryland's Eastern Shore. "It seems to me that viewers and listeners are gravitating toward that, and they seem to be liking it. We can't always predict what they'll go for, but that cable channel has been spectacularly successful."

"If I were making strictly a program-



Tony Snow



Allen Loudell

ming decision based on what I thought Arbitron ratings performance would be," Brooks said, "I'd go with it. If I believed I was going to get a 2- or 3-

share-point bounce in males in my target demo by switching from ABC or CBS or anything else, sure I'd go for it. And my sales manager would be behind it even more than me as a programmer."

## 'Better, cheaper'

One of the ways Fox hopes to make ground is to operate with efficiencies provided by its parent company's vast media empire.

In addition to the cable news channel, Rupert Murdoch's News Corp. publishes 175 English-language newspapers around the globe, and owns and operates 35 television stations in the United States plus the Fox Broadcasting Network, movie companies, magazines, books and direct broadcasting services.

See FOX, page 26 ▶

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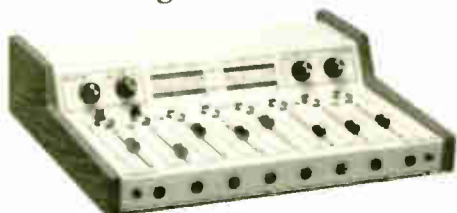
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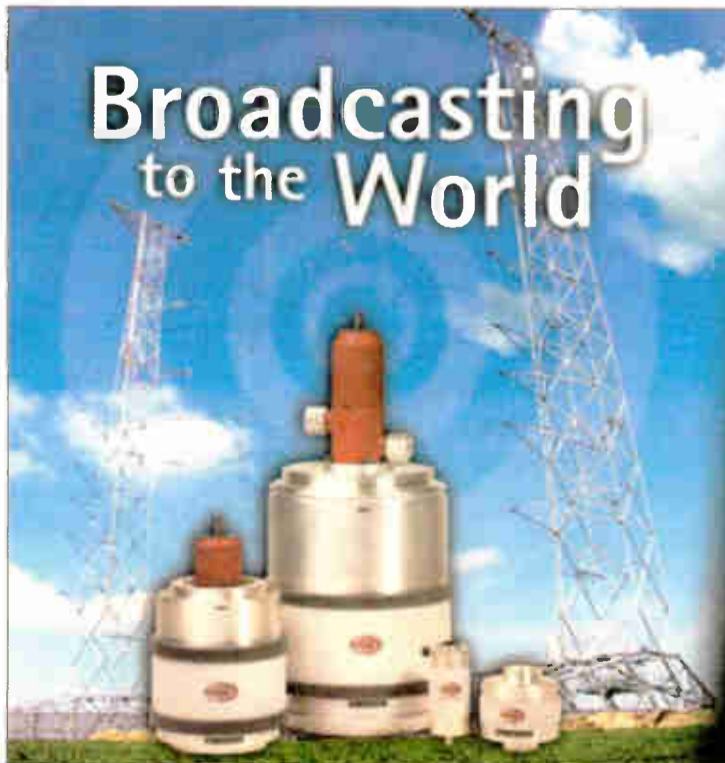
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Clear Channel Radio promoted 10 engineers to the new position of regional VP of engineering, as part of the formation of a new regional operating structure for the company's engineering initiatives. **Allan Brace, Ben Brintzer, Tom Cox, Gil Garcia, Mike Gideon, Mike Guidotti, Paul Jellison, Ken Jones, Dan Mettler and Randy Mullinax** were promoted.

S.C.M.S. Inc. appointed **Art White** as its South-Atlantic representative for broadcast products. He most recently worked for RDS as sales manager and will continue to sell RDS equipment.

**Andrew Ashwood** joined **Premiere Radio Networks** as VP/manager of Fox Sports Radio Network. Ashwood was operations manager/program director of WOAI(AM) and KTKR(AM) in San Antonio, Texas.

**Stephen Baker**, former senior VP of sales and marketing for **Denon Electronics (USA)**, now serves as president. He assumed the position from **Hideo Kushida** and reports to **Mitsuhige Sakamoto**, president and CEO of Denon Ltd.



Stephen Baker

Clear Channel Radio-South Florida Regional VP **David R. Ross** was named 2003 Diversity Champion of the Year by the BankAtlantic Equal Opportunity Day Awards Program for outstanding work in furthering equal opportunity, diversity and equal rights.

**Nate Bell**, former director of urban programming for four Clear Channel stations in Memphis, was promoted to regional VP of programming (RVPP) for Memphis and Jackson, Tenn., Tupelo, Mo. and Jonesboro, Ark. Former director of sales in Alexandria, La., **Lisa Ballance** was promoted to market manager for the region's four stations.

Radio veteran **Jim Bell** was named VP and market manager for Clear Channel's Bakersfield, Calif., cluster. He was the cluster's director of sales. **Dick Lewis** was named regional VP for the Louisiana region, where he oversees radio operations in New Orleans, Alexandria and Baton Rouge. He remains market manager of the cluster.

**John Lively**, longtime aide to Sen.

**Judd Gregg**, joined the NAB as director of government relations. Lively comes to NAB from Intrado, where he served as director of federal relations.

**Crys Quimby** was named program director and **Tim Scheld**

was named news director for **WCBS(AM) Newsradio 880**. Quimby comes to WCBS from sister station **WINS(AM)**, where she served as news anchor. Scheld was national radio correspondent for ABC News.

**AKG Acoustics** reorganized its Marketing Services Department and named **Mike Torlone** director. He oversees AKG's functional marketing related to advertising, literature and catalog development and public relations.

**TC Group** appointed former CEO/managing director of its joint venture company **TC-Helicon Vocal Technologies** **Fred Specken** as director of business development, based at Tannoy Limited in Scotland.

**Zeo Radio Networks** appointed **Patrick E. Gillen** to affiliate relations manager, where he is responsible for the company's marketing strategy. Gillen was the director of East Coast operations for Music Information Systems.

The **Canadian Association of Broadcasters** awarded its 2003 Gold Ribbon Award for Broadcast Excellence to **Andre Bureau**, chairman of the board of Astral Media and counsel at Heenan Blaikie LLP.

**Kent Dunn**, general manager of **Beasley Broadcast Group's** eight-station cluster in Augusta, Ga., was selected as the company's General Manager of the Year. **Carole Bowen** of **WKIS(FM)** in Miami was named Sales Manager of the Year. **Joyce Fitch** joined the company as general counsel. She had served as assistant general counsel at Rotech Healthcare Inc. in Orlando.

**John Marquis** returned to **Prophet Systems Innovations** as manager of online training after a three-year stint as GM of **KOGA(FM)** in Ogallala, Neb. **PSi** appointed **Kevin Sikes** to the position of senior product developer.

Radio veteran **B.J. Stone** was named director of R&B programming for **Sirius Satellite Radio**. He joined Sirius three years ago as a program manager. Former regional director of programming for Clear Channel Miami **Gregg Steele** was named Sirius' director of classic-based rock, responsible for programming on the company's classic-based streams.

The Greater Boston Food Bank recognized the hunger-relief efforts of **WAAF(FM)'s Hill-Man Morning Team**. The team has raised more than \$500,000 in 10 years, and received an award as an outstanding



John Lively

financial donor.

**John McCaffrey** returned to **Audio Processing Technology** as licensing manager. McCaffrey had been handling OEM business for Andor, a high-tech company in Northern Ireland, for four years.

**Ben Rosenthal** joined **NewRadio Group** as GM at its Fort Atkinson cluster, for radio stations **WFAW(AM)**, **WKCH(FM)** and **WSJY(FM)**.

**American Urban Radio Networks** appointed **Mary Ware** regional director of marketing and new business development. Ware joins from **Katz Media Group**, where she served as VP/director of the **Katz Urban Dimensions** division. **Jon Krongard**, former **AURN** director of sales and marketing for the Midwest, was promoted to VP of sales.

**DG Systems** named former **AOL Time Warner** sales executive **David G. Dietze** senior VP of sales, replacing **Mark Dunn**, who resigned.

**Tom Jordan** joined **Rohde & Schwarz** as regional sales manager for the New York networks and southeastern states reaching from Virginia to Florida. He was senior VP of strategic relations for **Leitch Inc.**

**Steve Rivers** was named senior VP of programming for **Infinity Broadcasting**. He joins the company from **Power Media** where he was president and CEO.

**Jones Radio Networks** promoted **Cheri Marquart** to operations manager of its revamped **Classic Hits** format. She has been with the company since 1991, most recently as assistant PD and music director for other formats.

**Joan Gerberding**, president of **Nassau Media Partners** and immediate past president of **American Women in Radio and Television**, was appointed to the **Federal Advisory Committee for Diversity in the Digital Age**, a committee established to advise the FCC on ways to create opportunities for women and minorities in the broadcasting industry.

**NPR** and **PBS** selected two journalists to anchor "PBS/NPR Newsbrief," hourly 30-second television news reports produced by **NPR** for **PBS** stations. **Beverly Kirk**, formerly of **NBC News Channel**, will anchor weekdays, and **ABC** and public television correspondent **Sheilah Kast** will anchor weekends.

**T. Scott Fain**, former senior VP and counsel for **ABC Inc.**, was promoted to senior VP and deputy general counsel of media networks at the company. A Yale Law School graduate, he supervises **ABC's** legal affairs for its television and radio stations and networks.

**Intelix** added **Andrew Kurth** to its application engineering department. He assists in the testing and development of new products.

**Catherine Hughes**, founder and chairperson of Maryland-based **Radio One**, and her son, president and CEO of the company **Alfred Liggins III** were named the 2003 **Ernst and Young Entrepreneur of the Year** award winners in the Arts and Entertainment category.

**JJ McKay** is the new operations manager for the **Jones Radio Network** 24-hour format, **Good Time Oldies**. **Jon Holiday** took the reins as operations manager for the **Adult Hit Radio** format, and kept his position as director of contemporary programming.

**John H. Davison**, president and general manager of **ABC Radio Group/Los Angeles**, was elected as chairman of the **SBCA** board of direc-

tors. **Pat Duffy**, vice president and market manager of news for **Infinity Radio**, moved into the vice chairman position. Additionally, **Thomas McSweeney**, vice president and station manager for **Hispanic Broadcasting Corp.**, was elected as secretary; **Roy Laughlin**, regional vice president of **Clear Channel**, was elected as treasurer; and **Val Maki-Candido**, vice president of **Emmis Radio**, was elected as immediate past chairman.

**Infinity Broadcasting** revised its executive structure, naming **Tony Berardini** as vice president of **Infinity Boston**, **Mark Hannon** as senior vice president/general manager for **WBCN(FM)** and **WZLX(FM)** and **Chris Hill** as senior vice president and director of sales for the entire Boston market.

**Washington Area Broadcasters Association** elected **Chris Berry**, president and general manager of **630 WMAL**, as chairperson. New **WABA** officers also include **Bennett Zier** of **Clear Channel Communications**, vice chairperson; **Jim Watkins** of **WHUR(FM)**, treasurer; **Michael Hughes** of **Infinity**, secretary; and board members **Joel Oxley**, **WGMS/WTOP**; **Jim Robinson**, **WRQX/WJZW**; and **Jerry Martin**, **WBDC-TV**.

**Mark Steinmetz** was named senior vice president and market manager for the **Infinity Phoenix Radio Group**. He joins the company from **America Media Services**, a Charleston, S.C.-based radio brokerage and development business.

**Interop** appointed **Shiela F. Kirby** to the position of senior vice president of **Interop Innovations**. She oversees the **Interop Marketing Group** and promotion/marketing. Kirby formerly served as CEO of **Morrison & Abraham**, an **Interop** subsidiary.

**Gary Wright** joined **NewRadio Group, LLC** as general manager for its **Ottawa, Ill.** cluster, and heads up radio stations **WCMY(AM)** and **WRKX(FM)**. Wright comes to the company from **STARadio Corp.**, where he was the general manager for stations in **Kankakee, Ill.** and **Joliet, Ill.**

**Juanita P. Baranco** was elected to the **Cox Radio's** board of directors as a member of the audit and compensation committees, and as chair of the community relations committee, after the death of board member **Ernest D. Fears, Jr.**

**Mark Lieber** was named vice president and managing director for the West Coast of **Infinity Solutions and Beyond (ISB)**, **Infinity's** in-house marketing solutions group.

Lieber formerly served as president of **Lieber Entertainment**, and is now responsible for developing marketing opportunities.

Independent senior management consultant **James R. Bonfiglio** joined **Furman Sound** as president and chief executive officer. He previously held positions as president and CEO of **Home America** and **Texscan Corp.**

**Joan Gerberding**, president of **Nassau Media Partners** and immediate past president of **American Women in Radio and Television** joined the Steering committee for the **Museum of Television and Radio's** initiative, "On the Air: A Celebration of Women's Achievements in Television and Radio."

**Sandy Hooper**, an executive of **Walt Disney World and Media Networks**, was named vice president of operations for human resources, **ABC Inc.** She will be responsible for the human resources department's **Shared Services** group.



# Fox

► Continued from page 23

The news service will rely heavily on existing Fox News domestic and international resources. The updates will be produced by Fox News and presented by its roster of anchors and reporters, and will take advantage of audio actualities of the day's news, daily entertainment and sports feeds, as well as breaking-news alerts and access to long-form coverage from the news channel during breaking news.

"We quickly realized that just like in cable, we can produce it better and cheaper," Fox News Executive Vice President Jack Abernethy said in a September interview with the Wall Street Journal.

For many programmers trying to decide whether to pick up Fox Radio News Service, the concern is that "cheaper" will come at the expense of "better."

doesn't discount the value of Fox's radio service riding the coattails of Fox News Channel's success.

"Because Fox is such a coming com-

modity, though, there may be some stations for image reasons that (add the service) and it will be interesting to see. More importantly, will there be any ABC or CBS affiliates that drop? I would not have a problem with a secondary Fox affiliation, but the problem there is then you have to clear the additional commercials."

However, Loudell is curious about the quality of the product Fox will offer.

"ABC and CBS are arguably the only two real radio networks left in the business. Even CNN Radio sounds a little like a tertiary network in comparison. CNN sounds like you have people from the 40th market anchoring the news. And it doesn't provide a full service."

"That's the danger when you start from TV, then go into radio. It will be interesting to see if Fox is prepared to do what CNN doesn't do."

He said CBS often will go out of its way to accommodate his station, a 1,000-watt all-news station in the 76th market, even if it is the only station being serviced.

"If someone is giving a speech, I can call CBS and they will put it up on one of their tertiary network feeds. They'll do it just for us, even if we're the only station taking it live. Will Fox provide the same kind of service, or will they simply let radio eavesdrop on TV?"

Finnerty says Fox News Radio Service does not plan to do station-specific feeds, at least for now.

"Eventually, when we roll out to a larger service, those types of things will be made available, but as we get larger our inventory requirements will go up."

Right now, Fox Radio News Service's inventory requirements may be one of the most attractive selling points. "For a CBS affiliate, they get as much as 280 to 300 minutes a week of commercial inventory," said Finnerty. "Our current requirements are 28 minutes a week."

## Snow in the forecast

One of the people most excited about Fox's entry into radio is Tony Snow. A former newspaper columnist and presidential speechwriter, he handed over his anchor duties on "Fox News Sunday" to Chris Wallace in mid November.

The versatile talker is the second Fox News Channel personality to be syndicated by Fox News Radio, joining fellow commentator Alan Colmes, co-host of "Hannity and Colmes." Colmes' show is carried on about three dozen stations.

Other popular hosts from the news channel, Bill O'Reilly and Colmes' partner Sean Hannity, are tied up in syndication deals with other services and don't appear to be joining the Fox Radio News lineup anytime soon.

"I'm excited about it," said Snow. "Having talked now with our radio guys, what impressed me is that they have a firm grasp of the realities of the business. They've got a smart business plan. They're not going to do this on the cheap. They're putting together a first-rate team and first-rate facilities. They're going to upgrade facilities we already have here in Washington."

"The stated ambition in New York" — where Fox News is headquartered — "is to be as successful in talk radio and in news as Fox News has been in cable news."

Steve Sullivan is the executive news editor for multimedia at The Baltimore Sun. He is co-founder of the Advanced Interactive Media Group LLC.

**The stated ambition in New York is to be as successful in talk radio and in news as Fox News has been in cable news.**

— Tony Snow

Allan Loudell, program director, anchor and reporter for WILM(AM) in Wilmington, Del., said his station has been a CBS affiliate for 25 years. Loudell

modity, though, there may be some stations for image reasons that (add the service) and it will be interesting to see. More importantly, will there be any ABC or CBS

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# Buyer's Guide

Tech Updates  
Inside

Radio World

Protection, Power Conditioning & Backup

January 14, 2004

SPECIAL REPORT

## Backups Keep Stations on the Air

by James Careless

**OTTAWA** Should the power ever fail in Hilversum, Netherlands, Radio Nederland Wereldomroep will not be knocked off the air.

"We have not one but two backup electrical power systems," said RNW Facility Manager Ron de Vries. "The main diesel-powered system provides 650 kW, which is enough to keep our entire complex running. Should it fail, a 150 kW secondary diesel generator keeps power running to our main production center."

As for diesel fuel supplies? "We keep enough fuel on site for eight hours' oper-

stay on air.

Granted, antenna sites require diesel-powered generators to keep high-power transmitters operating. However, the studios that feed these sites can be kept alive with little power, depending on how they are designed.

A case in point: A portable gasoline-powered generator can provide enough power to keep an amplifier, basic mixer, microphone and a few CD players running. With light coming from either flashlights or gas lanterns, this can be enough to provide a solid on-air sound — so long as the studio-to-transmitter link can be made via a telephone line or has its own backup power for a wireless link.

erator is a must.

To meet major power requirements, diesel generators are unavoidable. However, if a station can get by with 45 kW or less, a gas-powered generator, such as the Generac Power Systems Inc.



Designed for the North American residential market, the Guardian can be powered by natural gas or Liquefied Petroleum Gas (LPG).

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**L**isteners count on radio during power blackouts. If the station they listen to is knocked off, they will tune elsewhere.

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ation, and have a contract with a local supplier to deliver four hours more on short notice. We are therefore good for 12 hours, which is normally more than enough time for local authorities to restore the main power grid. If not, then we can always bring in more fuel."

A problem with diesel generators is that they take a few moments to kick in. No problem: Radio Netherlands also has a massive rechargeable battery plant that bridges this gap. It works like a computer uninterruptible power supply, providing backup battery power during short power outages.

### Ideal setup

Protection, power conditioning and backup systems are the theme of this *Buyer's Guide* section of *Radio World*. Ideally, all radio stations would enjoy the kind of backup power capabilities found at the Dutch foreign-service broadcaster.

However, many do not either due to tight budgets, poor planning or both. This means that when the lights go out — as it did at various times in the United States, Canada, Italy and the United Kingdom in 2003 — these stations go dark.

That is a major problem because listeners count on radio during power blackouts. If the station they normally listen to is knocked off the air, they will tune somewhere else.

Thankfully, there are steps broadcasters can take to provide backup power on a budget. Here are a few ideas.

### The shoestring approach

The cost of backup power is related directly to how much power is needed to

In a pinch, a car battery-driven "power inverter" can keep a basic studio running.

For instance, a Vector Manufacturing Ltd. VEC024 MAXX power inverter can convert 12 V DC into 400 W of AC power. Just clip the two clamps on the VEC024 onto a car battery, then plug AC devices into the AC plug sockets on the unit.

The result is enough power to keep a desktop computer with microphone, headsets and twin CD-ROM drives alive. If the AC starts to die, just start the automobile up to recharge the battery on the fly. Note: to prevent dead air, some kind of UPS must be connected to the "backup studio," to gain the time needed to get the inverter running.

As for flashlights, battery-powered tape recorders/digital recorders and battery-powered mobile telephones, the first two can be powered by rechargeable batteries, which can be kept charged with a solar-powered battery charger.

For the mobile telephones, a windup charger such as the Freeplay FreeCharge or the Innovative Solutions & Technologies SideWinder can revive a mobile phone in minutes. (This assumes that the local mobile telephone network remains on air after the power has failed.)

FreePlay also makes a two-intensity windup flashlight called the Sherpa — also branded as the Coleman Sentinel — and a range of windup AM/FM/short-wave radios.

### More power, more reliably

Running a radio station using an extension cord connected to a '75 Volkswagen is only a "quick fix," however. To provide a long-term supply, a gen-

erator is an option. Designed for the North American residential market, the Guardian can be powered by either natural gas or liquefied petroleum gas.

With power like this, a Guardian can even backup a transmitter site, so long as either natural gas or LPG are readily available.

So why choose gas over diesel? Well, gas-powered generators are smaller than diesel units, and they run cleaner.

Moreover, when connected to a natural gas pipeline, gas-powered generators can run indefinitely.

As natural gas supplies tend to stay on when the power fails, this means broadcasters can stay on air for as long as the lights stay off. In contrast, those using diesel fuel find themselves scrambling for supplies during long outages, as was the case in much of eastern North America during the August 2003 blackout.

### Battery backups

As mentioned, every station needs some kind of battery-powered UPS to bridge the gap between regular AC and backup generated power.

For basic studios, a suite of computer UPS devices — such as those made by American Power Conversion (APC), Belkin, MGE UPS, Staco Energy Products and other companies — can be sufficient for the job.

For larger studios, such as RNW, it is necessary to custom-install banks of rechargeable batteries.

Which brings to mind a question: If batteries can fill the power gap for short periods, could they do the same during longer blackouts? In theory, the answer is yes. However, in practice, it would simply cost too much for a station to install enough batteries to deliver long-term power.

This said, some small stations do have "closets full of UPS batteries" for backup power. Of course, once the batteries run down, there is no way to bring them back to life until the main power returns.

(Although it is possible to charge UPS supplies using solar panels, it is far cheaper to do so using conventional electricity.)

When it comes to choosing a backup power system, the final decision is financial.

If a station can afford to install a full diesel suite, à la Radio Netherlands, then by all means do so. If not, there are cheaper alternatives that will keep a broadcaster on the air, although with limited facilities.

This said, the availability of cheap options such as power inverters and gas-powered generators means that backup power is within reach of many smaller stations.

Throw in hand-cranked flashlights, AM/FM radios and mobile phone chargers, and there is no reason not to stay on the air when the lights go out.

Got a strategy for keeping your station on the air? Tell readers about it. Write to radioworld@imaspub.com. 🌐

## Corrections

The Nov. 19 article "WNRN Uses FT-1A as Receiver" referred incorrectly to AM stereo reception in the FT-1A. John Pavlica was commenting on the FM section of Fanfare's FTA-100, which has the same FM section as the FT-1A.

In the same issue, the article "VOA Looks Back" quoted a mission statement from the Broadcast Board of Governors but attributed it to Voice of America. A spokeswoman for VOA said its mission is best encapsulated by its charter, which was signed into law in 1976. It states:

1. VOA will serve as a consistently reliable and authoritative source of news. VOA news will be accurate, objective and comprehensive.

2. VOA will represent America, not any single segment of American society, and will therefore present a balanced and comprehensive projection of significant American thought and institutions.

3. VOA will present the policies of the United States clearly and effectively, and will also present responsible discussions and opinion on these policies.



# HD Radio Station Is Storm-Ready

*Superior Electric's Series-Connected TVSS Solved Power Surge Problems for WBPG(FM)*

by David Hoxeng  
ADX Communications  
Owner, WBPG(FM)

**PENSACOLA, Fla.** Radio stations seem to attract lightning. Superior Electric's Stabiline CS2 series-connected TVSS has solved an important problem for us.

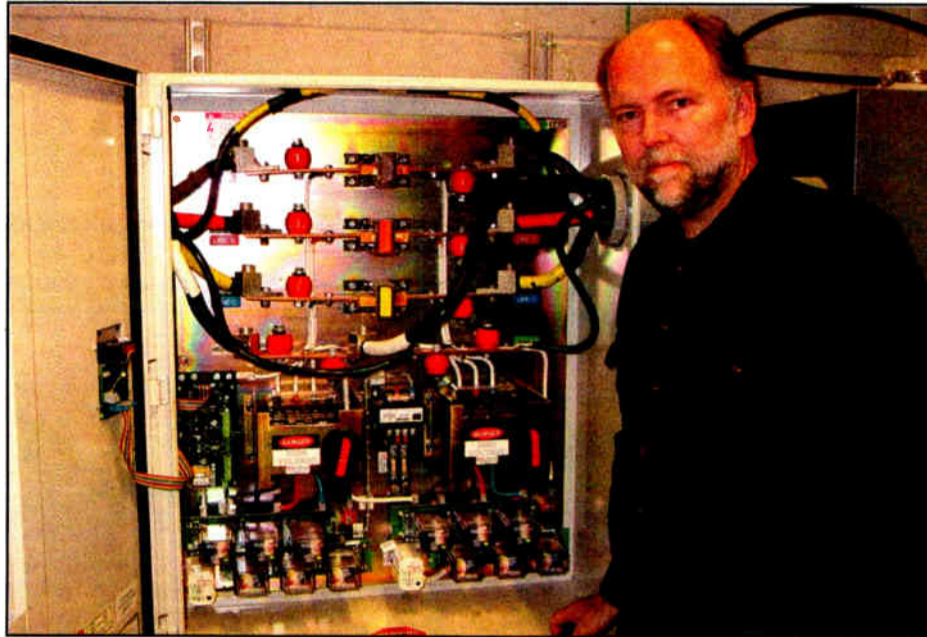
I applied to the FCC for our new station CP in 1988. We finally built it at 100 kW this year. Our 1,100-foot (HAAT) tower was constructed by Central Tower near IH-10 close to the Florida/Alabama line. We planned to debut our station with analog and with HD Radio, so our entire transmitter project was designed around HD Radio.

My wife Mary and I were Shively Lab's first customers for its IAD HD Radio antenna. It has eight 6810 bays for analog and three interleaved 6810 bays for HD Radio. Using this dual-feed antenna made more sense than using a power-hogging high level IBOC combiner. Our Shively IAD antenna is directional in order to protect a first-adjacent station to our east. Antenna coverage study tests are scheduled for mid-December.

We are out in the country and expected that lightning would be attracted to our tall tower. Central Tower designed a low-resistance ground system. Our electric co-op extended its three-phase-power a mile from the highway and installed an array of 21 ground rods at its last pole

next to our building.

We chose 208-Wye power service based on recommendations from Continental Electronics. A parallel surge



The author is in front of an open CS2 TVSS that reveals its copper bus bars.

suppressor was installed in our building the same day utility power was installed. During the next 2 months of construction, we sustained lighting damage several times.

One Sunday night, a thunderstorm arrived. I was sweeping up and mentally

prepared myself for a possible loud thunder boom. KA-POW! It was loud, the lights went out and something crashed to the floor at my feet. It was the florescent fixture, and its ballast had exploded. We needed better lightning protection.

Superior Electric solved our problem.

It turned out that the lightning surges were coming into the building from the electric line, not from the well-grounded Central Tower.

Superior Electric was at the NAB convention last April showing its CS2 series-connected TVSS. Most TVSSs attach in

parallel to the power line. In the CS2, there is an input and an output. The incoming power is routed through the copper bus bars. The bus bars pass through a transformer-like hunk of metal for suppression.

The CS2 is rated for 400 amps, features three-phase 102/208Y service and has additional protection in the form of parallel devices on the input and output. The connections to the MOV and Silicon Avalanche Diode modules are switched using quality inductive elements. It also has 320kA surge current capacity per mode. This TVSS is robust.

We have had *no* lightning or power surge damage since we installed the Superior CS2 TVSS. There is an event counter on the front panel. Our site has had 38 "events" in the first six months, and the CS2 TVSS handled them all. I am a happy customer and will use this product at our future AM transmitter building. The only negative I have found is the "installation" weight of the CS2, approximately 175 pounds.

We signed on the air in December as Christmas Radio 98.7. It will be important to protect our HD Radio exciters with a robust UPS. Based on our superior success with the CS23 TVSS, and the smaller PT1 TVSS that is used to protect our water well pump, we plan to order the Superior Stabiline SEG1000R UPS for our exciter rack.

We are proud to be Pensacola's first HD Radio station, and appreciative of the products from Superior Electric that successfully protect our facilities.

For more information, including pricing, contact Superior Electric in Connecticut at (860) 585-4500 or visit [www.superiorelectric.com](http://www.superiorelectric.com).

## TECH UPDATES

### Furman Regulates Voltage With Steady Output

**Furman Sound** AC power conditioners are voltage regulators that deliver constant voltage at varying



Furman Sound's AR-1215 is a 15-amp AC line voltage regulator.

amperage (15, 20 and 30 amp versions).

AC power is filtered to reduce AC line noise before it reaches the audio signal, and protect against electrical surges and spikes using two lines of opposite polarity. The company says the units compensate for voltage fluctuations by stepping up or stepping down the AC line voltage.

The 15-amp AR-1215 and 20-amp AR-1220 shield audio, video and computer equipment from AC line voltage irregularities, such as sags and brownouts that cause sensitive digital equipment to malfunction or sustain damage. Providing a steady 120 VAC output, they accept an input voltage from 97V to 141V and transforms it to a constant 120V,  $\pm 5V$ . Voltages

beyond that range may be converted to usable levels, depending how far out of range they are.

The AR-1215 and AR-1220 can handle loads totaling up to 15 amps, as long as the input voltage is above 124 volts. For voltages below that level, the capacity must be derated at approximately 0.15 ampere per volt. They do not use ferro-resonant transformers, and both models feature Extreme Voltage Shutdown, which

senses dangerously high or low voltages and shuts down the output before damage is done.

The AR-1215 has eight regulated, spike-suppressed outlets on the rear panel, and one on the front panel, while the AR-1220 features 12 outlets on the rear panel and two on the front panel. The outlets are filtered against RFI with a three-pole filter, and there are no controls except the circuit breaker/on-off switch. A bar-graph meter comprising 10 LEDs indicates input voltage, while another LED indicates "In Regulation" status (i.e., that the output voltage is within  $\pm 5V$  of 120V.)

For more information, including pricing, contact Furman Sound in California at (707) 763-1010 or visit [www.furmansound.com](http://www.furmansound.com).

### Staco's CPS Defends Against Surges

Staco Energy Products says its

FirstLine Conditioning Power System protects against 98 percent of power problems such as voltage fluctuations, brownout conditions, harmonics and transient surges by isolating the connected load from the primary AC supply.

Its design is suitable for broadcast and other applications where blackouts are rare but costly events.

FirstLine, the company says, delivers true sine wave output and extends the life of capital equipment to enable it to continue running through unstable power situations and protect against damage from poor power quality. Additionally, the CPS is programmable for remote monitoring and protects where UPS cannot be used because of environ-

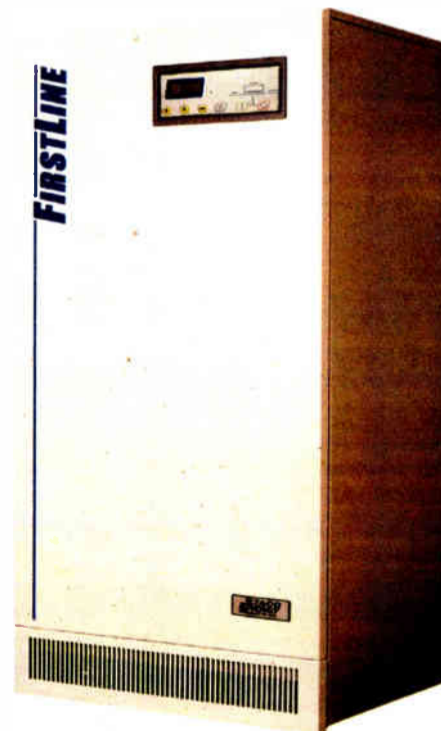
mental or cost considerations. Staco Energy's vice president of sales and marketing says it "fills a gap between UPS systems and traditional power conditions."

The system can be configured for any 208, 400 or 480 VAC application. It has a total harmonic distortion of less than 3 percent for 100 percent linear loads, and less than 5 percent for 100 percent non-linear loads. FirstLine also regulates frequency to  $\pm 0.05$  percent.

Features include a front-mounted display panel, optional remote diagnostics and a remote alarm unit for immediate notification of power problems. The FirstLine system can be purchased in 30, 40 and 65 KW ratings. The compa-

ny is planning to soon release a broader range of ratings.

For more information, including pricing, contact Staco Energy Products in Ohio at (937) 253-1191 or visit [www.stacoenergy.com](http://www.stacoenergy.com).



To surge and protect: FirstLine features true sine wave output.



# What's better than MP3? Broadcasters agree: it's AAC.

Being a technology leader is something we take pretty seriously. When new tech is introduced by a Telos product, you can be confident it's the absolute best – so you shouldn't be surprised to find high-performance MPEG AAC coding in the latest Zephyr products.

Remember the original Zephyr? Its introduction of MP3 coding turned broadcasting upside down, and since then MP3 has become extremely popular for audio distribution, especially on the Internet.

But MP3's compression technology is now over a decade old, and there have been a lot of advances in perceptual audio coding and compression since then. You wouldn't settle for a '386 computer these days – so why be content with compression technology from the same era? What you want is Advanced Audio Coding... MPEG AAC.

MPEG AAC takes advantage of all of the latest advances in compression technology. Compared to MP3, AAC delivers higher quality audio at much lower bit rates, resulting in noticeably better audio even over low-data-rate connections. AAC also cascades better than older codecs – especially important for HD Radio considerations.



## Move Over, MP3

AAC was developed by the Fraunhofer Institute for Integrated Circuits (FhG IIS, the inventors of MP3) and a consortium which included Sony, Dolby Labs, Nokia and AT&T. Their goal: to create a codec that would satisfy the International Telecommunications Union's Recommendation BS.1115, which specified indistinguishable source-to-output quality at 64 kbps per mono channel. They succeeded with AAC, which is a coding algorithm *30% more powerful* than MP3.

AAC is, by scientific and subjective analysis, the best-sounding, most efficient pure perceptual codec yet, and has been part of the International MPEG-4 standard (ISO/IEC 14496) since 1999. As a point of reference, the near-CD quality Layer 2 codec

needs a data rate of 192 kbps per channel to deliver high-quality stereo; AAC gives the same quality at just 64 kbps!

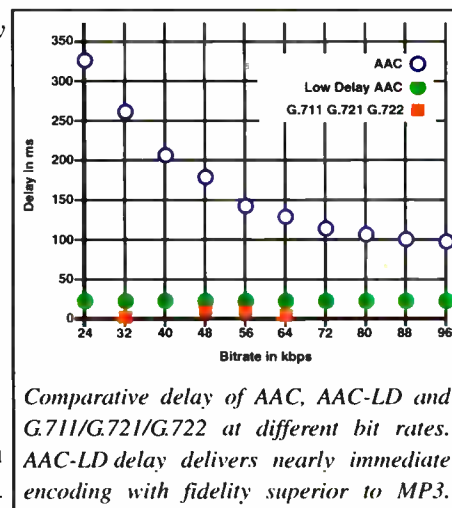
"The AAC codec outperforms the rest of the codecs," stated Canada's Communications Research Centre after performing double-blind subjective tests of 17 codecs (including MP3 and Layer 2) to determine which was best.

"When compared side-by-side, AAC proves itself worthy of replacing MP3 as the new Internet audio standard," says Apple Computer, which has incorporated AAC into its latest software products.

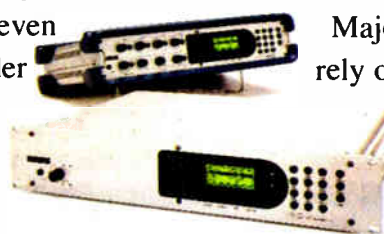
## Better Audio, Less Delay

In addition to "plain" AAC, broadcasters have another tool specifically designed to improve the performance of remote audio transmissions: AAC Low Delay (known as AAC-LD for short).

AAC-LD slashes encoding delay by nearly 70% compared to MP3 – invaluable for real-time two way broadcasts. It also employs new techniques to offer both low delay and high fidelity. Compared to speech coders (such as G.722), AAC-LD handles both speech and music with good quality. Unlike speech coders, however, audio quality scales up with bit rate. With AAC-LD, audio quality is far superior to G.711 or G.722 at the same bit rate, and equal or better to MP3 at the same bit rate.



Comparative delay of AAC, AAC-LD and G.711/G.721/G.722 at different bit rates. AAC-LD delay delivers nearly immediate encoding with fidelity superior to MP3.



Both AAC and AAC-LD are featured in the Telos Zephyr Xstream rack and portable codecs.

Major personalities such as Rick Dees have come to rely on AAC-LD for better-sounding remotes. Jerry Burnham, KIIS-FM Special Projects Engineer, told us "AAC-LD coding in Zephyr stream is amazing. Low-Delay coding is a tremendous advantage. We get fantastic-sounding remotes, and we can interact with phone callers, traffic reporters and other remote sources without that annoying time lag."

## "The Best Low-Bit rate Codec on Earth"

There's one more exciting part of the AAC story: *aacPlus*<sup>TM</sup>. This extension of AAC melds Spectral Band Replication with MPEG AAC, resulting in truly stunning audio fidelity at bit rates never thought possible before. In tests conducted by the European Broadcasting Union (EBU) which compared a variety of codecs at several bit rates, they declared *aacPlus* as the clear winner, significantly outperforming proprietary competitors and improving over other standards; studies conducted by DRM and MPEC affirmed that *aacPlus* is ideally suited for the low bit rates of AM & FM IBOC. *aacPlus* has been chosen for use by XM Satellite Radio and Digital Radio Mondiale, and will soon be in 2.4G and 3G audio applications deployed by Matsushita and NEC.

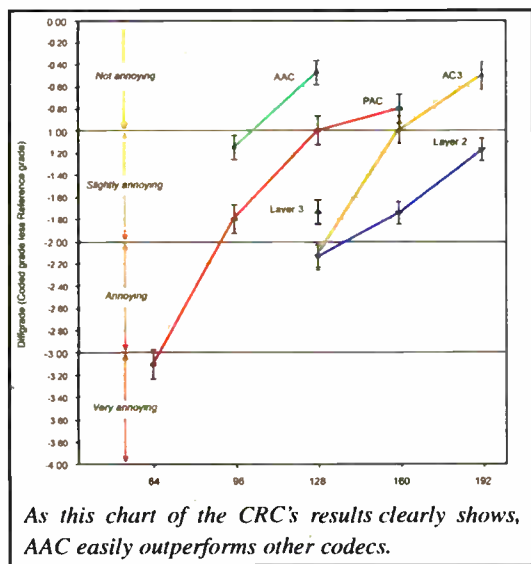


Zephyr Xport is the only POTS codec with *aacPlus*. It can send 15 kHz mono audio over analog lines.

Industry experts agree. "AAC Plus is the future... all else is stone knives and bearskins," according to Gary Blau of Jefferson-Pilot Communications. Jeff Johnson of X-Star Radio Network agrees: "It is quite amazing how decent a 32 kbps bitstream can sound."

Telos has chosen *aacPlus* as the algorithm used in the new Zephyr Xport POTS + ISDN codec. Paired with custom modem technology developed by Telos, *aacPlus* enables Xport to send 15 kHz mono audio over ordinary POTS phone lines.

Of course we hope you will purchase Telos equipment. But even if you decide differently, make certain that whatever codec you do purchase – POTS, ISDN, serial or otherwise – takes full advantage of today's advanced audio coding technology. Make certain it has AAC.



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## TECH UPDATES

## SurgeX Snubs Spikes

The SX15-iR2 and SX20-iR2 surge suppressor and power conditioner from SurgeX upgrade protection against spikes and inductive transients for audio, video and computer equipment. The standalone units have two three-prong receptacles on the front panel and use the company's Series Mode Pro technology, which it touts as being better than conventional MOV circuitry. The SX15 iR2 offers 15-amp protection, while the SX20 iR2 is rated for 20 amps.

Three limiter circuits are included: a series surge reactor that is current-limited; a cascaded auto-tracking dual-polarity model that is voltage-limited; and dual pulse inverters.

Series Mode Pro technology enables these models to stop surges of up to 6,000 volts without producing ground contamination. A snubber is featured for fast-rising surges generated within the installation location. These components are UL 1449-2 listed, and meet government purchase specifications for power line surge suppressors.

Other features include a 6-foot grounded three-wire line cord — #14 cord for SX15 iR2 and #12 for SX20 iR2 — magnetic shielding steel enclosure and self-test circuit with visual indicator. The SurgeX units are distributed through SystemsStore.com.

The company recently debuted its SA-15 and SA-20 surge suppressor/power conditioners, 15- and 20-amp-capable units that offer SurgeX's Impedance Tolerant EMI/RFI filter package and use A-1-1 technology.

For more information, including pricing, contact SystemsStore in Missouri at (636) 230-0046 or visit [www.systemsstore.com](http://www.systemsstore.com).



## Phasetec Conditions Power

Phasetec digital power conditioners from Phase Technologies protect electrical equipment operating in harsh power quality environments. They feature a wide input voltage range, user-selected output voltages and frequency conversion capabilities.

Most power conditioners are transformer-based technologies that provide voltage regulation and some degree of protection from adverse power events. Phasetec touts its double IGBT (insulated gate bipolar transistor) conversion. This process converts the incoming AC power to DC, then rebuilds a new AC voltage for clean power. It also offers isolation from power problems that can plague AC power mains.

Phasetec power conditioners operate over an input range of 160-277V, while maintaining output voltage within 2 percent of the selected output voltage. The output voltage is a sine wave with <4 percent THD. Electronic power factor correction on the input

draws current in a sinusoidal manner, enabling the unit to be operated downstream from generators without the need for up-sizing the generator to serve non-linear loads.

50 or 60 Hz power is accepted, and the user may select either 50 or 60 Hz output for operation. This feature also protects sensitive equipment from frequency variations produced by back-up generators.

Phasetec digital power conditioners are available in single-phase models up to 19 KVA, with three-phase models up to 50 KVA scheduled for release in 2004.

For more information contact Phase Technologies LLC in South Dakota at (866) 250-7934 or visit [www.phasetechnologies.com](http://www.phasetechnologies.com).



Phase Technologies' digital power conditioners protect equipment from the elements.

## CleanSource Protects With Flywheel

Active Power's CleanSource UPS is integrated with flywheel technology, providing power conditioning, voltage regulation and harmonics cancellation.

It ranges in power levels from 65 kVA to 3600 kVA and creates a continuous power system that protects sensitive broadcast loads against short power disturbances when coupled with a standby generator for a battery-free approach. During a power disturbance, stored energy from the flywheel is converted to electricity and powers the critical load for short duration events, or until a standby generator takes over in the event of an extended outage.

The company says its UPS handles overloads better than traditional battery-based UPS systems because it is designed to manage crowbar events — momentary power flickers or outages that cause the crowbar self-protection circuit to kick in.

The system's flywheel can handle overloads of 1,000 percent for 10 milliseconds. When the crowbar event causes

a large overload on the UPS, the capacity of the flywheel enables a transition to bypass. This supplies the desired current from the lowest impedance source without disturbing the operation of other amplifiers connected to the same UPS.

CleanSource integrates with gen-sets due to its low-input harmonic distortion and high efficiency. This eliminates the need to oversize the generator and insulates the gen-set from block loads and transients. Software-configurable integration with standby gen-sets protects critical applications. The system eliminates frequent maintenance and replacement of batteries, and operates at full performance between 0 and 40 degrees C.

For more information, including pricing, contact the company in Texas at (877) 359-9433 or visit [www.activepower.com](http://www.activepower.com).



CleanSource UPS offers a battery-free solution for power surge protection.

## Henry Debuts PowerClamp

Henry Engineering has debuted the PowerClamp line of transient voltage surge suppressor (TVSS) units, which the company says feature low clamping thresholds. They are intended for use by the broadcast and professional audio industry.

The company says the units improve transmitter and studio system reliability by attenuating noise spikes to within a few volts of the power line, and eliminating imperfections that cause transmitter shutdowns and tripped breakers, such as spikes, high-energy surges, noise and harmonics.

PowerClamp units use multi-stage hybrid circuitry to yield clamping levels as low as 2 volts above the AC waveform, resulting in waveform integrity or "clean power" without distortion. They are available in four sizes, Series 8, 6, 2 and 1, for use at transmitter sites, translators and studio installations.

Series 8 wire-in parallel TVSS devices are suited for radio and television broadcast transmitters, microwave sites and studio facilities. They are rated at 150,000 surge amps per phase, and each line phase is fused with a fuse status LED. The company says an unlikely failure will not interrupt power to the load, and suggests unit installation at the main entry electrical panel for an environment where frequent lightning occurs.

Other features of the Series 8 include optional remote failure detection for monitoring the suppression integrity of the device and sine wave tracking. Series 6 offers 100,000 surge amps per phase and is intended for sites where lightning is occasional, while Series 2 offers 40,000 surge amps per phase and is intended for studios and sub panels in non-lightning areas. Series 1 is a plug-in unit for studios and computers, and offers 20,000 surge amps per phase.

For more information, including pricing, contact Henry Engineering in California at (626) 355-3656 or visit [www.henryeng.com](http://www.henryeng.com).





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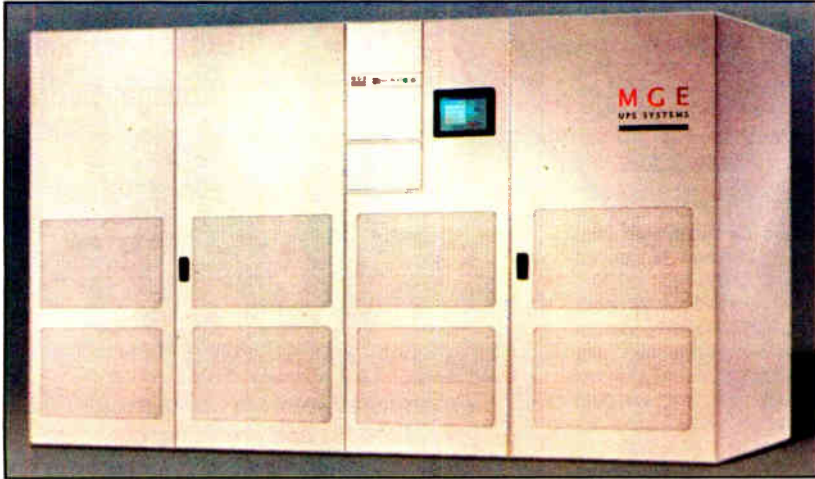


## TECH UPDATES

## MGE UPS Stabilizes Sensitive Equipment

Transmitting equipment places special demands on uninterruptible power supplies. The ability to protect against crowbar effect damage that can occur during periods of power instability is as important as providing backup power.

MGE UPS Systems' EPS6000 Series UPS models incorporate fault-tolerant circuitry that enables them to sustain a dead short without suffering internal damage.



MGE's EPS6000 Uninterruptible Power Systems provide backup for radio transmission.

The systems are available from 225 kVA to 800 kVA, and employ a proprietary generator interface technology that reduces the need to oversize connected engine generator sets, as well as the risk of generator failures.

MGE touts its precise voltage regulation, which limits voltage transients to less than 5 percent. An integrated isolation transformer and reduced harmonic distortion on the output (less than 4 percent THD) add further layers of protection for sensitive equipment.

The EPS6000 is available with a large graphical user interface and includes multi-port serial communications to enable optional integration with common monitoring systems. The company's Teleservices option automatically can notify its service department and the customer of alarm conditions via the Internet, e-mail or pager. MGE has factory service organizations with 900 service specialists at 170 locations.

For more information, including pricing, contact MGE UPS Systems in California at (800) 523-0142 or visit [www.mgeups.com/us](http://www.mgeups.com/us).

## MEAU Systems Use IGBT Technology

Mitsubishi Electric Automation has debuted its 9800AD series Uninterruptible Power Supply, an online double-conversion 480-volt input, 480-volt output UPS. A 600-volt input, 600-volt output configuration is an option.

The 9800 AD series UPS module is available in six capacity ratings: 100, 150, 225, 300, 375 and 500 kVA. Single Module System or SMS configuration or up to eight UPS modules of the same capacity can be applied in parallel operation for Multi-Module System or MMS configuration.

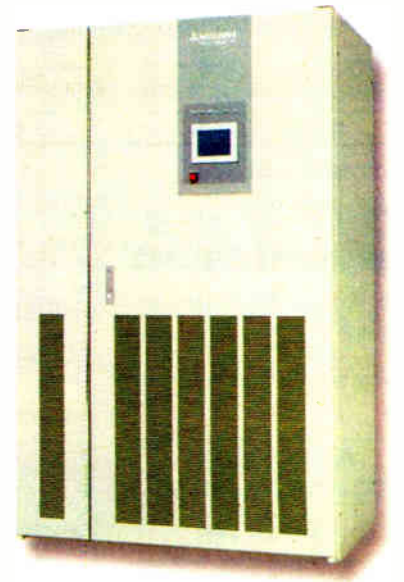
The UPS MMS consists of the UPS modules and a Critical Load Cabinet (CLC), which connects the UPS power circuits and has no control circuit functionality.

Each UPS module incorporates independent bypass circuit and control, and independent parallel operation (load sharing and synchronization) control. The company says this eliminates single points of failure associated with common control circuitry, and offers a UPS system with total redundancy. Existing UPS MMS modules can be removed from a system and used as a stand-alone SMS UPS.

The 9800AD UPS incorporates insulated gate bipolar transistors (IGBTs) and pulse width modulation control techniques, which provide large power capabilities, high-speed switching and low-control power consumption. Included is an operator terminal touch screen with communication abilities, such as Ethernet 10Base-T offering Web monitoring functionality.

Mitsubishi also debuted the 2033D series UPS system with IGBTs and availability in three capacity ratings: 30, 50 and 80 kVA. Features include dual inputs, automatic restart and retransfer, converter walk-in function, ripple-free DC output and integrated "Diamond Sense" system that detects weak cells.

For more information, contact Mitsubishi Electric Automation in Illinois at (847) 478-2320 or visit [www.meau.com](http://www.meau.com).



MEAU's 9800AD series UPS.

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## Cat UPS Offers Alternative to Batteries

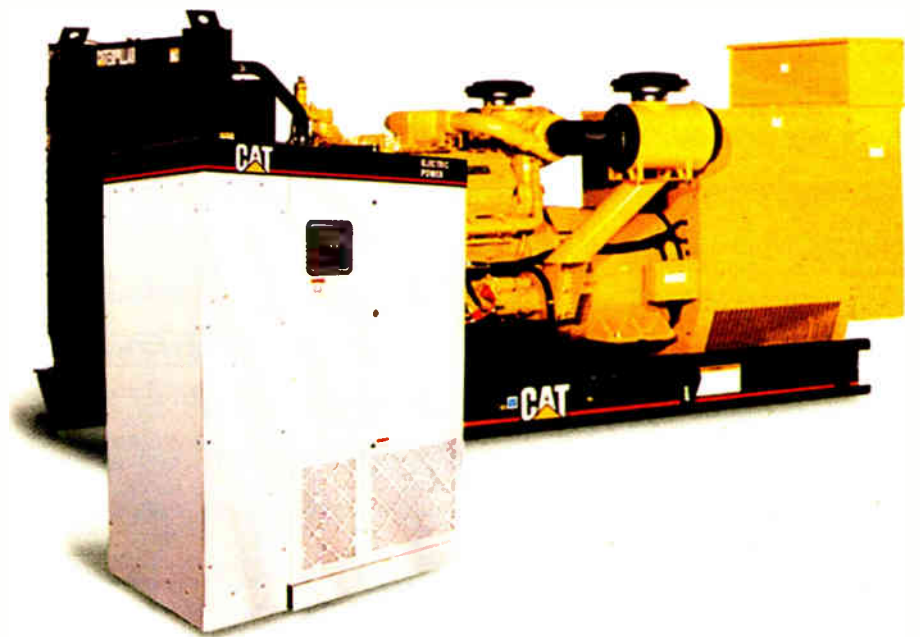
Cat UPS, Caterpillar's uninterruptible power supply, is touted by the company as an alternative to the traditional solution of lead-acid battery UPS for power reliability issues.

It requires 11 square feet of space and features kinetic power cell technology, making batteries unnecessary. Unification between the system and the engine-generator enables it to withstand high temperatures and high-density particulate matter; the integration of kinetic power cell technology protects against transient spikes, dips, sags and complete outages.

For outages beyond its storage capacity, the engine-generator set is brought online and continues to supply electricity through the on-board UPS for as long as there is fuel for the engine. The inverter is continuously operational and monitors the quality of input power. Transient over-voltages are attenuated by two actions. There are high-energy transient-voltage surge suppressors (TVSS) and large line-isolating inductors on the input, and there are redundant surge suppressors on the inverter terminals' output.

Cat UPS detects the beginning of voltage sags, which can cause adjustable speed drive (ASD)-controlled processes to be momentarily interrupted or permanently tripped off-line. The system then takes energy from the kinetic power cell to sustain the desired output voltage. In the instance of a 30-cycle, 30 percent dip, followed by a controlled walk-in back to normal operation, a draw of less than 10 percent of the total stored energy is consumed.

For more information, including pricing, contact Caterpillar at (800) 947-6567 or visit [www.go.catups.com/pr](http://www.go.catups.com/pr).



Cat UPS (the white unit) provides power ride-through after an outage occurs and before the gen-set (yellow) kicks in.



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Want to buy translators, AM's or FM's in western US. Please contact Doug@ihradio.org or 530-584-5700 ext 11.

### STUDIOS

Want to Sell

ATI Audio Distribution Amplifier 2016-1. We have about 10 of these as a result of studio renovations. They cost over \$1,100.00 new but will let these go for \$200.00 each plus S&H. Contact Michael Raley at (704) 523-5555 for more information or e-mail [Mraley@rb.org](mailto:Mraley@rb.org) for a picture.

Audio Arts 8400 Distribution Amplifier. We have about 15 of these as a result of studio renovation. They cost over \$1,100.00 new but will sell "as is" for \$200.00 each plus S&H. Contact Michael Raley at (704) 523-5555 or e-mail [Mraley@rb.org](mailto:Mraley@rb.org) for a picture.

Audio Cord Cart machines. We have about Several "E" series playbacks at \$20.00 each, 10 "DL" series playbacks and two "A" series playbacks at \$20.00 each. Most of them have been refurbished. We also have one "A" series P/R mono, two "E" series p/r mono, two "DL" series p/r mono and two "DL" series stereo p/r at \$100.00 each. Call Michael Raley @ (704) 523-5555 or e-mail [Mraley@bbnradio.org](mailto:Mraley@bbnradio.org) for more information. No connectors are available. Will sell "as is". Shipping and handling charges apply. Call Michael Raley @ (704) 523-5555 or e-mail [Mraley@rb.org](mailto:Mraley@rb.org) for some pictures.

Enberg BA - 6 Annunciator. three of them in great condition with no more than eight years of use in them. Original cost was \$359.00 each but we will sell them for \$200.00 each "as is" plus s/h. Call Mike R at (704) 523-5555 or e-mail [Mraley@rb.org](mailto:Mraley@rb.org) for more information.

Tascam CD 301 (Have two working units) will sell as is for \$225.00 each plus s/h. Email [Mraley@rb.org](mailto:Mraley@rb.org) for a picture or call (704) 523-5555.

Tascam Ministudio Porta One Cassette. Four mic lines for remotes This cost \$600.00 new but will sell "as is" for \$75.00 plus s/h. Call Mike Raley at (704) 523-5555 or e-mail [mraley@rb.org](mailto:mraley@rb.org) for a picture.

Technics SL-D2 record player can let go "as is" for \$125.00 plus s/h. E-mail [Mraley@rb.org](mailto:Mraley@rb.org) for a picture or call Mike at (704) 523-5555 for more information.

Ten Nidec motors for Audio-cord "E" series. 117v 6H 3.1w 0.2amp 12p and 600rpms. Will sell "as is" for \$5.00 each. Working condition just somewhat noisy. Call Michael Raley (704) 523-5555 or e-mail [Mraley@rb.org](mailto:Mraley@rb.org) for pictures.

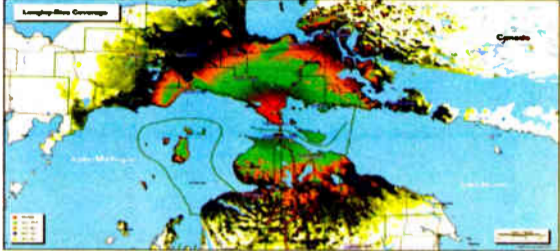
TFT 713 AM Frequency and Modulation Monitor. Cost \$3,400.00 new but will sell for \$1500.00 plus S&H. Needs re-calibration. Call Michael Raley at (704) 523-5555 or e-mail [Mraley@rb.org](mailto:Mraley@rb.org) for a picture.

Two B.E. Record Playback cart machines Two Stereo units "as is" for \$65.00 each and two mono units "as is" for \$50.00 each. Call Michael Raley @ (704) 523-5555 or e-mail [Mraley@rb.org](mailto:Mraley@rb.org) for pictures.

Two Denon DNM 1050R Professional Mini-disc Rec/PB Deck. Both units manufactured in 2001 and were used on our test bench in our downlink room. Has low impedance and headphone jack. We are asking \$570.00 for each unit plus shipping and handling. I can e-mail two pictures and the "Main Features" portion of the manual. Please contact Mike Raley or Ron Muffley at (704) 523-5555 for more information or e-mail [Mraley@rb.org](mailto:Mraley@rb.org) for pictures.

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Well the minidisc craze came and went and we are stuck with more than a dozen Sony MDS-JE470 units that never got out of the box. Yep! Brand spankin' new, never even opened. We bought these new at \$175 each but will let them go for \$135.00 which will include shipping if address is in the lower 48 states. These can record and includes a remote which can record as well. Has PC connection in the back as well as a digital optical out. To order call Mike Raley @ (704) 523-5555 or e-mail [Mraley@rb.org](mailto:Mraley@rb.org) for a picture if what one looks like.

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QEI FMQ series 6.0 to 9.6FM. This xmtr did a tour of duty in Argentina but some goofy laws in this country made it impossible to permit the station to operate at this power. To make a long story short it was only in operation no more than four months. Will let this go for \$ 18 ,000.00. Call Mike Raley at (704) 523-5555 or E-mail [Mraley@rb.org](mailto:Mraley@rb.org) for pictures.

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Radio World, January 14, 2004

# Remembering Adrian DeVries

by Tom Read  
Northwest Pioneer Broadcasters  
Local Chapter, American  
Pioneer Broadcasters

Not long ago, the Northwest Pioneer Broadcasters presented an award to Adrian DeVries for being the longest-running and most continuous radio/TV voice in the state of Washington.

Little did we know that Adrian DeVries would be gone within weeks of that presentation. He passed away last April.

Adrian began his announcing career at KFPY(AM) in Spokane in 1944. He had been traveling through Eastern Washington selling automobile parts for his father. It became difficult for his father to obtain automobile parts during the war, so Adrian had to find other employment in his hometown of Spokane.

One day while downtown, he wandered into the Symons Building and went upstairs to the studio of KFPY Radio. Looking through the glass into the control room, he watched as the announcer gave a local station break between CBS Radio Network programs. He later told me that what he saw looked easy and that he felt could do it. So he decided to apply for a job as announcer at the station. He was hired and started announcing live shows produced by KFPY in its Golden Concert Studio.

Television was in the planning stages then. After KFPY changed its call letters to KXLY(AM), Adrian moved into TV and was KXLY's first announcer when television went on the air in 1953.

## Community involvement

In 1955, Adrian DeVries purchased KCLX(AM) in Colfax and operated the station in the best tradition of local broadcasting and service to the community. By then, Adrian had learned how to produce local programs at KFPY and how to be a voice for the community. He launched live remotes from the county fair, put old-time radio shows on each afternoon at 5 p.m. and started attending and recording every major meeting held in the area. Soon, people knew that whatever was going on of importance in the Colfax area would be covered on KCLX in detail.

Understanding that agriculture was important to Colfax, he joined the local Grange and took it upon himself to learn everything about farming in the area. Through the Grange, he learned what political issues were important to local farmers, and began reporting Grange activities on the air. When the next convention for the Washington State Grange was scheduled, Adrian attended and gave live detailed reports of the activities on KCLX.

Never had the Grange had such complete and detailed coverage of its state convention. Adrian had set the standard for agricultural reporting. Listeners who were unable to travel to the convention heaped praise on Adrian for his knowl-

edge of the issues and detailed coverage. He realized that agricultural news was important to farmers, and he attended every Washington State Grange Convention after his purchase of KCLX.

He also joined, started attending and

Pullman, out of curiosity to see the KCLX operation. Adrian and I became immediate friends and started working together on various projects. We continued doing so until his death.

Adrian phoned me and asked whom



DeVries in the early stages of his announcing career at the KXLY(AM) studios in the 1940s.

reporting on the meetings of the Spokane Chamber Agricultural Committee and became involved in the planning of the yearly Ag Forum. He was responsible for the live broadcast of the keynote speakers at 2003's Ag Forum, a first for the Spokane Chamber of Commerce.

The Grange leaders were so impressed with Adrian's coverage of its conventions and agricultural issues, they asked him to syndicate his reports to stations throughout the state. The Grange funded the project and Adrian DeVries became the radio/television editor for the Washington State Grange.

It did not take long for the National Grange to hear of Adrian's work in Washington state; and the national leaders asked Adrian to also produce, voice and syndicate a regular weekly program on a national basis. The problem was how to distribute the Grange programs to stations in Washington and for the National Grange, as KCLX did not have reel-to-reel duplicating facilities

## A beautiful friendship

Adrian aired a syndicated program called "Theatre of the Mind," which featured old-time radio shows and interviews with old radio actors. I hosted and produced the program.

I met Adrian when I left my pre-law classes at University of Puget Sound in Tacoma and moved to Pullman, Wash., to take some advanced business courses at Washington State University. One day I drove over to Colfax, 20 minutes from

did I use to duplicate the reel tapes for my syndicated nostalgia programs. I told him we had purchased the equipment and did all the high-speed duplicating for the Old Time Radio National Archives, advertising agencies and other syndicators. That began our longtime distribution of Adrian's "Grange Forum." All every station in the state of Washington carried the program. It was the largest syndication outside of "Expo 74 Radio" that has ever taken place in the state of Washington.

Adrian sold KCLX 30 years later, but continued to produce radio and TV programs for Washington State and the National Grange.

In the satellite and regional radio network era, Adrian stopped distributing via reel-to-reel tape and began a regular weekly "Agriculture in the News" program on the ACN Radio Network, in which he covered speakers at the Spokane Chamber's Ag Bureau luncheon and other agricultural conventions and meetings. That program was heard through May 2003 on KSPO(FM) in Spokane, as Adrian had prepared the program in advance.

The Washington State Association of Broadcasters honored Adrian as its first recipient of the Broadcaster of the Year Award. I was a director of the National Association of Broadcasters at the time, and was informed that I was being considered for the award based on some work I had done at the NAB on behalf of Washington state's small-market radio

stations. When I was told that Adrian was also being considered, I told my contact to forget me and to give the award to Adrian. He was my senior and deserved the honor. I urged the WSAB to give the award to Adrian, and it did.

The Washington State Grange also honored Adrian for his service as broadcast editor of the Grange. Normally, this annual award went only to people who were actually involved in farming. One of the concepts he originated for the Grange was the live broadcasting of the Grange Convention's keynote address on the ACN Radio Network throughout Eastern Washington.

Adrian was one of the kindest, most generous men I have ever known, truly a gentle man. He was active in the Northwest Pioneer Broadcasters and donated many pictures and a great deal of information from the early days of Washington State radio and television. Fortunately, he helped support himself by learning photography before he entered radio. Many of the pictures of KFPY in the NPB archives were taken professionally by Adrian with a 4 x 5 Graflex camera, which he later taught me to operate.

## Northwest's finest

We had lunch at the Davenport Hotel in Spokane when I presented him with the news that the Northwest Pioneer Broadcasters had determined that he was the longest-running and most continuous radio/TV voice in the state.

The waitress was just passing our table and Adrian stopped her and said, "Let's have some dessert. I have something to celebrate." At this point I asked the waitress to guess how old Adrian might be. She hesitated, so I volunteered 83, to which she responded, "Oh, Mr. Read, you are teasing me again. Mr. DeVries is not a day over 70."

Always youthful in looks and spirit; that was Adrian DeVries.

The broadcasting industry has lost a true professional, and many of us have lost a loyal friend. Adrian shared with me many times how sad he was that radio was being taken over by huge national monopolies that did not know or care about how to cover local events for radio and bring the local community to the radio listener.

Adrian DeVries will be remembered as *the* voice of agriculture in Washington state and the nation. He pioneered many new concepts in agricultural reporting that will be carried on for years to come.

A true broadcaster who understood the value of local radio to its community is gone. But his dedication to broadcasting in the public interest will live in his name, as long as there is radio and those of us who understand that it consists of so much more than a jukebox.

*A former member of the NAB board of directors, Tom Read is historian for the American Pioneer of Broadcasters and CEO of the American Christian Network. He is known in the industry for his voiceover work; and he owns radio stations in the Northwest, with headquarters in Spokane, Wash., and Palm Springs, Calif.*



## ◆ READER'S FORUM ◆

## Camp D.A.V.I.D.

Thank you for your article, "USDA is Online With D.A.V.I.D." in the Oct. 22 *Buyer's Guide*. It is always good to see who else in the North American broadcasting industry has chosen to employ D.A.V.I.D. Systems' software product.

Marketplace Productions is a current user of the system, and has been for the last three years. We are a part of a growing family of D.A.V.I.D. users who are fond of its performance and networkability, including the USDA, Colorado's KCNR(AM) and New York City's WNYC(FM).

D.A.V.I.D. Systems and Magix joined forces in distributing their new PC-based digital sound-editing platform, Sequoia, which interfaces with the DigaSystem environment. Marketplace recently purchased five licenses for our studios.

We believe in the company, and hope to see the D.A.V.I.D. Systems product blossom over the coming years.

Dennis Foley  
Senior Audio Producer  
Marketplace Productions  
Los Angeles

## Out of Context

Recently, I submitted a letter which was published in the Dec. 17 *Reader's Forum*. Unfortunately, the edited letter introduced two factual errors that make me appear foolish:

1. Cable TV: When cable was first introduced in Pennsylvania in the 1950s, it was solely a community antenna service, which allowed rural viewers to get television service. Cable-only channels were not offered until the late 1960s or early '70s. That is when cable picked up a lot of urban and suburban subscribers, as they wanted the added choices. These choices were *not* available in the 1950s. Unfortunately, the edit to that paragraph makes it appear otherwise.

2. In the sentence, "Fans of country and adult standards are forced to buy CDs ...", my mention of New York City was edited out. There are plenty of country stations across America, but none within 50 miles of New York. My point was about the extremely limited programming choices in New York City, our No. 1 market.

Philip E. Galasso  
Independent Broadcast Engineer  
West Creek, N.J.

## Translators: Do Better Next Time

The recent filing window for new translators was deeply flawed.

Instead of fulfilling its role as regulator of broadcast spectrum, the FCC created a Wild, Wild West free-for-all that resulted in more than 10,000 applications for new translators. A couple of organizations filed for thousands of individual translators each.

The majority of these translator applications were mutually exclusive, tying up a huge number of valuable channels at the eternally court-challenged commission. Additionally, because only a rudimentary technical filing was required, nuisance applications with no technical merit were allowed to block legitimate proposals.

The FCC should learn from this mess and return to a system that requires applications to be technically complete and accurate before filing. Defective applications should be rejected and not allowed for re-filing in that window.

The FCC also should strictly enforce the requirement that all translators be able to receive an off-air signal from the station being translated. Translators are intended to extend the coverage of a local station; they are not intended to be used to develop a national radio network. A reasonable standard could be developed to prevent applications that proposed translating unbuild stations (such as construction permits) or stations located many states away.

Finally, the FCC should consider a reasonable numerical limit on applications from individual stations to reduce the number of "nuisance" filings only designed to block legitimate users (and potentially extort payments). No public good is served by allowing such gamesmanship to continue; filing windows were supposed to eliminate this parasitic behavior.

Let's hope the commission realizes the problems with the translator process and does not allow it to become a precedent for future filing windows.

— RW



Dennis Foley works at the D.A.V.I.D. console in the control room at Marketplace Productions.

## An Author's Response

A reader might think that as author of the article, "Fight Off Satellite, Go HD-R (Oct. 8)," I would take offense with Mr. Galasso's letter to the editor calling it "totally off base." Instead, I found myself nodding in agreement to most of his points.

Mr. Galasso's letter claims that content is absolutely critical with consumers. In my article, I made four points that support his position and show that HD Radio can provide better content.

First, satellite radio has empirically proved this concept by winning customers in droves.

Second, as an effective means of competing with satellite, HD Radio offers more content through such developments as Tomorrow Radio (also see Guy Wire's article, Nov. 12, 2003, "HD Radio Is Here to Stay").

Third, HD Radio could considerably improve the sound quality on the AM band, and this is in the context of provid-

ing previously unavailable music content on these frequencies.

Finally, new HD Radio data services (traffic, weather, news and sports) could supplement the existing local broadcast.

Changing technology for the sake of technology is pointless, but HD Radio improves radio by providing the ability to broadcast and receive more content.

John Gardner  
Digital Radio Marketing Manager  
Texas Instruments  
Dallas

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