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**'A Boatload of Questions'**

Harry Cole cuts through the verbiage of the ownership NPRM.

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**POTS Power**

Al Peterson evaluates the Patriot codec from Tieline.

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# Radio World



\$2.50

The Newspaper for Radio Managers and Engineers

December 4, 2002

**INSIDE**

**NEWS**

▼ More than a year after 9/11, some members of the Media Security and Reliability Council wonder how better prepared stations are.

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**ENGINEERING**

▼ Skip Pizzi has a beef with the FCC's initial action on IBOC.



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▼ Experts share their views on how stations will integrate IBOC/HD Radio.

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**OPINION**

▼ A station owner says it's time to explore low-power AM and long-wave options.

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**NEWS ANALYSIS**

## WOR Happy With IBOC/HD Radio

Tom Ray Offers a First-Person Account of Going Digital at the Legendary Station in New York

by Thomas R. Ray III

**NEW YORK** While we've all heard and seen things regarding in-band, on-channel digital transmission for AM and FM stations, there hasn't been much written in regards to what it will take to install IBOC on an existing facility.

WOR(AM), a 50 kW flame thrower in New York City and one of America's pioneer broadcasters, became New York's first digital AM radio station at 9 a.m., Oct. 11.

First and foremost, before you delve into the world of IBOC, you must first evaluate your transmitter facility. You may have seen articles regarding what you need to do in order to make your facility IBOC-ready.

Would it be nice to have all digital studios and a completely digital studio-to-transmitter link to make this happen? Sure. Is this practical for most stations? No.

See WOR, page 6 ▶

**FIRST PERSON**

## Will Sales Continue To Improve in 2003?

Recent Numbers Bring Promise of Better Revenue For Radio Groups Early Next Year

by Randy J. Stine

**NEW YORK** "Cautiously optimistic."

That's what radio executives and Wall Street media analysts are saying about the revenue forecast for the first quarter of next year.

With solid Q3 results posted by most of the large broadcast groups and a strong Q4 push expected, radio appears poised

to continue growth into the first quarter of 2003, analysts say.

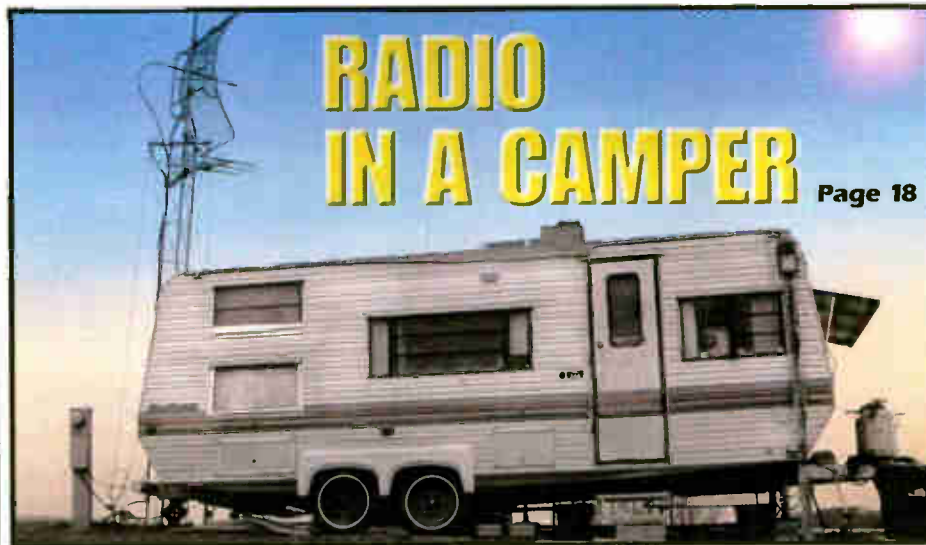
"With the trends we see in local radio growth right now, we are comfortable in saying we expect a decent first quarter next year," said Jonathon Jacoby, vice president of SunTrust Robinson Humphrey, an investment banking firm.

Jacoby said the "local pickup" is less

See Q1, page 5 ▶

## RADIO IN A CAMPER

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**POWER CARD**

▼ An engineer in Kansas takes home an Antex LX-44.

Page 4



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# ◆ NEWS WATCH ◆

## Election Impact To Be Felt on Hill

**WASHINGTON** With the Republicans regaining control of the U.S. Senate after the November elections, the party now leads both houses of Congress, making it easier for Republican FCC Chairman Michael Powell to see broadcast ownership rules completed with little opposition from Congress.

Lawmakers were focused on items they could pass quickly, such as spending measures, when they returned for a lame-duck session after the election in order to quickly adjourn.

Sen. Fritz Hollings, D-S.C., retains chairmanship of the Commerce Committee until new committee assignments are made for the 108th session, a spokesman for the senator said.

When lawmakers reconvene in January, Republican Sen. John McCain of Arizona is expected to regain control of the Commerce committee. He lost the chairmanship suddenly to Hollings when James Jeffords of Vermont switched parties in May 2001, handing the Democrats a one-vote majority in the Senate.

Louisiana Rep. Billy Tauzin is expected to retain his Commerce Committee chair in the House. And while Hollings never actually set hearing dates to review

media concentration in the 107th Congress, he will be active on the issue as the ranking minority member of the committee, his spokesman said.

## Arbitron Picks Up MeasureCast Service

Remember when "bricks and mortar" companies worried about being put out of business by online competitors? Chalk one up for bricks and mortar.

Arbitron has acquired a license to the streaming audio audience measurement system and related assets of

MeasureCast. In doing so, it removes a major obstacle in its effort to become as dominant in measuring streaming as it is in radio. Terms were not disclosed.

MeasureCast was founded in 1999 at the height of the dot-com boom. It sought to market audience measurement services for online broadcasters and advertisers. Arbitron subsequently came out with online measurements of its own, so the two were chasing the same business.

The deal lets Arbitron market the MeasureCast measurement system. Arbitron gets the MeasureCast trademark "and other assets necessary to produce and maintain a streaming audience measurement service." MeasureCast will continue to develop technologies for its strategic partners, including Nielsen Media Research, NetRatings and Trans Cosmos Inc., but gave no details. Arbitron will publish weekly and monthly Webcast audience estimates under the name Arbitron's MeasureCast Ratings.

## Extension Draws Criticism

**WASHINGTON** The FCC extended its deadline for comments on the broadcast ownership proceeding by 30 days, to Jan. 2, and reply comments to Feb. 3 (MB Docket 02-27.) But Commissioner Michael Copps said he was "disappointed and alarmed" by the short extension, which he called inadequate.

In publicizing the extension, Mass Media Bureau Chief Ken Ferree said the core concepts of broadcast ownership are not new, and interested parties will have adequate time to comment.

The commission established a media ownership working group to "develop a solid factual and analytical foundation for media ownership regulation that can withstand judicial scrutiny." During this time, Ferree said, "interested parties have had the opportunity to pursue their own studies on issues raised by the courts or other issues related to media ownership regulation."

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# FCC Hopes 3x a Charm for EEO

by Leslie Stimson

**WASHINGTON** The FCC thinks it has EEO right this time.

The commission unanimously passed updated broadcast Equal Employment Opportunity rules in November, rules commissioners believe will stand up in court if challenged.

That's important, after two previous sets of EEO rules were struck down by federal courts as unconstitutional.

## Complexities

FCC Chairman Michael Powell said that sometimes, lost in the complexities of what the FCC does each day, it's easy to lose sight of the fact that "some things are just right."

"This is just right," he said.

The rules focus on station outreach. Following a three-pronged recruitment effort, stations would disseminate information concerning full-time job vacancies, provide notice of such vacancies to any organization that requests them, and participate in long-term recruitment

efforts — such as job fairs, internships and scholarship programs — every two years.

Stations with five to 10 employees operating in smaller markets must participate in two such events every two years; stations employing 10 or more

people in larger markets must participate in four such events every two years.

Religious broadcasters remain exempt from the rules.

FCC Commissioner Michael Copps called the rules a first step and hoped

that the commission eventually would improve on them.

Powell supported other efforts to help diversify broadcasting, such as the minority tax certificate idea recently revived by Sen. John McCain, and urged Congress to consider this option.

## The commission unanimously passed updated broadcast Equal Employment Opportunity rules in November.

It was unclear at presstime if any group would challenge the rules.

NAB President/CEO Eddie Fritts said broadcasters share with the agency the goals of increasing opportunities for minorities and women, but the new rules appear to "have done little" to reduce paperwork burdens, particularly for small broadcasters.

The Minority Media and Telecommunications Council, which represents several civil rights and religious organizations, applauded the effort.

Council Treasurer Dr. Everett Parker said the new EEO rules would "contribute substantially to the diversity and

competitiveness of our electronic mass media industries." In 1967, said MMTTC, Parker filed the petition for rulemaking that led to the FCC issuing its original EEO rules in 1969.

MMTC attorney David Honig said the group would defend the rules in court if they were challenged.

For those who question the effectiveness of the rules, he said the FCC did what it could on the issue, given the constraints earlier imposed by the courts.

"Nothing can have enough teeth," he said, but he believes the rules will prevent some discrimination from occurring.

## To be determined

Still to be determined is how to handle reporting requirements for part-time vacancies and how to use hiring data supplied by stations such as information on an applicant's sex or race. When a federal court last struck down the EEO rules in 2000, it said it was unconstitutional to use such data to go after a station for alleged recruitment deficiencies.

A separate proceeding would determine how and when such data is used, and whether it would be made public. One source said the information potentially could be used in cases where intentional discrimination is suspected.

For now, Media Bureau Chief Ken Ferree said the information would be used only for reporting to Congress.

The rules take effect early next year, 60 days after publication in the Federal Register.

See related analysis, page 23. 

# Media Council Talks Get Deeper

Some Radio Participants Worry That EAS Woes May Not Be Sufficiently Addressed

by Leslie Stimson

**WASHINGTON** More than a year after the terrorist attacks, some broadcast members of the new Media Security and Reliability Council are wondering how better prepared stations are to handle operations and get information to the public in the event of a natural disaster or further attacks.

It's going to take at least another six months before MSRC is ready with its recommendations in an interim report.

## Subhead here

The MSRC was formed earlier this year to devise ways to keep terrestrial and satellite radio, terrestrial and satellite TV and cable outlets on the air in such cases.

Separate groups are researching how fast equipment suppliers can deliver orders in emergencies, and how the digital transitions in radio and TV might affect disaster recovery operations.

At a second meeting of the group in November, FCC Chairman Michael Powell told fellow MSRC members that the recent Washington-area sniper attacks reminded him of the importance of the media.

Michael Byrne of the Office of Homeland Security said it's not always clear at first whether a disaster is a terrorist attack. He asked members to keep that in mind as the group moves forwards.

The role of the Emergency Alert System also is part of the discussion. McHenry Tichenor Jr., president and

**MRSC is looking at how fast equipment suppliers could deliver orders and how the digital transition in radio and TV might affect disaster recovery operations.**

Some broadcast participants hope discussions about the Emergency Alert System aren't overlooked as council members look to the future.

Since its first meeting in May, the MSRC has formed subgroups to discuss how to get information to the public and what form that information should take; what the message should be; and recovery plans for getting media outlets operational during and after a crisis.

chief executive officer of Hispanic Broadcasting Corp., said EAS needs to be fixed and wondered how that could be done quickly.

NBC President/Broadcast & Network Operations John Eck, who oversees a public communications and safety working group, said, "We're anxious to get things moving forward."

Al Kenyon, senior vice president of

See MRSC, page 10 



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FROM THE EDITOR

# Three Radio Holiday Gift Ideas

by Paul J. McLane

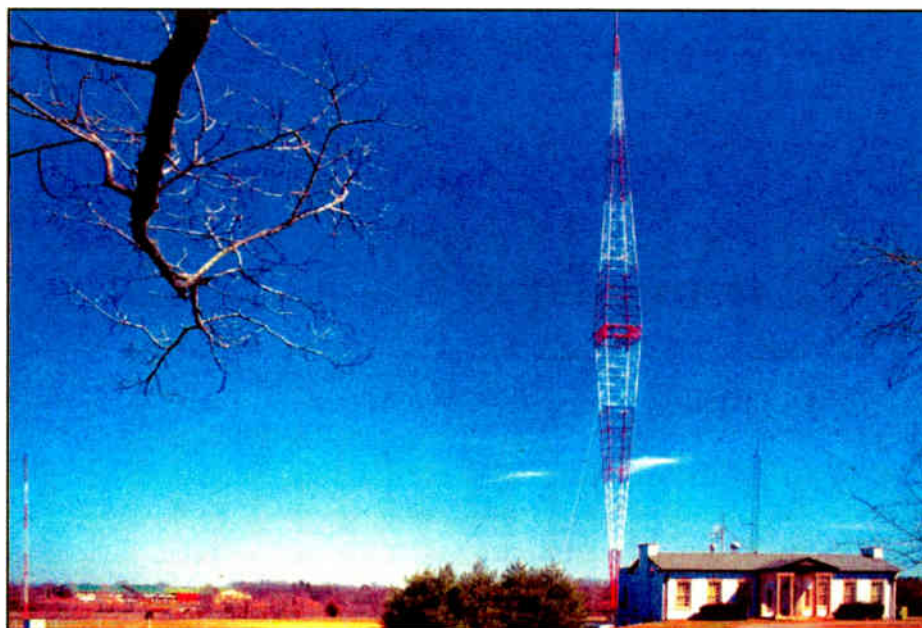
Looking for a suitable gift for the radio geek in your life? Scott Fybush is out with his annual tower calendar for 2003.

Fybush is an über-writer. He contributes to Radio World. He created the "Tower Site of the Week" and "NorthEast Radio Watch." He's editor of the radio directory [100000watts.com](http://100000watts.com). He travels the country visiting broadcast facilities. And he sold out his first tower calendar last year.

Each month of the 2003 calendar has an 8-by-11-inch color picture of a broadcast transmitter site taken by Fybush during his travels.

Sites include Mount Mansfield, at the highest spot in Vermont; WSM(AM) in Nashville; WHJJ(AM) in Providence, R.I.; WTIC(AM/FM) in Hartford, Conn.; WBEN(AM) in Buffalo; WIBC(AM) in Indianapolis; Brookmans Park in England, home to a BBC AM facility; WGN(AM) Chicago; and WPAT(AM) in Paterson, N.J., just off the Garden State Parkway, near where I grew up.

In addition to tower photos, the pages include dates in radio and television history, holidays and major industry trade shows and events.



Legendary WSM(AM) in Nashville uses a Blaw-Knox diamond-shaped tower, the tallest of its kind.

The calendar costs \$16 including delivery, slightly more in New York. You can use a credit card to order.

For info, visit [www.fybush.com](http://www.fybush.com) or

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While we're on the subject of holiday gifts, how about a Holliday book?

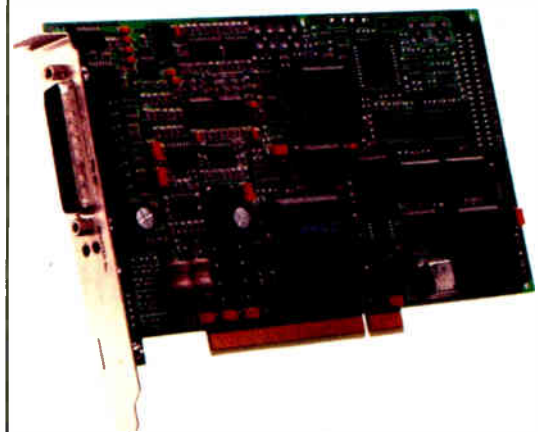
"Johnny Holliday: From Rock to Jock" tells the story of a man whose voice we know from his sports work at ABC Radio Networks, his coverage of the Olympics and, locally, his play-by-play of University of Maryland Terrapins football and basketball. (Fear the Turtle.)

Holliday was a rock and top-40 jock before he was a sports voice, earning national recognition at Cleveland's WHK. He also worked in Miami, New York, Washington, San Francisco and Rochester. He has done public address and voice work for pro sports teams like the Browns, Warriors, Raiders, Redskins and Orioles. I've personally seen him perform in yet another role, that of stage actor.

Radio, acting, sports. A man after my own damn heart.

Holliday's pleasure at what he does is

Ed Treese, president of Treese Broadcast Service in Overland Park, Kan., wins an Antex LX-44 in our Reader's Choice Sweepstakes this issue.



Ed's job keeps him running; he tells me he contracts to a dozen stations in the Kansas City area.

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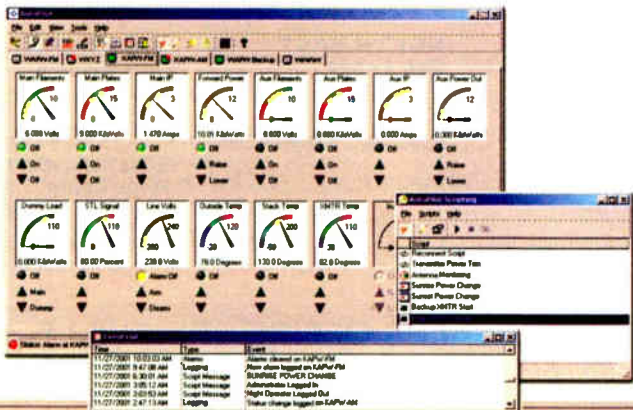
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Cox Radio.

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# Q1

► Continued from page 1

variable than national spot buys and is a sign that radio is in a slow recovery.

"We expect to see 4 to 5 percent revenue growth in the first quarter. Demand should be good. Cash flow will be up 13 to 15 percent after a year of belt-tightening by broadcasters," Jacoby said.

Bond & Pecaro financial analyst Tim Pecaro said, "Broadcasters have been operating so lean that cash flow should be way up in the first quarter. That downsizing has great appeal to investors."

## Radio trails TV

"Radio will continue to trail TV's recovery a bit, but we see low double-digit growth in the first quarter for radio. The fact that broadcast TV should continue to be sold out bodes well for radio. (TV's) tight inventory should create a trickle-down effect. Some dollars will filter into the first quarter," Pecaro said.

First-quarter revenue growth estimates for Infinity and Clear Channel Communications, issued by Soundview Technology Group, are 5.6 percent and 6 percent respectively, said media analyst Jordan Rohan.

"Demand for first quarter looks as strong as it can, with most radio groups still lacking the visibility to project revenue growth accurately for next year."

Several major broadcast groups appear positioned to take advantage of audience rating momentum and favorable large-market ad growth.

"Radio One, Emmis Communications and Cox Radio are major groups that appear to be outperforming the industry overall. That should continue into first quarter," said James Boyle, managing director of Wachovia Securities, who covers media stocks.

"Forward business continues to hold up very well for most broadcasters," Boyle said.

"Part of the reason for that is because advertisers are eager to defend market share."

Media analysts say they are worried about falling consumer confidence numbers, which fell to a nine-year low in October. Consumer confidence measures a person's willingness to spend money. The index is watched closely because consumer spending accounts for nearly two-thirds of economic activity.

**Broadcasters have been operating so lean that cash flow should be way up in the first quarter.**

— Tim Pecaro

They also fear the automotive and commercial banking advertising sectors could "go away" eventually.

"I wonder how long the automakers can continue the incentives before everyone who wants to buy a new car already has one. That could lead to cutbacks in radio ad budgets. The same goes for the refinancing craze," Pecaro said.

Clear Channel Communications, radio's largest group, says it takes in nearly 20 percent of all radio advertising. It said there is nothing right now to indicate the larger-than-expected revenue jumps experienced in the last half of 2002 won't continue.

"We believe the economy is recovering more quickly than people are giving it credit for. Based on what we are seeing and what we're hearing, we think it will carry over into 2003," said Randy Palmer, vice president of investor relations for Clear Channel.

One advantage radio has over other industries in a down economy is that ad budgets are not viewed as discretionary by competitive companies, Palmer said.

"Companies know they have to spend money on advertising or they will lose market share. We feel very strongly about that. That's what we have found in our markets and heard from our customers," Palmer said.

Emmis Communications Chairman/CEO Jeff Smulyan said the broadcast industry is still a bit gun-shy about sustaining revenue growth into 2003.

**The numbers are too iffy right now, especially if there is a war in January or February.**

— Ed Christian

"So much depends on the retail season over Christmas. If the economy can avoid flattening out, then I think by conservative estimates we'll be set up for a healthy start to 2003," Smulyan said.

Cumulus Broadcasting, the ninth-largest radio broadcaster based on revenue, operates 260 stations in 54 markets. Cumulus Chairman/CEO Lew Dickey said, "There is no reason to expect a decline in the momentum we are seeing heading into the first quarter. We are expecting modest growth into early 2003. It's clear that we are walking out of this recession and not running out of it."

Dickey said radio tends to grow just ahead of the economy and sees the advertising recovery as a good indication for the national economy.

"Automotive already is indicating it will run volume in Q1. They want price and promotion and look to radio for that," Dickey said.

Ed Christian, CEO at Saga Communications, said because so many variables are in play, including the possibility of war with Iraq, he believes it's too early to make Q1 predictions.

"I don't think anyone really knows. It's a very fluid situation. The numbers are too iffy right now, especially if there is a war in January or February. I'm just not overly bullish at the moment," Christian said.

Christian said some broadcasters are holding their "January white sales" early and spreading the spots into late first quarter.

"That makes me think some broadcasters believe they'll have inventory still at that time. That doesn't look good for the industry," Christian said.

Saga, which owns 72 radio stations, expects revenue to grow only 3 to 3.5

## Projected Radio Industry 2003 Revenue Growth Rate

<b>Bank of America</b>	<b>5.0%</b>
<b>Credit Suisse</b>	<b>6.0%</b>
<b>DB Alex Brown</b>	<b>6.0%</b>
<b>Merrill Lynch</b>	<b>6.5%</b>
<b>UBS</b>	<b>6.0%</b>
<b>Wachovia</b>	<b>7.0%</b>
<b>Wm. Blair</b>	<b>8.0%</b>

percent in 2003, Christian said.

If national spot sales are any indication, Q1 appears to be on a revenue fast track, according to Stu Olds, CEO of Katz Media Group, a national rep firm.

"Things look very positive for the

as particularly strong ad categories.

"From a national spots standpoint, because of upfront sales we are looking for double-digit first quarter growth compared to a year ago," Olds said.

The strength of national advertising this year has been a pleasant surprise for many broadcast groups, including Journal Broadcast Group.

"We see that continuing in the first quarter. But the pattern of business has been that buys are placed late. We are actually pacing behind a bit for first quarter right now, but it will materialize," said Carl Gardner, president of the radio division at Journal Broadcast Group, which owns 36 radio stations.

Gardner said the broadcaster's retail customers are optimistic, while the auto sector shows some strain.

"We've had to work very hard for our business this year, and we don't expect that to change next year," Gardner said. ●

first quarter. There is good business booked already. Radio has benefited from a very broad-based turnaround. It hasn't been driven by a single category," Olds said, who estimated national grew 12 percent to 13 percent this year.

Olds cited auto, retail, fast food, consumer products and professional services

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# WOR

► Continued from page 1

Most of us need to live within a budget, and replacing the entire plant, microphone to antenna, makes no sense initially.

Because this article focuses on the transmitter plant, I'll say only briefly that WOR has older studio equipment: our consoles are literally serial numbers 1 through 5 of Pacific Recorders & Engineering's System 1 console, the predecessor to the BMX, and are mono. We will concentrate on our studios in the next two or three years, and made no changes at the studio with the exception of our monitoring situation, as IBOC introduced an 8.5-second delay into our analog audio.

## Plant ready?

WOR's transmitter facility has seen much work over the past five years. It started with a rebuild of the phasor and coupling circuits for our three-tower dogleg array. But this is not just any three-tower dogleg.

The transmitter plant is located in Lyndhurst, N.J. The area is an RF oasis. On our street, all within 1-1/2 miles of each other, are WOR(AM); WLIB(AM), New York; WJWR(AM), Newark, N.J.; and WINS(AM), New York.

Counting WOR, there is approximately 300 kW of RF over our site. You can shut

off WOR's transmitter, ground a tower and draw a considerable arc. We have almost 3 V/m at 1010 (WINS) alone.

Needless to say, our antenna system consists of detuning skirts on the towers to electrically shorten them at 1010 and 1190 kHz, detuning networks at the bases of the towers for 620, 1010 and 1190, traps for 620, 1010 and 1190, and then we actually get to the components that WOR can use.

The redesign, performed by Carl T. Jones Corp., took WOR's common point, which looked like a rollercoaster on either side of 710 kHz, and made it fairly flat  $\pm 15$  kHz from carrier. After that, the common point impedance goes to hell in a hurry, but for IBOC operation, your antenna and/or common point should look fairly flat and the reactance flat or at least symmetrical over the passband of  $\pm 15$  kHz from carrier.

WOR passed the first major test.

You next need to look at your transmitter. According to information I received from Harris at its IBOC road show, a tube-type AM transmitter pretty much will not have the stability required for the phase modulation components of the IBOC signal. The RF chain needs to be fairly linear, and, in the case of a pulse duration modulated transmitter, the sampling frequency needs to be high enough and the filtering broad enough to allow the IBOC components to properly pass through to the final amplifier.

WOR uses a Harris DX-50 transmitter

for a main. The unit is basically plug-and-play for IBOC. Our older auxiliary transmitter, a Continental 317C-1, pretty much doesn't have a prayer of passing IBOC, though both Chief Engineer Kerry Richards and I think it might be interesting to try IBOC on the beast to see what would happen.

As WOR had a main transmitter that is more than capable of passing the IBOC signal, and the antenna system looked good, it was time to play.

with the IBOC carriers off, and adjusted the gain on the interface box to produce a 100-percent modulated signal into the dummy load. So far, so good.

Next, we turned on the IBOC carriers with the transmitter set for 5 kW. The display on the spectrum analyzer looked good, but on the receiver, the audio sounded awful in digital and in analog. It was time to troubleshoot.

Turns out the analog-to-digital converter between the STL switcher and pro-



Tom Ray makes adjustments to the IBOC exciter.

## "We're On-Air in Five Minutes."



### When you've got audio to cut and no time to spare...

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Installation Kerry and I prepared the site before Pat Malley, a field engineer for Ibiquity Digital Corp., arrived one fine Sunday afternoon for installation.

To get the IBOC signal into the transmitter, an interface box needs to be installed between the exciter and transmitter. The connections between the interface and the transmitter are a BNC for a coax connection to the external RF input and a Phoenix-type connector for the audio connection. As an option, there is a control voltage input that can be paralleled to a relay in the transmitter to change between internal and external excitation.

Connection between the exciter and interface is done with Cat-5 cable. I can now say that I have pretty much seen it all — I have connected my first 50 kW AM rig using shielded Cat-5 cable. Before Pat arrived, Kerry and I had run the Cat-5 from the racks to the transmitter, and made sure we had jacks available on the patchbay for input to the A/D converter. This took about an hour.

Pat arrived bearing gifts, and we put the auxiliary on the air. We proceeded to connect the Cat-5. Kerry worked on getting the connections between the patchbay, A/D converter, exciter and processing correct. I installed the bypass relay in the DX-50, changed the audio input and installed the BNC cable for external excitation.

We brought the DX up into the dummy load at 5 kW. We made sure that when the exciter was in the bypass mode we were, in fact, operating on the internal oscillator and, when not in bypass, we were operating on the external excitation from the exciter.

We then needed to set up the internal AM reference in the exciter. This was done by putting our Optimod 9200 into test tone mode and watching the reference signal from the exciter on a scope. We set the exciter for 100-percent negative modulation, then fired up the DX,

processing was bad. A quick replacement of the A/D resulted in clean audio.

Several adjustments need to be made on the IBOC exciter during installation. One major adjustment sets the phasing delay of the IBOC waveform as it passes through the transmitter. (From AM stereo, remember setting the group delay through the transmitter?)

This is done by making an adjustment on the touchscreen of the IBOC exciter while monitoring data errors on the receiver, or by watching the RF signal on a spectrum analyzer to minimize "spectral re-growth" around  $\pm 20$  kHz from carrier. I'm happy to say that errors on the WOR signal are zero and the signal is extremely stable.

### Delay synch

The next alteration was to adjust the delay of the analog signal to match the delay of the digital signal precisely. The reason for this adjustment and the delay added to the analog is that the radios are designed to lock on a station in analog mode, then, when the digital signal is acquired, blend or crossfade into the digital signal.

Obviously, if the two signals are not time-aligned, the listener will hear an abrupt switch between them. Additionally, the radios are designed so that, if the digital signal is lost, the radio will immediately revert back to the analog signal. Once again, if the signals are not time-aligned, the change will be abrupt.

The easiest way to time-align the signals? We set the receiver to produce the digital signal on the left, the analog on the right, and proceeded to match them by ear! The result is that there is no abrupt change when the receiver blends.

We then brought the DX up to 50 kW. All the above tests were done at a lower power level so that the dummy would not

See WOR, page 7 ►

# WOR

► Continued from page 6

get grumpy and take up smoking. Analog sounded really good. Digital, because the processing is very light (as opposed to our analog which is very "in-your-face"), sounded close to FM quality.

Then ... glitch!

The DX-50 reduced its power to 25 kW, and ramped back up to 50 kW. We thought the problem might be that the dummy, which admittedly needs some work, was shifting impedance, so it was time to put the DX-50 back on the air.

We switched back to the DX-50. It sounded really good in analog. We turned on the IBOC carriers. It sounded wonderful in digital. Then ... glitch! The DX abruptly dropped to 25 kW, then ramped back up to 50 kW.

It became obvious the dummy load was not the culprit causing the glitching.

It did this several times. Pat said he had seen this before.

A call to Harris showed that, on the bandpass filter VSWR monitoring, the voltage and current sample points are taken in different locations along the circuit. At some point during operation, the zero crossing points of the voltage and current due to the phase modulation of the transmitter must occur at the same moment in time. The VSWR circuit takes this as a problem in the bandpass filter, and reduces the transmitter's power for protection.

As a Band-Aid, per Harris, we have bypassed the bandpass filter VSWR circuit. Harris is working on a field modification that we will need to perform on our DX-50 in the near future.

Total time spent? About three hours, and IBOC is on the air.

## Results

Of course, Kerry and I rushed to our cars to see what the outcome was on the air. My car has a stock Ford AM stereo radio. Kerry has a high-end radio with a \$2 AM section.

Before Ibiquity arrived for installation, we had reset our Optimod 9200 processor from its NRSC settings to a 5 kHz brick-wall rolloff. We based the 5-k setting on our NRSC processing settings and added our own EQ curve.

Listening on our car radios, we could barely tell a difference in the processing changes on the AM stereo radio, and could hear no difference at all on the high-end radio. Because we're not modulating above 5 kHz, we are now louder on these radios than we were.

Once IBOC was on, we listened for artifacts. On the supposed "wideband" AM stereo radio, I need to turn the volume up to ear-splitting levels before I can hear any noise under the audio. On Kerry's radio, you cannot hear any artifacts of IBOC whatsoever.

WOR's listeners are a loyal and vocal bunch. If they hear something wrong, they do not hesitate to speak up and make it known that "their" radio station has a problem and they want it fixed N-O-W. Our calls from listeners have consisted mostly of people wanting to know how they can hear our digital signal and where they can buy the radios.

We have had a few complaints. One was from a gentleman who was restoring a 1930s vintage Atwater Kent radio, and wanted to let us know he heard hiss

when he tuned across WOR on either side of us.

Negative comments also have come from a group of AM stereo fanatics in New Jersey. These people live for the day AM stereo makes a comeback. They are not listening on typical AM radios. They have verbally and personally attacked both Kerry and me, as well as the radio station and Ibiquity.

This group thinks that AM radio is a high-fidelity medium. They also started a rumor that WOR was operating illegally. The NRSC mask allows emissions to -25 dBc from 10 kHz to 20 kHz. IBOC operation puts the IBOC carriers from 5 kHz to 15 kHz at -30 dBc, perfectly legal.

The other complaint was from a person who was trying to get WLW(AM). This person lives not all that far from our

transmitter. Unfortunately, the IBOC carriers occupy space in the NRSC mask around 700 kHz, and the listener was not able to DX in the near field of the WOR antenna. But because WOR is operating legally, there is not much that can be done for this person.

## Three hours

The spectrum on the WOR signal basically was textbook-perfect. The entire signal fits nicely under the NRSC mask and is completely legal. Even with all the detuning aspects of WOR's antenna, the IBOC carriers are symmetrical.

IBOC was installed without rebuilding our studios or replacing our STLs. The time spent for installation was about three hours, and we did it in the afternoon with the auxiliary transmitter on the air.

If your antenna system is in reasonable

shape, and your transmitter is of fairly recent vintage (i.e., not a 1955 BC-5P), you should lose little time and spend the minimum amount of money putting IBOC on your AM station.

For more information, I recommend Ibiquity's Web site at [www.ibiquity.com](http://www.ibiquity.com). Or call your favorite RF supplier. Ours is Harris, which can provide you with details from their IBOC road show, and guide you as to whether your IBOC installation will be as uneventful and easy as ours was.

WOR also has a section of our Web site dedicated to our IBOC installation, and information is added as we receive it: [www.wor710.com/Engineering/iboc/hd/index.htm](http://www.wor710.com/Engineering/iboc/hd/index.htm).

The author is CSRE, and corporate director of engineering for Buckley Broadcasting/WOR(AM), New York. ●

## Last-minute remotes? No stress for John Kennedy of Entercom Boston.

The Patriots win the Superbowl! A major cause for celebration in Boston. And potentially major stress for John Kennedy, Engineering Director for Entercom Boston. With no advance warning, John had less than 24 hours to orchestrate coverage of the festivities on numerous stations — including live remotes along the Patriots' parade route. Fortunately, John knew he could count on Comrex Matrix to deliver — even last-minute. With Comrex in your toolbox, last-minute remotes are successful, not stressful.

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## DIGITAL NEWS

## XM Needs \$250 Million; Lays Off 80

**WASHINGTON** XM Satellite Radio is taking steps to reduce its cash consumption, reported to be about \$90 million per quarter, to make its money last through the first quarter of 2003.

In the meantime, it is pursuing new funding and trying to renegotiate its agreements with technology partners and strategic shareholders such as General Motors and Clear Channel Communications to reduce or defer payments.

XM also is pursuing outside funding and hopes to have a package crafted by the end of the year and finalized in early 2003. The company needs at least \$200 million in new funding in order to be able to break even by mid-2004.

XM President/CEO Hugh Panero said XM is not looking at a recapitalization, as Sirius recently announced.

The satcaster has pursued several ways to reduce expenses, including reducing the amount of advertising it places as GM increases its promotion of the service.

XM also laid off 80 employees in November, leaving its total workforce at around 400. Jobs were cut from most departments, including the programming, finance, marketing and technology divisions.

A spokesman said XM's personnel needs have changed as the company has launched its product and begun operations. "Areas that required substantial resources now require less," he said.

XM planned to drop at least two channels and those employees were let go. USA Today News was to be replaced with CNN programming. Teen talk channel Babble On was to be replaced with XM Live, featuring live concerts.

The layoffs were publicized just before the company released its third-quarter earnings. XM ended the quarter reporting 201,544 subscribers as of Sept. 30. This represented an additional 64,836 subscribers since the second quarter.

For the three months ending Sept. 30, XM reported revenue of \$5.6 million, EBITDA loss of \$67.1 million and net loss available to common shareholders of \$114.7 million or \$1.26 per share. In comparison, for same quarter in 2001, XM reported revenue of \$1,000, EBIT-

DA loss of \$49.8 million and a net loss to common shareholders of \$70.8 million or \$1.14 per share.

XM is talking with GM about deferring up to \$200 million in payment obligations and exchanging these payments for certain debt and convertible securities, as well as the introduction of an arrangement that would permit certain payments to be made in either stock or cash. The GM agreement would be contingent upon modifications to XM's capital structure and the satcaster securing at least \$200 million in additional financing, which XM is looking to come from other key shareholders and/or outside sources.

By reducing its expenses and receiving the cash infusion, as well as ramping up radios offered as factory-installed options in new cars, XM hopes to reach cash flow break-even by mid-to-late 2004.

The satcaster is still projecting to end this year with 350,000 subscribers and approximately 1 million by the end of 2003.

XM's current subscriber acquisition costs are \$120 per person, roughly \$10 less than projections for the quarter, the company said.

When asked by a Wall Street analyst if the company has a back-up plan should the funding package not close by early 2003, Panero did not answer directly, other than to say, "We're focused on the financing. We continue to believe in the product."

## Sirius Reports More Losses

**NEW YORK** Sirius reported an EBITDA loss of \$60 million and a net loss applicable to common stockholders of \$120 million, or \$1.56 per share in the third quarter. That compared to losses of \$37.5 million and \$57.4 million or \$1.06 per share, respectively, for the same quarter last year. Sirius had 16,000 subscribers as of Oct. 31.

Its revenue was \$17,000 for the quarter, which included "negative subscriber revenue" of \$51,000 and advertising revenue of \$62,000. Sirius said a mail-in rebate program offset its subscriber revenue, which consists of subscription and activation fees.

Sirius said it had \$255,898 in cash as of Sept. 30, enough to meet its needs through the second quarter of next year.

With a planned \$1.2 billion recapitalization (Nov. 6, page 2), Sirius said it

will have enough funds to operate into the second quarter of 2004. Even with the recapitalization, Sirius needs \$75 million more to break even with approximately 2 million subscribers. If the recap deal does not close, Sirius would need about \$600 million more until it can become self-sustaining with 3 million listeners.

## Hitch in CPB Digital Fund

**WASHINGTON** Discussions are underway among CPB, NPR and public radio station leaders to determine the criteria to distribute \$3.5 million in federal funds for public radio's digital conversion in 13 seed markets. Guidelines could be available before the end of December, according to CPB.

A hitch arose in the plans in November when it appeared the Senate would not act on the spending measures when lawmakers returned briefly in a lame-duck session after the elections. NPR and CPB were discussing options, to try to ensure that public radio stations that wanted to transition this year could take advantage of Ibiqity Digital Corp.'s license fee waiver.

CPB said in August it dedicated about \$24 million in federal funds for public TV and radio stations. This fall, CPB awarded about \$20 million in grants to help 58 public television stations make the FCC's May 2003 digital conversion deadline.

The details of when funding would be available was unclear, because Congress had not yet acted on the appropriation.

In this round of funding, 43 TV stations were to receive a total of \$12 million from the Digital Universal Service Fund to cover the costs of acquiring a reduced-power transmitter, the equipment a station needs to meet the FCC's minimum requirements. Nearly \$7.4 million from the Digital Distribution Fund will be provided to 15 TV stations to help them acquire a full-power transmitter and to encourage station collaborations that initiate new rural or educational services.

DUSF competitive funds are available to CPB-qualified public TV stations that have not activated a digital transmitter with an emphasis on assisting small or rural stations.

## Goodmans Offers Portable DAB Radios

**LONDON** Goodmans, a manufacturer in the United Kingdom, is selling portable Eureka-147 radios. It has also integrated a digital radio tuner and CD player into one unit. Goodmans has also included an FM/MW analog radio into each model.

Products retail from roughly \$155 to \$300.

## ITU Endorses DRM

**GENEVA** The International Telecommunication Union has endorsed the Digital Radio Mondiale system for all three broadcasting bands below 30 MHz — shortwave, medium-wave/AM and long-wave. Administrations of the ITU's member countries approved a revised version of Recommendation BS1514, now called Recommendation BS1514-1 — Digital Sound Broadcasting Below 30 MHz, in October. It states that DRM is an ITU-R Recommendation for all the broadcasting bands spanning 150 kHz to 30 MHz.

DRM is a digital radio technology that claims to be the world's only non-proprietary, digital AM system for shortwave, medium-wave and long-wave, with the ability to use existing frequencies and bandwidth across the globe. For AM, it's a competing digital technology with Eureka-147 and IBOC. DRM plans to launch at WRC 2003 in Geneva.

## Ibiqity Signs Delphi; 11 Markets Ready For HD-R

Mobile electronics maker Delphi Corp. has licensed HD Radio technology from Ibiqity Digital Corp., the developer of IBOC technology. Ibiqity said Delphi would integrate HD Radio technology into receivers slated for availability to automakers in the 2004 calendar year.

The company also says 11 markets will have HD Radio signals on the air by the end of the year: Atlanta, Boston, Chicago, Dallas, Denver, Detroit, Los Angeles, Miami, New York, San Francisco and Seattle.

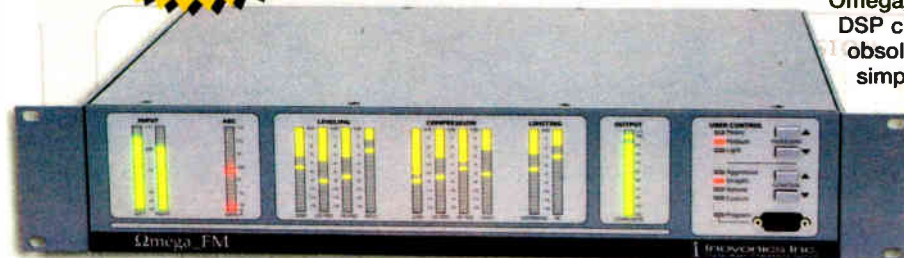
— Leslie Stimson

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## NEWS WATCH

**'Dan's Mom' Is Remembered**

**PHILADELPHIA** Ann Braverman died in November of pulmonary disease. She was 81.

Braverman was familiar to radio equipment buyers from her appearances in advertisements for Radio Systems — ads in which she portrayed a Jewish mother to the company's president, Dan Braverman. Many readers assumed she was an actor.

She really was his mother, and became a recognized spokeswoman for the company, not only in its ads but in convention appearances.

"She took great pride in this 10-year-long role," Dan Braverman wrote. "This was a labor of love that brought her great joy."

In fact, "Ann was the emotional and spiritual center of the Jewish community in Philadelphia," according to information provided by the family.

A child of the Depression, she was the eldest daughter of Hasidic immigrants. As an adult she worked professionally for Jewish organizations, and later trained as a lay chaplain and provided spiritual and educational guidance to residents of a rehabilitation hospital. She traveled to Israel frequently, and toured that country two months ago.

Ann Braverman is survived by four sons, eight grandchildren and a great-granddaughter.

**MRSC**

► Continued from page 3

projects and technology for Clear Channel Radio, suggested that the committee might consider recalling people formerly active in EAS issues to keep abreast of any problems that may arise with EAS in the interim. Kenyon was the last EAS National Advisory Committee chairman before that group's federal charter expired earlier this year.

**EAS questions**

The issue of why EAS wasn't activated in New York or Washington on Sept. 11, 2001, arose in MSRC discussions. Marianne Burnett of the Office of Homeland Security said the broadcast media "did so well" in disseminating information on 9/11 that it wasn't necessary to use EAS.

Some sources disputed that point privately, saying it's not clear whether EAS can be used to carry a national message from the president and that the system's ability to operate needs to be proven.

Texas Association of Broadcasters Executive Director Ann Arnold advocates one party stepping in and overseeing EAS. Currently, several federal agencies, notably the National Weather Service, the Federal Emergency Management Agency and the FCC, have oversight for portions of EAS. "Someone needs to be in charge," Arnold said, noting that some states still have not submitted EAS plans to the commission.

Whether that would happen, and which agency that would be, such as the new Office of Homeland Security, are questions up for discussion within the Media Security and Reliability Council.

The FCC's Enforcement Bureau inspects EAS encoders/decoders to make sure they are operating and that stations are airing the required tests and

could air a national alert. But beyond that, EAS participation is voluntary.

Some former EAS National Advisory Committee members believe the FCC doesn't consider the Emergency Alert System a priority. Linda Blair, deputy chief of the Enforcement Bureau, disagreed. "EAS is a priority as well as other homeland security issues," she said.

Blair also said the issue raised by Arnold is appropriate to be aired in the Media Security and Reliability Council.

## The council is expected to finalize disaster plans late next year.

Former NAC participants are grappling with how to replace the EAS National Advisory Committee. The issue is being discussed within the Partnership for Public Warning, a public-private group made up of civil defense planners and private interests working to make public emergency warnings more effective. The partnership is working with MSRC.

The Media Security and Reliability Council is expected to finalize disaster plans toward the end of next year, if it releases an interim report in the spring. Although not all radio participants believe EAS needs fixing, most participants agree that EAS concerns could be overlooked as MSRC focuses on a broader picture. ●

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## In Remembrance



Mrs. Ann Braverman died on November 11th, 2002.

Many in the broadcast community knew her in her official capacity as “Official Spokesmom” for her son’s company, Radio Systems Inc.

As this collection of her ads testifies, she took great pride in this 10 year-long role and did a wonderful job of promotion. This was a labor of love that brought her great joy.

In addition to her part-time modeling, Ann worked hard her whole life. She grew up in the Great Depression, helped take care of her parents and brothers and sister, and raised four sons with her husband, Cy. Professionally, she devoted her whole career to Jewish cultural and service organizations.

She will be greatly missed.





Radio World, December 4, 2002

Past columns are archived at [www.rwonline.com/reference-room](http://www.rwonline.com/reference-room)

## Just Because He Carries a Badge ...

by John Bisset

... doesn't mean he knows the law!

A contract engineer recently told me of an FCC inspection that began at 5 p.m. After reviewing EAS and the public file, the inspector waited for the AM to switch to the night directional array. After seeing the switch, he informed the engineer that he wanted to do the night-pattern monitor points — in the dark!

With the FCC requesting proof data to be taken two hours after sunrise and two hours before sunset, the inspector was clearly wrong. The contract engineer went around and around with the inspector. The station didn't get cited, but it's a



Fig. 1: Seal doorframes with expanding foam to keep nature out.

good example of the need to speak up — politely — when something doesn't seem right.

I'm reminded of an older station owner who had his own way of standing up to the FCC. He was being inspected because the lights on his center tower were out. He filed the paperwork to have the center tower lighting extinguished, to save operating cost. An inspector was dispatched to determine why the lights weren't on, and why the owner hadn't notified the FAA. After much rummaging, the elderly station owner produced a copy of the original paperwork and the exemption.

On his way out, the inspector decided to drop by the transmitter site. Located in a flood plain, one of the tower stockade fences had been torn down by high water. The inspector asked the owner about fixing the fence, and the owner said he would, after the flood season.

Not the answer the inspector wanted to hear, but he tried another tack. "What would happen if a small child got inside the tower fence, and was electrocuted when he touched the tower?"

The sage station owner replied, just as serious and without batting an eye, "Well, I guess he'd never do it again, would he?"

There's a right and a wrong way to confront the FCC. Most inspectors are decent folks, just doing their job. If something doesn't seem right, let them know. A compromise can be achieved. Above all, don't lie. No station is worth defending with a falsehood. And no lie to the commission is worth your reputation.

Like lawyers, when inspectors ask a question, they usually know the correct answer. Truer words were never stated than when Sir Walter Scott said, "Oh

what a tangled web we weave, when first we practice to deceive."

I saw a station operations manager lose his job when he insisted he turned down the transmitter power each night. The inspector kept asking if he was sure, did he check the remote control after the change, did he log each channel's nighttime parameters? Yes, yes, yes.

The inspector gave the guy every chance to admit what had not been done. But after the third lie, the inspector pro-

nowadays. With no real operator licensing requirements, no one cares, right? Wrong!

With a station license hanging in the balance, get your GM behind you in certifying all of your operators with the SBE. The entry-level "operator" certifications not only are proof of your operator's abilities but can help the station prove that as the licensee, they are taking steps to make sure that all operators are trained properly.

★ ★ ★

Keep your transmitter site sealed against nature and insects.

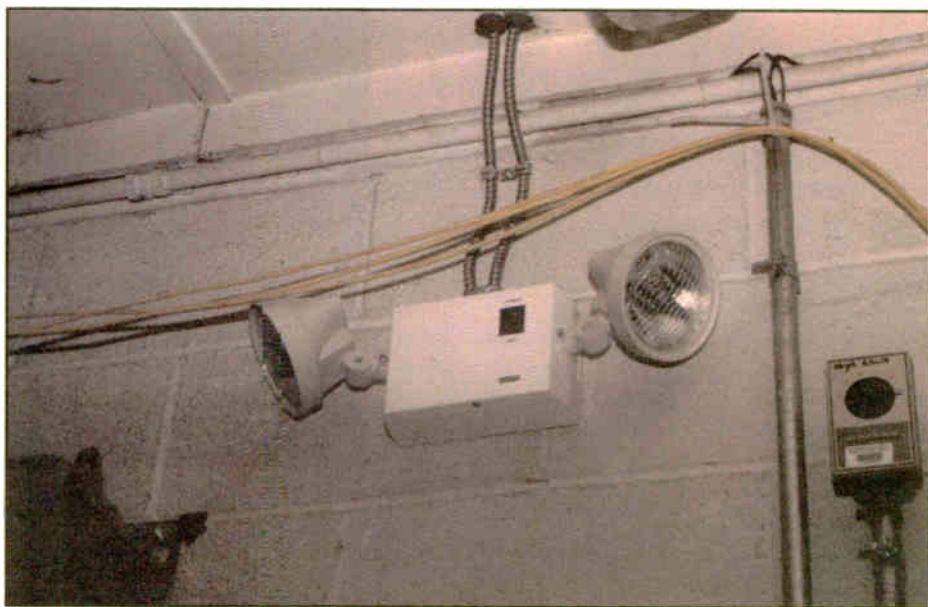


Fig. 2: Unappreciated but ever-present, safety lights are a good investment for a site without a generator.

duced his log. He'd sat near the transmitter for three nights with a field meter, and the rig was never reduced in power. It was a willful and repeated violation in the eyes of the inspector. The station was fined, and the OM was sent packing.

A lot of air staff pooh-pooh FCC rules

Not only is it wise to plug cable access holes to the outside, but in Fig. 1, we see the doorframe sealed as well. The tubes of expanding foam sealant make the job quick and easy. Dirt, dust and pollen also are kept out. This means cleaner

See WORKBENCH, page 14 ▶

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## Pots only?



You can't always get ISDN at your remote. The new Zephyr Xport connects to ordinary analog (POTS) phone lines in the field and connects with your Zephyr Xstream back at the studio. Rock-solid connection reliability, built-in mixer and monitor, sweetening by Omnia, Ethernet for a convenient audio connection to your laptop, and more. Updating your Zephyr Xstream to work with Xport is a simple (and free) software update. And an SD\* option ensures that you're ready for anything on your remotes.

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# FCC's Action Is the Wrong Mandate

*Pizzi Says the Commission's Initial Rulemaking on IBOC Could Doom the Digital System to Failure*

Much punditry has already been expended on the FCC's landmark launch of IBOC radio broadcasting in October. With this action, the commission allowed adventurous broadcasters to set sail on an as-yet-uncharted digital sea.

The commission, however, did not mandate that broadcasters take such a plunge and convert to the new format, and consequently no timetable was set for the transition.

Given that there is no spectrum recovery or any other broader benefit to the public in an IBOC conversion, this makes sense. But it doesn't do much to speed the transition.

(Ibiquity may have done more for that cause by allowing a waiver of its software licensing fees to broadcasters if they commit to the technology by year's end. Pretty tricky move in itself, given that Ibiquity only introduced the concept of levying such fees a few months earlier, and hadn't yet collected a single penny on the plan. Reminds me of the trick of raising your rates just so you can appear to offer a discount. But I digress.)

Meanwhile, the FCC report and order on IBOC did mandate that if a broadcaster implemented the technology, the audio program carried on the digital signal must be the same as that broadcast on the analog carrier. While this follows the technical proposals that Ibiquity has presented all along during the system's development, it now sets in regulatory concrete the premise that IBOC will be purely a qualitative enhancement, eliminating the prospect of adding new audio services, even if a broadcaster wanted to do so.

There is still the possibility that some additional narrowband audio streams or downloaded files could be sent via auxiliary data paths on the IBOC channel, but here again, the FCC failed to mandate any standard (or even to require that a future standard be set) for such auxiliary services, rendering dim the ultimate prospects for such enhancements. Unless these elements were standardized and mandated, it is unlikely that any such new services would ever develop and succeed.

## Turning about

It is with some irony that the FCC now is mandating the permanent simulcast of what might have been independent analog and digital signals on an IBOC service. The commission is obviously not a student of its own history, in which a mandate prohibiting such simulcasts between AM and FM channels are what ultimately led to the success of FM broadcasting, following decades of its languishing near failure (see the article "To Look Ahead, Try Looking Back," in the Nov. 20 issue).

If the pure qualitative improvement that FM brought to AM was not enough to stimulate broad penetration of FM, it is unlikely that an even smaller increment in quality (between FM and IBOC) will generate mainstream consumer acceptance of the new service. The only way HD Radio will find its way into consumers homes and cars is likely by accident, as a value-added or

bundled feature with other, more purposefully desired items (like a car CD changer or satellite radio). Given this lukewarm motivation for consumers, and no mandate for broadcasters to implement the service, the future of HD Radio seems grim indeed.

**It is with some irony that the FCC now is mandating the permanent simulcast of what might have been independent analog and digital signals on an IBOC service.**

Nevertheless, all is not yet lost. It took nearly 30 years for the FCC to amend its FM rules and eliminate AM-FM simulcasts. Let's hope the commission won't take so long to rethink its errant mandates this time.

Unfortunately, in the IBOC case, there are ramifications of the decision that affect receiver design, such as the ability to manually switch between analog and digital services on a channel, which would only be offered if separate programming were possible. So if the commission waits very long to make changes this time around, first-generation IBOC radios won't be able to accommodate the possibility of receiv-

ing the new services.

The proper approach is not a mandate either way for broadcasters. Stations should be free to simulcast, or to separately program analog and digital services on their carriers, and to choose

## The Big Picture



Photo: Gary Hayes, BBC

**by Skip Pizzi**

either approach dynamically over the broadcast day. The only regulatory mandate would involve IBOC receivers' capability to handle independent services via sub-channel tuning, similar to the approach used for multicasting in digital television.

Come on, commissioners. It's still not too late to turn the ship around and save IBOC. But you'd better hurry, because you've already set it on a course toward the falls.

*Skip Pizzi is contributing editor of Radio World, which welcomes other points of view.*

## Workbench

► Continued from page 12  
equipment and more reliable operation.

It's not a bad idea to spray the outside doorframe and threshold with bug spray. The application won't last forever, but it deters insects from nesting or attempting entry under the door. Ditto for mothballs. Place a few of them in the bottom of equipment racks and especially in your AM coupling networks to deter snakes and rodents.

★ ★ ★

Fig. 2 on page 12 shows the installation of a safety light. These are available readily at hardware superstores and are priced reasonably.

**Don't lie. No station is worth defending with a falsehood. And no lie to the FCC is worth your reputation.**

Although the battery powering the lights has a finite life, for facilities with no generator these safety lights beat walking into a dark transmitter building.

★ ★ ★

Dwight Morgan handles engineering for Maranatha Broadcasting in Grand Junction, Colo. He writes that about 15

**WHERE ARE THEY TODAY?**

S	I	N	G	R	S	I	N	G	V	E	C	T	B	S	U
W	R	A	Y	T	H	E	A	E	V	E	C	T	A	I	L
W	E	S	I	N	T	R	O	N	I	C	S	A	U	N	A
R	T	S	V	E	R	S	I	C	O	U	S	S	T	A	N
W	L	P	T	V	B	S	T	A	N	D	A	R	D	V	H
E	G	E	N	E	R	A	L	E	L	E	C	T	R	I	C
S	R	M	S	C	R	C	U	D	I	V	I	D	B	S	N
T	A	U	T	T	R	N	E	E	N	E	I	A	A	U	S
I	R	E	A	O	B	C	E	I	R	R	C	E	U	A	I
N	A	F	A	R	A	S	T	L	A	S	O	C	A	L	N
G	Y	A	E	C	U	R	I	T	E	I	A	T	S	V	G
H	T	E	T	D	A	A	R	I	O	C	I	E	R	I	E
O	H	U	V	M	E	A	G	M	R	O	T	S	I	V	R
U	E	S	C	R	P	R	C	R	A	U	E	R	A	A	A
S	O	M	N	S	C	R	A	E	E	N	A	R	I	R	
E	N	S	T	W	N	D	A	L	L	T	A	R	L	C	G

Fig. 3: Here's the key for our puzzle last issue. How'd you do?

years ago, he had a couple of FMs that used the fused disconnect panels. He discovered that when he "thought" he had disconnected the power, in fact, the bakelite had failed to pull the knives out. Two of the three phases were still connected!

When doing transmitter maintenance, open those fused disconnect boxes, make sure the disconnect has taken place!

Dwight also experienced problems with breakers, as we discussed in the Sept. 11 *Workbench*. Some started to smoke as they heated up inside. Another just outright failed, and an intermittent third had Dwight running in circles. Sometimes when you threw the breaker back on, it would work, sometimes it wouldn't.

Dwight encourages *safety first*, working safely with all the power removed and the meter checked before wandering inside the breaker box with


a screwdriver or Allen wrench. Be sure to check the connections at least once a year. With circuits like air conditioners cycling on and off, the current surges and heat of the connections inside the box may cause lugs to loosen. This increases the heat and can lead to a failure or fire.

★ ★ ★

Fig. 3 is the key for "Where Are They Today" that appeared in the last issue of *Workbench*. Did you find them all?

*John Bisset has worked as a chief engineer and contract engineer for more than 30 years. He is a district sales manager for Harris Corp. Reach him at (703) 323-8011.*

*Submissions for this column are encouraged, and qualify for SBE recertification credit. Fax your submission to (703) 323-8044, or send e-mail to jbbisset@harris.com.*



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# Experts Discuss IBOC Issues

by Mario Hieb

Industry experts shared their views recently about how stations will integrate IBOC/HD Radio into existing analog AM and FM facilities. Here is a sampler of their remarks, made during this fall's NAB Radio Show in Seattle.

Note that due to the potential for interference, the FCC's interim approval of digital radio as outlined in the report and order of Oct. 11 did not authorize the use of separate antennas for digital FM radio. Comments below referring to the use of separate antennas were made prior to the report and order; and although these implementations may be feasible technically, they are not allowed by the commission at this time.

## Buechting

Daryl Buechting, senior manager of radio products for Harris Corp., said the transition to AM digital requires a close look at hardware.

"You need an AM transmitter that's capable of IBOC. That means that it has inherently wide bandwidth in the design, about 50 kHz of audio bandwidth in the analog channel ... and about 100 kilohertz capability for the phase channel."

What about the antenna? "You need Hermitian symmetry to 5 kHz," he said.

"What that means is that you want equal but opposite sign reactance, if you're plus at 10 kHz on one side, you should be minus at 10 kHz. on the other."

Also required is low VSWR out to about 15 kHz. "If you don't have this, there are some possible fixes in AM, there are broadbanding networks that can bring everything into symmetry; phase rotation is important for best performance," he said. "You may need a new computer-aided-designed antenna coupling unit or phasor."

On the FM side, the transmitter has to be linear. "We can do both separate amplification or separate antennas and we can also have transmitters up to 15-20 kilowatts that can do common amplification of IBOC plus FM only," Buechting said. "You should check your antenna to make sure that you are flat +/- 200 kHz. If you are on a combined antenna, you should check with the manufacturer of your multiplexer to make sure that it is compatible with IBOC."

Other digital configurations are possible, such as separate amplification.

"If you're doing that, you need an IBOC-only transmitter. If you decide to go with a separate antenna then you still need an IBOC-only transmitter," he said.

"If the antenna that you have up for the separate is the same gain as your existing, then it's 20 dB less, but a lot

of people don't have the real estate to put up the same gain, so you may only wind up with a unity gain antenna." He also said the antennas should be located on the same tower, with one mounted above the other.

## Gould

Bill Gould, broadcast products manager for Harris Intraplex products, said studio-to-transmitter links for IBOC will require a different approach.

"Delivering 20 kHz digital audio will require a 44.1 sample rate to the transmitter site. We need to look at a migration path to all-digital radio which will include other services."

He said the audio must be delivered not only to the IBOC chain through the IBOC processor, but it also needs to be delayed before it goes to your existing audio processor, exciter and transmitter.

"This delay is accomplished as part of the IBOC system, but it lines up the analog or delays the analog so it is in sync for blending later on. Whenever possible, keep your chain digital and at 44.1 all the way through."

## Wandel

Eric Wandel is director of product development for Electronic Research Inc. He noted several approaches to integrating a digital IBOC signal with an existing analog FM signal.

"The main method of achieving the high-power analog/digital combiner is the injector method that typically uses the 10 dB combiner," he said. "The 10 dB coupler is used to combine existing analog FM and IBOC transmitters into one antenna. It's very flat, profiling of good match, good isolation and flat across the band."

He said these devices are wideband and, regarding frequency and bandwidth, are "off-the-shelf, one size fits all."

"These are flat across 20 MHz; this will allow you to use an existing antenna and existing combining facilities. The disadvantage of this method is that a lot of power is thrown away. Ninety percent of the digital power is converted to heat due to the losses. The analog transmitter has to have some headroom."

He listed several points to consider including power output of the existing FM transmitter, available room on the tower, antenna type and the requirements for physical space in the building.

Other options mentioned included using separate antennas that are vertically separated, interleaved antennas, dual antennas with separate inputs for analog and digital, and a dual-input antenna where all of the antenna elements are radiating both analog and digital.

"If you're building new analog facilities now, you need to think if what you're building will be upgradable in the future," Wandel said.

## Hinkle

Richard Hinkle, director of RF engineering for Broadcast Electronics, said, "When you're running a separate amplification system, the peak-to-average ratio defines the size of that transmitter. The IBOC signal has a very high peak-to-average ratio. There is significant

loss in the RF output path."

He stated that about 90 percent of the IBOC signal and 11 percent of the analog are dumped into a load. This equates to a 10 dB loss in the IBOC path.

"In addition you have the reject load here, which you have 90 percent of your IBOC power and 10 percent of your analog power dumped into it. You need 11 percent overhead on the analog transmitter with little or no impact to existing antenna installations."

The site will require additional space for the IBOC transmitter, combiner and reject load; allowance needs to be made for heat dissipating from the load.

"As we move to separate amplification, separate antenna, you can see the significant difference in that you get rid of the 10 dB loss," Hinkle said. "It's very significant because in the same implementation where at 20 kW FM I needed a 2,000 watts IBOC power going into that 10 dB injector, now I only need 200 watts of IBOC going into the antenna."

Another advantage of separate amplification is that you don't have additional 0.45 dB (11 percent) loss in the analog path. The biggest consideration in going with separate antennas is "do you have enough tower space?"

The third configuration is common amplification.

"In the common amplification approach, you have one transmitter, it passes both the FM and the IBOC signal," he said. "You need about 30 percent overhead in an existing FM Class C unit to accommodate the common amplifier approach." There is less site space required in this configuration and the combiner losses are eliminated.

## Chancey

Dave Chancey is broadcast technology director for Moseley Associates. He also visited the topic of STLs.

"We have the Starlink series; it's based on a common platform. We sell it in an RF and T-1 mode," he said. "It has a common chassis, audio cards and a 2 Mbps multiplexer. The audio cards have AES and analog audio in and out on both ends."


From the front panel it can be adjusted from 16 to 32 to 64 QUAM; the higher the rate, the more spectrally efficient it will be.

"We sell the Starlink in two different forms. The data rate of the Starlink can max out at E-1 data rates," he said. "In the 4S mode you can run two linear stereo pairs through the 500 kHz, 950 MHz channel."


## Surette

Bob Surette, manager of RF Engineering for Shively Labs, was asked, "Why can't you use existing balanced combiners systems to combine the digital and analog?"

Theoretically, it can be done, he said. "You're basically back-feeding your digital signal through your existing broadband combining system. If you take the concept of back-feeding the balanced combiner modules, now you have two outputs, you have a digital output and an analog output."

Surette went on to describe a combining system using left-circular polarization for analog and right-circular polarization for digital that essentially would improve the isolation between the two transmitters. 

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# Radio, Live From a Camper

by Ken R.

Deep in the Southern Appalachian Mountains is a small town called Clinton, Tenn. In that tiny community you'll find Fox Inn Campgrounds. And if you enter the park and look around, you'll discover that one particular 16-foot Road Ranger camper is the source of a lot of whoopin' and hollerin'.

It's the home of WDVX(FM), a not-for-profit station at 89.9 MHz.

WDVX plays bluegrass, Americana, alternative country music, gospel and the occasional Celtic tune. If you happen by at the right time, you might hear a live band stompin' and fiddlin' in the largest of the three studios contained in that crowded camper.

of broadcasting: serving the public. These days, the attitude seems to be 'public be damned.'

Burggraf knows that WDVX has a poor signal. It tries to compensate by airing its 200-watt ERP signal from atop Cross Mountain.

"We have good coverage, but not good penetration into buildings," he said. "So what really helps us is our exposure on the Internet, even locally."

Technical limitations aside, Burggraf enjoys the whole experience. He would have to give that his only financial remuneration is a small mileage allowance.

"The station is a refreshment to me, seeing how the whole thing has literally grown from nothing," he said.

er up in the mountains and I asked Don (Burggraf) what he thought about it," said Lawson. "He thought we were crazy."

But it worked. Lawson arranged a barter deal for the campground site and Moore donated the camper and provided propane and telephone service. When he eventually sold the campground, he let Lawson have the camper for \$500. The price was right.

Believe it or not, there are three studios in that 16-foot camper.

## Cramped

"We have the main control room, Studio A, where we stripped the refrigerator out. We put in EAS, the STL, a mixer, Comrex and compression," said Lawson. "The equipment rack is where



Faces of WDVX: Don Burggraf, Tony Lawson and personalities Freddy Smith, Alex Leach, Red Hickey and Grace.

The station is the brainchild of Tony Lawson, program director, air personality and chief fund-raiser for WDVX, which also streams its programming over the Internet at [www.wdvx.com](http://www.wdvx.com).

## Internet help

"I worked in commercial radio for 20 to 25 years and I was fed up with the lack of creativity," said Lawson. "I made a decision to research this and see what it would take to get a station like this on the air. It was a little like going back to school."

Tony had very little money, but he did have a good friend who was an engineer.

"Don Burggraf set up the equipment and still works for the station and he never has taken a dime in salary," Lawson said. "Don is our biggest volunteer and president of our company."

Working 10 years as a "labor of love," is a bit unusual, but Burggraf himself is unusual. His day job is maintenance engineer at WBIR(TV), Knoxville, Tenn.

"My TV job just keeps the lights on in my house," he said. "The concept of non-commercial, community radio always had a warm spot in my heart. My philosophy goes back to the real intent

Lawson expects that the station's Internet presence will survive the new streaming fees.

"We just met with the attorney from SoundExchange and I think we're going to be OK with the new rulings," he said in October. "For a while, I was afraid the record guys were going to choke this Internet thing off, but it looks like smaller companies will be able to pay a small

the refrigerator used to be."

Studio B has two mics, which come down from the ceiling for interviews in the former kitchen area. Studio C is a bigger space in the back where an RCA 77 ribbon mic is available for live performances, which are frequent and sometimes boisterous.

"It's amazing, the people who have come in here to play live," said Lawson.

## The station's programming includes regional musical styles. It even airs hog calls once in a while.

percentage of their revenue instead of paying by the listener and by the hour. Because we're non-commercial, I think we'll be in good shape."

Lawson started dreaming about putting on a station like WDVX in 1991, but it took five years before the dreams became reality.

"We got one small grant from the Tennessee Arts Commission for \$1,600 to broadcast four live productions from the Laurel Theater in Knoxville. The rest of our money comes from listeners and some corporate underwriting," Lawson said.

The station's programming includes a lot of regional musical styles. It even airs hog calls once in a while.

But why broadcast from a camper, and doesn't it get crowded in there?

Lawson's friend Bob Moore made the original suggestion for this unorthodox studio.

"He pulled this thing up on his property so we could use an STL to hit the tow-

The station broadcasts from remote locations using an older-model Comrex codec.

But yes, the camper is very crowded.

"We don't even have room for a computer in there," said Burggraf. "Every bit of space is taken, and the weather is a factor too. Most of the time it's pleasant because we're in the south, but winters can be brutal."

The morning show is bluegrass and classic country. It's called "Rise and Shine With Freddy Smith." Smith is a part-timer who has never missed a day of work in his three years on the air.

Middays are handled by Red Hickey, a full-timer who started as a volunteer.

"She also plays in a band and loves the music," said Lawson. "Her other duties include keeping the logs and working on the music library."

"Grace" is another full-time employee who doubles as Webmaster. She is normally on the air between 2 and 7 p.m., subject to change to accommodate music specials on the station.

## Top New Plays on WDVX(FM)

It's definitely not top-40. Below are the top new artists, the name of their albums and their record companies as heard on WDVX in August.

1. Doyle Lawson & Quicksilver  
The Hard Game of Love  
Sugar Hill
2. The Flatlanders  
Now Again  
New West
3. Jim Lauderdale  
The Hummingbirds  
Dualtone
4. Jorma Kaukonen  
Blue Country Heart  
Columbia
5. Mary Gauthier  
Filth and Fire  
Signature
6. Dolly Parton  
Halos and Horns  
Sugar Hill
7. Hillman/Pedersen  
Way Out West  
Back Porch
8. Lauderdale/Stamley  
Lost In The Lonesome Pines  
Dual Tone
9. Various  
The Bottle Let Me Down  
Bloodshot
10. Ralph Stanley  
Ralph Stanley  
Columbia

In the evenings, a number of shows rotate on days of the week including "The Happy Camper Show," which features world music, heard on Mondays. On Tuesday nights, Lawson shares the microphone with a 14-year-old lad named Alex Leach who has been with the station since he was nine. Their show is called "The Bluegrass Special."

There is a live host overnight. Her name is "Mary Lou," and one can hear the eastern Tennessee twang in her voice. On Sunday, WDVX plays bluegrass gospel and what Lawson calls "old-time music."

Other programs have titles that provide a good picture of the spectrum of music. "Hillbilly Fever," "Johnny Mac's Friday Night Blues Attack" and "Tennessee Saturday Night," are among them.

Obviously, the geographical area is a hotbed for this type of music, and Lawson believes he touches a lot of people with his programming.

"You have a lot of 'pickers' down here and I think our station has created a buzz with the local musical community," he said.

But even with its small signal, WDVX offers unique programming in a world of cookie-cutter playlists.

"Americana is one of the most exciting formats out there right now," said Lawson. "We show up strongly in the ratings for a small station, especially with men 45-64. I don't know why we don't get a lot more women listening. Maybe they don't like the hog calls." 🎧

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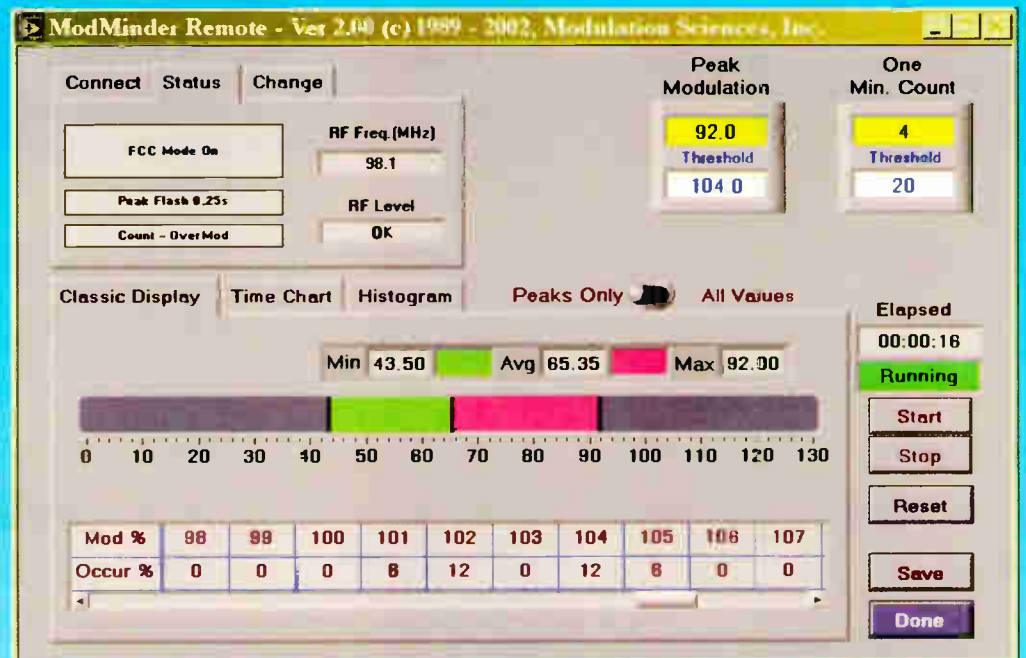
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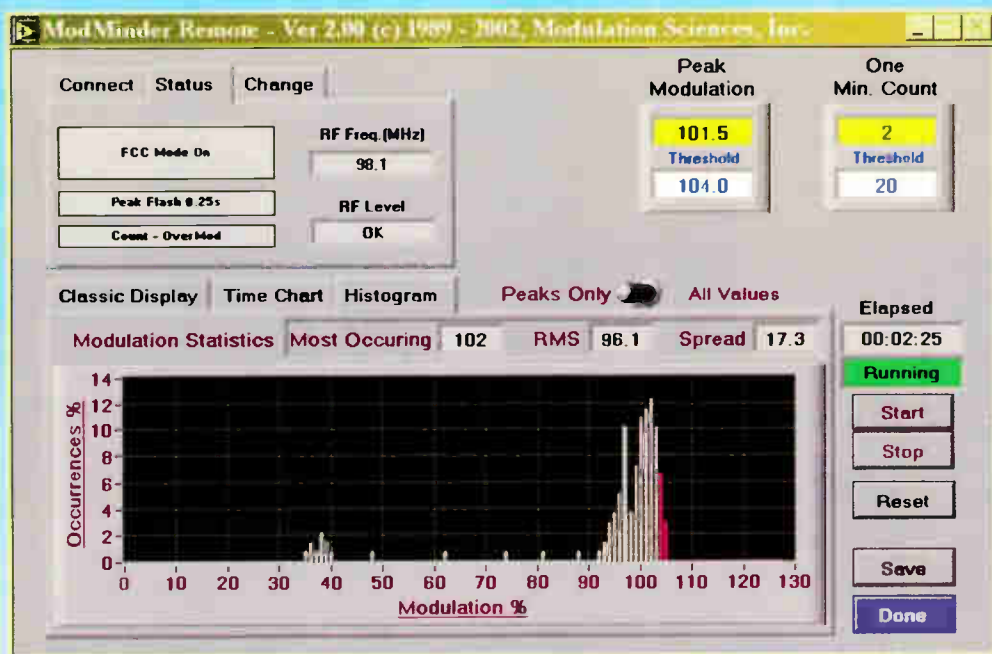
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FEED LINE

# Rings, Stubs and Rototillers

by W.C. Alexander

There are numerous FM antenna designs commercially available with various characteristics. Types include the panel with crossed dipole, ring, ring-stub, slanted dipole and "rototiller."

In the early days of FM broadcasting, several variations of the ring radiator were designed for both horizontal and vertical polarization. It was found that by adding vertical stubs to the ends of the radiator, one could produce elliptical polarization. It is difficult to produce true circular polarization with a ring or ring stub radiator because the axial ratio varies with azimuth. Over the years, the design has been improved by adding a second ring. One advantage of this type of radiator is its excellent circularity in free space. A disadvantage is that it is a high-Q design and is more susceptible to detuning because of icing.

A variation on the ring radiator is the ring-stub. The horizontally-polarized radiation is produced by the ring portion of the radiating element. The popular Shively 6814 is an example of a ring-stub design.

## Slants and panels

The slanted dipole antenna was developed in the 1970s. As its name implies, it consists of two half-wavelength slanted dipoles bent 90 degrees. The two dipoles are fed in phase. The ratio of V-pol and H-pol radiated power is determined by the slant angle. Shunt feeding provides for equal currents in all four dipole arms, which produces excellent circularity. The Jampro Penetrator is an example of a slanted dipole antenna.

Another popular design, often called the "rototiller" because the radiating elements have a shape similar to that of the blades of a rototiller, consists of two series-fed bent dipole elements, forming a space-phased, circularly polarized radiator. This configuration in combination with the relatively large diameter of the radiating elements tends to produce good bandwidth and inhibit corona discharge. The ERI SHPX is an example of this type of antenna.

Panel antennas were developed in the 1950s specifically for collocated stations. They come in flat and cavity-backed configurations. Both the flat frame and cavity are made of a large-diameter wire mesh with 4- to 12-inch openings. The mesh appears electrically as a solid surface but produces little wind loading.

Two crossed dipoles are used as the illuminating source for each panel or cavity. The dipoles are fed 90 degrees out of phase to produce circular polar-

ization. This type of antenna typically is side-mounted on a large-aperture tower.

Because they are directional, panel antennas usually require three or four

achieve extremely wide bandwidth. This type of matching scheme more typically is used on master antennas fed by multiple collocated stations.

## Complex matching schemes use phase quadrature compensation to achieve extremely wide bandwidth, typically for master antennas fed by multiple stations.

panels, mounted around the tower to produce a circular horizontal radiation pattern; circularity on the order of 2 dB is achievable. The cavity-backed design offers better axial ratios with more controllable azimuth pattern and better bandwidth. Cavity-backed panel antennas provide a lot of control where directivity is important.

With all these designs, antenna gain is achieved by vertically stacking multiple antenna elements or "bays" at full- or half-wavelength spacing on a common feed. A single circularly-polarized bay operating by itself usually exhibits a negative gain over a half-wave dipole in free space, while two bays usually provide near-unity gain. More than two bays will exhibit a positive gain, and gains of up to seven are possible with an antenna with 12 bays.

## A good match

Matching is an important consideration in FM antenna arrays.

The simplest and perhaps most common method uses a VSWR tuner. This matching section is inserted between the transmission line and the antenna interbay line and consists of variable capacitors at 1/8-wavelength spacing along the main feeder at the antenna input.

This type of matching section is used on many side-mounted antennas. It is adjusted for minimum reflected power to the transmitter. The net effect of this matching scheme is to place an impedance in parallel with the antenna impedance to match it to the 50-ohm line. The disadvantages of this method are that it is bandwidth-limited and it produces standing waves within the interbay line.

Another matching scheme involves the use of dielectric or metal slugs on the main transmission line inner conductor. This type of matching scheme produces better bandwidth, although it is more difficult to adjust.

Other, more complex schemes use phase quadrature compensation to


antenna with even a small amount of ice will present an unacceptably high VSWR to the transmitter, possibly leading to damage not only to the transmitter but also to the transmission line and the antenna itself.

Deicing equipment keeps ice from forming on the radiating elements, thus preventing this detuning. Broadband antennas, while detuned by ice just as more narrowband designs are, have sufficient bandwidth that the detuning has little effect on the load presented to the transmitter.

## Savings

Keep in mind that high initial cost may be offset by many years of low maintenance costs. The converse also is true. When selecting an antenna, the best approach is to select the best antenna that your budget can stand. After all, what other part of your transmission system has more effect on the signal you present to your audience?

In the next installment, we will look at transmission lines.

The author is director of engineering for Crawford Broadcasting and a frequent speaker at industry conventions and training seminars. 

MARKET PLACE

## V-Soft's AM-Pro Goes Nighttime

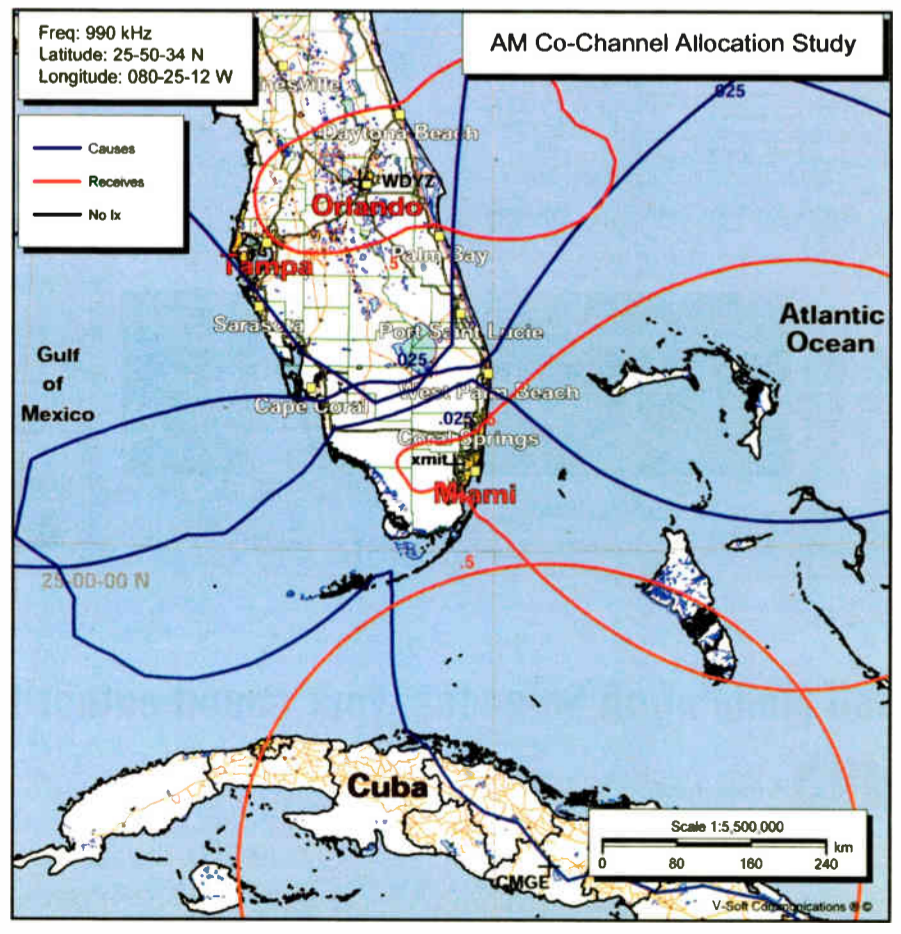
V-Soft Communications is out with a new nighttime version of AM-Pro that automates the job of doing difficult allocation work.

"We are one of the few companies today to bet on AM's ultimate success by investing our resources in a wholly new product for the standard band," said the company's Doug Vernier.

AM-Pro combines daytime contour-to-contour allocations with a set of RSS nighttime tools. It provides numerous tables including azimuthal radiation limits and channel interference. The program's coverage mapping engine draws fine-quality polygon feature maps. It comes with M3 and R2 ground conductivity databases and the U.S. 2000 Census database.

Eight industry consultants, knowledgeable in AM allocations, served as beta testers and consultants on this project.

For information contact the company in Iowa at (800) 743-3684 or visit [www.V-Soft.com](http://www.V-Soft.com).



## Correction

The formula used in an earlier article in this series ("Overshoots and Close-In Coverage," Nov. 6) was incorrect.

The formula should read:

$$\text{First Null Radius (mi.)} = \frac{\text{Antenna Height (ft.)} \times \text{No. Bays}}{5,280}$$

## Boscon Show Called a Success

Organizers said a large turnout spelled success for the Boscon 2002 Convention, sponsored by Boston SBE Chapter 11, at the Royal Plaza Trade Center in Marlborough, Mass.

Boscon 2002 was the first broadcast convention in the Boston area since the 1990 NAB Radio Show and the first ever organized by SBE Chapter 11.

The opening day of the two-day convention was given over to an Ennes Workshop.

"The workshop was a great success," said Bob Hess, co-organizer of the event for SBE Chapter 11. "Attendance was a record high for an Ennes Workshop, anywhere, ever." A total of 96 registered for the day-long event. After opening comments and lunch, attendees could choose an afternoon devoted to radio or television.

On the radio side, topics included the latest on HD Radio implementation, new developments on data services for HD Radio and digital audio testing. A joint session for radio and television engineers featured a presentation about the process of siting new towers. The day ended with a talk from the Boston district director of the FCC Enforcement Bureau.

Day two of the convention featured an exhibit hall with 110 companies displaying broadcast equipment. Some 435 people attended the exhibits.

"Our idea was to give broadcasters who don't go to the spring NAB an opportunity to attend a show well-balanced between radio and television interests," said Dan Rau, who orga-

nized the event with Hess. "We also wanted to schedule the workshops separate from the exhibits so that attendees would have time to give their full attention to both aspects of the show."

Engineers reported being pleased with the content of the Ennes Workshop and its organization. While some exhibitors reported spotty traffic at the exhibits, others were pleased with the turnout. "We were busy all day," said Brian Szewczyk, regional sales manager for Harris Corp.

Hess and Rau were pleased with the turnout and plan to make the show an annual event. "We're already talking about how to make it even bigger next year," said Rau.

— by Michael LeClair



The 'Yellow Submarine' remote vehicle by Kustom Kreations brought visitors to the booth of Technet Systems Group.

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### MARKET PLACE

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The Nokia 7250, shipping early next year, is a fashion phone with all the latest cellphone accessories including a CIF camera, color display and support for MMS and Java. More of interest to us, the 7250 has a stereo FM radio.



The Music Stand option allows the phone's radio to be played through stereo speakers; you just pop the phone into the stand.

The product was among those introduced at Nokia Mobile Internet Conference in Munich.

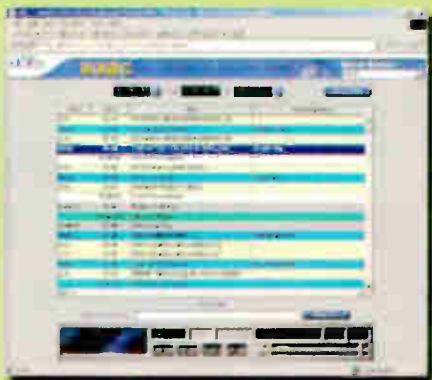
For information visit the company Web site at [www.nokia.com](http://www.nokia.com).

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## Early Holiday for Small Webcasters

by Craig Johnston

Small Webcasters got their Christmas present before Thanksgiving, when Congress passed the Small Webcasters Settlement Act of 2002.

In the face of retroactive copyright royalty payments dating back to late 1998, hundreds of small Webcasters saw the legislation as the only way to avert bankruptcy.



Because the Senate amended a House bill, HR-5469 had to pass the House again before heading to the president's desk. Barely 20 minutes before the 3:05 a.m. adjournment gavel fell on Nov. 15, the House gave its unanimous consent as well.

The president was expected to sign it.

The measure opened the door for small Webcasters and SoundExchange, the royalty-receiving agent, to come to an agreement that would supersede the performance fee structure laid down by the U.S. Copyright Office last summer.

A prior measure had come to a screeching halt in the Senate before the November elections when Sen. Jesse Helms, R-N.C., raised a last-minute objection. (The Small Webcasters measure was being shepherded through Congress without committee hearings, thus requiring unanimous consent in each house.)

Even though the due date for the large copyright payments had come and gone at that point, SoundExchange extended an offer to await payment until Congress acted or until the year ended.

Stealthily, and without returning Web

Watcher's repeated phone calls, Helms' staff members crafted new language that addressed needs expressed by religious, college, non-commercial and other Webcasters who had not been included in the earlier version of the bill.

Despite the term "small Webcaster" appearing in the bill's title, those rewriting the bill also took out the definition of a small Webcaster as well as any specific royalty rates. Rather, they set the table for Webcasters and SoundExchange to come to their own agreement on the gross revenue threshold of small Webcasters and royalty rates and set a Dec. 15 deadline for them to do so.

Most traditional radio stations simulcasting their programming on the Internet probably will not be affected, because their gross revenues likely are above the threshold of a "small Webcaster" to which SoundExchange and the Webcasters ultimately will agree. But Web Watcher notes that this is not a sure thing.

Royalty payments for non-commercial Webcasters, so defined by their tax-exempt status, are suspended until next June 30 to give that group an opportunity to come to an agreement with the music industry.

Commercial and religious broadcasters worried that the prior version of the bill would set precedents that future Copyright Arbitration Royalty Panels could use in establishing royalty rates in later years. The new version specified the legislation should not be considered precedent-setting.

However, when Web Watcher asked the NAB for a comment, he was told the association is not commenting on the SWSA because it does not involve broadcasters.

★ ★ ★

As this issue of Radio World arrives in your mailbox, the NAB and an array of

major radio groups are due in the Court of Appeals for the Third Circuit in Philadelphia, where their appeal of a Copyright Office determination is being heard.



Sen. Orrin G. Hatch, R-Utah

The broadcasters have insisted from the start that the DMCA's instituting sound recording copyright royalties does not include simulcasts of their terrestrially broadcast programming. The Copyright Office has ruled they are included, and has denied broadcasters' every appeal on the subject.

Another Internet radio interest going the court route is Internet-only Webcaster Live365. The company has asked the D.C. Circuit Court of Appeals to let it wait to pay its copyright royalties until the company's appeal has gone through the courts. Live365 claims the Copyright Office's royalty rates are arbitrary and violate its right to free speech because they make Webcasting prohibitively expensive.

See WEB WATCH, page 28 ▶

### BROADCAST LAW REVIEW

## Prep for EEO, Radio License Renewal

by Barry D. Umansky

As 2002 comes to a close, radio broadcasters prepare their New Year's resolutions to understand and comply with two important new developments in FCC law.

The first is a revised set of Equal Employment Opportunity rules. The second — and you knew this would be back too — is the resumption of the radio license renewal process.

Indeed, the Federal Communications Commission has confirmed that any allegations against a station for EEO non-compliance will be central to FCC's assessment of that station's license renewal application.

### Key element

Just as before, EEO has become a key, if not *the* key, element of the broadcast license renewal process. So it's time to check with your communications counsel to ensure that your station will be bulletproof, on EEO and other grounds, when you file for license renewal — and that time is approaching.

The three-year period during which *all* radio stations will file for license renewal begins next year.

Here's a brief summary of the FCC's EEO history and the new EEO rules, plus a brief preview on the upcoming return of the radio license renewal process. My next *Broadcast Law Review* article will be dedicated to license renewal and the steps you should be taking every day to assure a trouble-free experience in getting your FCC license renewed.

See EEO, page 30 ▶

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RE20 \$99<sup>00</sup>

COLE'S LAW

# NPRM — Time to Speak Up

by Harry Cole

Humpty Dumpty once said, "When I use a word, it means just what I choose it to mean — neither more nor less," to which Alice, of Wonderland fame, responded, "The question is whether you *can* make words mean so many different things."

That was fiction. But the casual reader of the FCC's recent Notice of Proposed Rule Making on broadcast ownership might be forgiven for thinking that the commission has chosen to abandon objective reality for the infinitely malleable, totally subjective approach to language, and ideas, embraced by Mr. Dumpty.

The history of the broadcast ownership rules is well known. From the earliest days of regulation, the commission, following the direction of Congress, sought to limit the number of broadcast licenses that any one person or entity could hold.

These limitations served a variety of goals. By definition they increased diversity of ownership, which in turn meant that a diversity of "voices" speaking to the public. Such diversity of viewpoints was said to advance essential values of our democratic system, which is based, after all, on the free and unfettered exchange of ideas.

And one of the beautiful aspects of the

ownership rules was that, by providing a "structural" approach that limited the ownership of stations, but did not impose any limits on the content of material that licensees could broadcast, it achieved that free and unfettered exchange of ideas indirectly, thus avoiding First Amendment problems.

**The casual reader of the NPRM on ownership might be forgiven for thinking that the FCC has chosen to abandon objective reality for the approach to language embraced by Humpty Dumpty.**

A second goal traditionally cited in support of the ownership rules was localism. Since the Radio Act of 1927, which established the precursor to today's FCC, Congress has mandated that broadcast channels be doled out fairly and equitably among the various states and communities.

The commission historically took that to mean that it would be desirable if each community could have at least one local

station to serve that community's particular needs and interests.

A third goal of the ownership rules was to promote competition. In general, robust competition within a market is desirable from a commercial perspective. But it also affords secondary benefits with respect to the program service that

the public can expect to receive from entities competing to attract the ears and eyes of the broadcast audience.

In a perfect universe, the ownership rules could have continued to exist without much problem. But we do not live in a perfect universe.

Instead, the attractiveness of assembling large groups of commonly owned stations seems gradually but inexorably to have overwhelmed the more theoretic

cal, far less commercially rewarding, underpinnings of the ownership rules.

By the 1980s the limits had already started to erode. But the final nail in their coffin was the Telecommunications Act of 1996, in which Congress lifted national ownership limits for radio licenses, drastically expanded local radio ownership rules and suggested that similar deregulation on the TV side might be warranted.

The 1996 Act was especially odd because, while it seemed to direct a major-league reversal of the commission's ownership policies, it left intact other statutory language embracing localism and diversity as desirable goals.

The commission — which as a creation of Congress is obligated to play the slavish and unquestioning Igor to Congress's Dr. Frankenstein — has sought to make sense of Congress' intent, but the FCC's ability to do so is constrained by the seeming inconsistencies inherent in what Congress has done.

All of which leads us to the NPRM released in September.

In the NPRM, the commission announced its intent to review *all* of its broadcast ownership rules and policies in a single omnibus proceeding. To the extent that radio ownership rules already were under consideration in their own proceeding, that separate proceeding is going to be folded into the new omnibus docket.

So what we have on the table for consideration are the local radio ownership rules, the radio/television and newspaper/broadcast cross-ownership rules and the national and local television ownership rules.

The NPRM lays out an ambitious range of questions involving the state of mass media and the appropriate role of the FCC in regulating the mass media.

But there are problems with the NPRM.

First, although it is entitled a notice of "proposed rule making," the commission has in fact not proposed any particular rules. Rather, it simply has asked a boatload of questions.

Normally, an NPRM is expected to contain at least some indication of the action that the agency is contemplating, so that folks who might be affected may comment. The lack of any particular proposals makes it a bit difficult to know what may be in store and, therefore, how best to comment on it.

## Chatter

Some say the commission may be planning to dismantle, to the extent possible, all of its broadcast ownership rules.

That may indeed be the case, and it may even be a good idea overall, but if that in fact is the intended goal of the NPRM, it brings into focus a second problem. The commission, in the NPRM, continues to embrace diversity, localism and competition as desirable goals.

Abandonment of ownership regulation would appear to be antithetical to traditional notions of "diversity," "localism" and "competition." The massive consolidation of radio ownership which has occurred in the wake of the 1996 Act demonstrates what happens when ownership limits are lifted: The number of different owners shrinks dramatically, and stations that were once owned and operated locally become small elements of national chains, controlled from afar by folks who, it often appears, are driven more by concerns about their own financial bottom line than about the public interest.

## NRB Opens Headquarters

The National Religious Broadcasters opened its first permanent headquarters with a dedication ceremony to mark a renewed focus on evangelical broadcasting. The building is in Manassas, Va.,

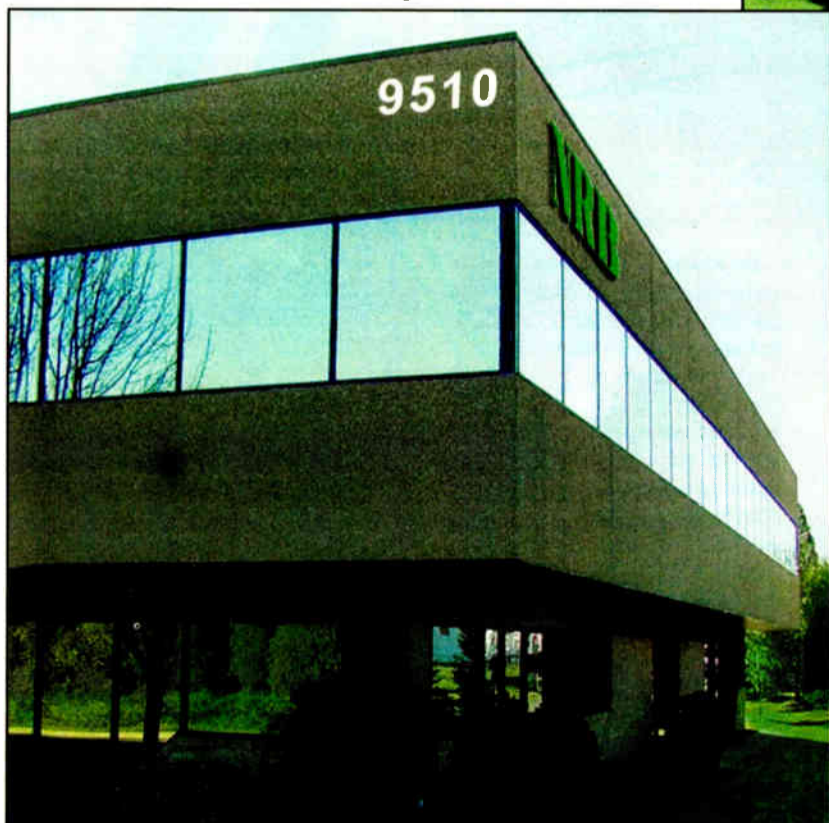
"This is an anchor for us," said NRB Chairman/CEO Glenn Plummer. "It brings our focus to a permanent home. One benefit is that this place is much closer to the Capitol and the FCC."

The ceremony included letters from evangelists Billy Graham and Pat Robertson, who donated a bronze statue for the building's foyer. Notable attendees included Rep. Frank Wolf, R-Va., and Tim Goeglein, a special assistant to President Bush. Approximately 125 people attended.

The NRB recently took a stand against the proposed EchoStar/DirecTV satellite network merger, which was denied



The NRB cuts the ribbon at its new headquarters. From left: Chairman/CEO Glenn Plummer, Building Committee Chairman Jerry Rose and Executive VP Michael Glenn



NRB's New Headquarters

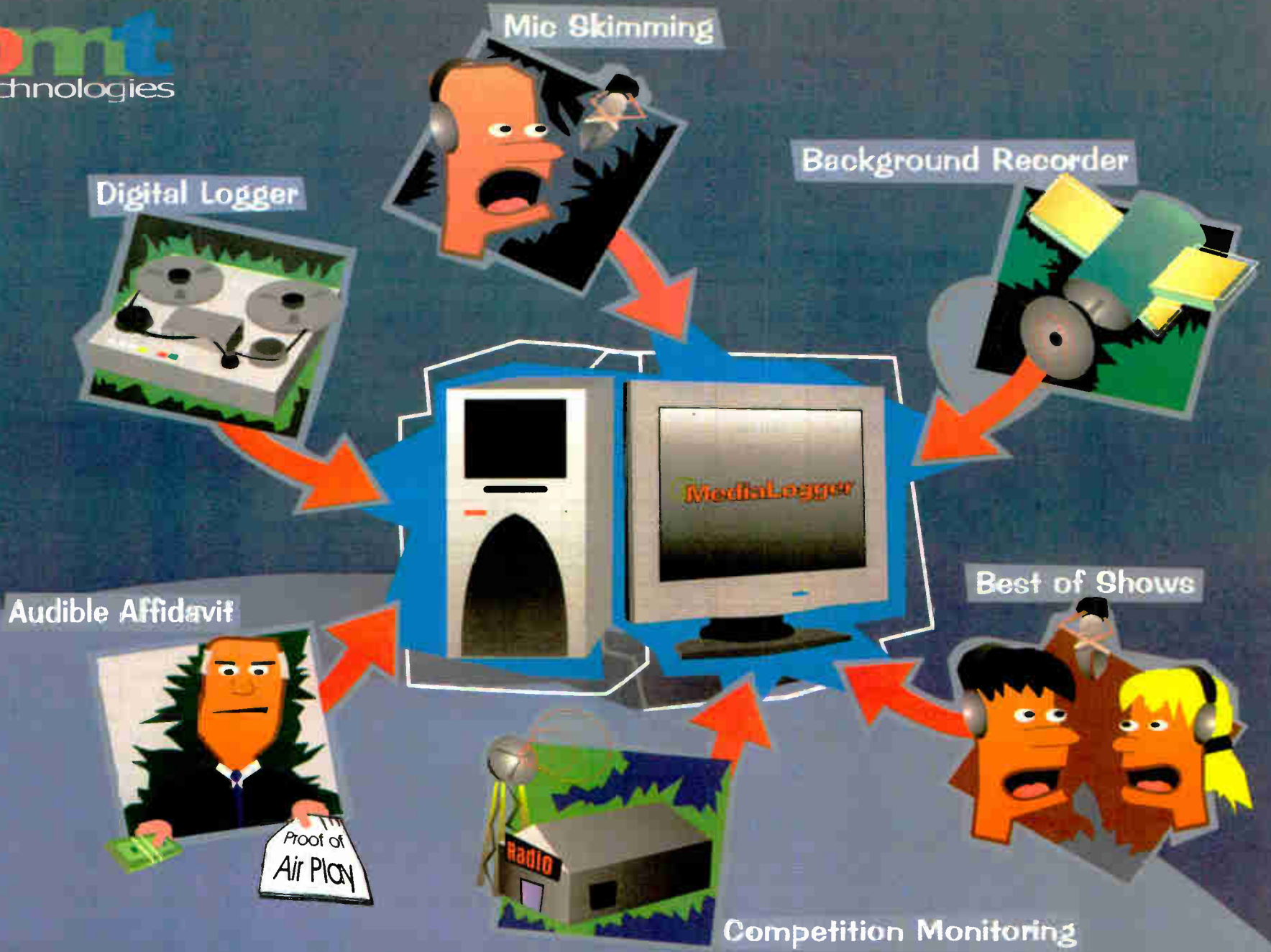
by the FCC and the Justice Department.

"Access for the gospel on TV through satellite and cable is not where it should be," said Plummer, pointing out the merger would have decreased opportunities for religious broadcasters in more rural areas served by satellite.

The 18,000-square-foot, two-floor headquarters houses the group's offices and the Religious Broadcasting Hall of Fame, and will contain an NRB museum in the future. The museum will include print, audio and video materials in interactive exhibits on the history of evangelical broadcasting that will occupy the lower floor of the building.

— Michael Hedrick

See COLE'S LAW, page 29 ►



# iMediaLogger

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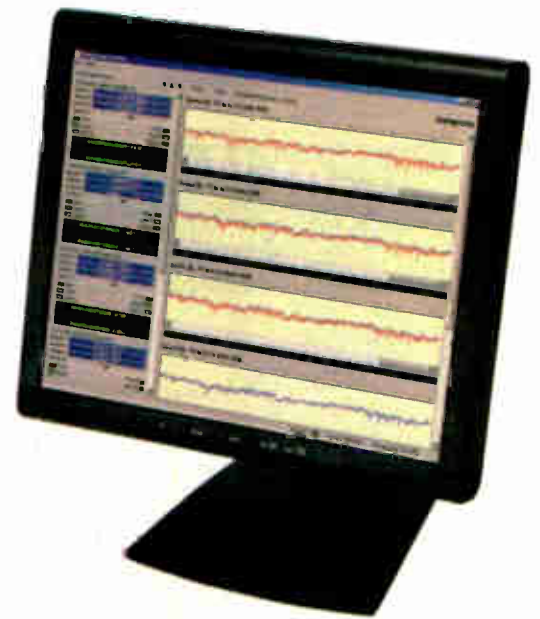
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# Web Watch

▶ Continued from page 23  
★ ★ ★

In November the country saw a surprisingly strong showing by the Republicans, who strengthened their hold on the House and took back control of the Senate. What the elections will mean to Internet radio is not yet clear.

What is clear is that the Republicans will place members of their own party in committee chairmanships. Sen. Orrin Hatch, R-Utah, likely will head the Judiciary Committee, which oversees copyright legislation.

"Hatch has traditionally been supportive of artists' issues and is a strong supporter in the notion that holders of copyright be compensated for their work," said Web Watcher's unidentified insider, code-named Deep Thought. "On the Small Webcaster Amendments Act, he voted for it, but was not vocal and did not make waves."

Longer range, Sen. Hatch at the head of Judiciary brings into question efforts to modify the Digital Millennium Copyright Act. He has heaped praise on the DMCA in the past, which might indicate tough sledding for the Internet Radio Fairness Act introduced by Reps. Jay Inslee, D-Wash. and Rick Boucher, D-Va. Their legislation entailed a heavy rewriting of the DMCA.

But Hatch is a hard read on this.

"Hatch has always had a good relationship with broadcasters and the NAB," said Deep Thought. "So it should be fun to watch this one next year."

When Web Watcher spoke with a Hatch insider, he was told the senator

issues a "Tech Agenda" at the beginning of a congressional session, which will offer insight on what to expect from the senator in the year upcoming.

forming the new CARP, which means next year's royalty rates won't be determined until 2003 is well underway.

Combine this with questions about

Trans Cosmos International, will retain certain rights to the MeasureCast services and technology.

★ ★ ★

Arbitron and MeasureCast haven't been the only research firms studying the Internet, however. Another company announced some findings that show the record industry is not having a good day online.

Despite the music industry having crushed free download service Napster, online-consumer researcher comScore Media Metrix found online sales of CDs fell 39 percent in the third quarter compared to sales a year earlier. Similar drops of 12 and 28 percent were seen in the first and second quarters.

The music industry cites factors such as the slow economy and the lack of hit songs as factors, but it's hard not to focus on the fact that comScore's research shows that Kazaa, Morpheus and others have more than filled the file-sharing void created by the demise of Napster.

"While a host of factors inevitably impact consumer behavior, the greater sales decline online as reported by comScore would suggest that Internet file-swapping and CD-burning are having a severe negative impact on music sales among Internet users," stated Peter Daboll, division president of comScore Media Metrix.

★ ★ ★

Web Watcher notes that the comScore music sales numbers do not include the music subscription and download services such as Pressplay and MusicNet. One of those services made a series of announcements recently about its own online CD-burning offerings that may challenge the value-proposition of the free downloads.

"When you're using a free service, the cost of free is time and convenience," said Matt Graves, spokesman for Listen.com. Through its Rhapsody Music Subscription Service, the company offers subscribers the opportunity to burn CDs from more than 100,000 tracks from major record labels Universal Music Group, Warner Music Group and Bertelsmann Music Group, as well as several dozen smaller labels.

By building the CD-burning software into its own service, Rapsody allows the user to complete the search, download and CD-burning process without leaving its site. Graves explained to Web Watcher the guarantees the come along with paying 99 cents a cut for music via their service.

On a free service, "you're going to have to poke around and remember the names of the songs you want, and hope you can remember the artist, and hope that you are getting the right file, that it's the song you want, that it's an adequate sound quality, that it's consistent across all the tracks. That's a guarantee the free services just can't make."

If Listen.com's past record is any indication, signing deals with the other two major labels is right around the corner. They were the first to bring all five majors into the fold of their subscription music service. Pressplay recently announced they, too, had scored the five major label bingo.

Craig Johnston is a Seattle-based Internet and Multimedia developer who is a frequent contributor to RW. Reach him via e-mail to [craig@craigjohnston.com](mailto:craig@craigjohnston.com).

comScore Networks Monthly Online Sales of Music versus Average Monthly U.S. Home Users of Select File-Sharing Applications						
	Online Sales of Recorded Music		Unique Users of File-Sharing Applications Average Month Within Quarter (Thousands)			
	Dollar Sales (\$Millions)	Average Month Within Quarter (Thousands)	Napster	Kazaa	Audiogalaxy Satellite	Morpheus
1Q 2001	\$262		11,962		550	
2Q 2001	\$269		8,264	519	719	808
3Q 2001	\$199		5,722	1,588	946	2,271
4Q 2001	\$278		2,960	2,998	1,832	4,884
1Q 2002	\$230	-12%	1,644	4,577	2,912	7,146
2Q 2002	\$194	-28%	1,060	7,278	3,132	3,758
3Q 2002	\$122	-39%	751	9,431	1,646	*n/a

\* Note: Online sales data include outright purchases of CDs, other physical recorded media and streaming online content, and exclude products at auction sites. File-sharing data indicate launch/usage of the stated services' client application by unique users at home. This table does not include all file-sharing applications. Data not available for Morpheus in 3Q 2002.

comScore data shows online CD sales declining.

★ ★ ★

Speaking of next year, royalty rates for Internet streaming that were set by the Copyright Arbitration Royalty Panel run out at year's end. A new CARP will be empanelled by the Librarian of Congress to determine rates for 2003.

The Copyright Office told Web Watcher there is no firm schedule for

what Congress will or won't do and one of Webcasters' major expenses remains an unknown.

Web Watcher observation: What's new?

★ ★ ★

It's been hard to understand how the nascent and stumbling Internet radio industry could support two ratings services: Arbitron Inc. and MeasureCast Inc.

Now there is now just one.

Arbitron purchased the license to MeasureCast's Web stream audience measurement software, along with other MeasureCast assets. "You're putting the MeasureCast technology together with Arbitron's experience and resources," said Arbitron Vice President for Communications Thom Mocarsky.

The move could be a win for Webcasters. Web Watcher has listened to panelist after panelist at Streaming Media and the NAB show talk about the need for research that advertisers believe in.

"This is a significant step forward in our efforts to establish an industry standard currency for measuring streaming media audiences," stated Bill Rose, Arbitron vice president and general manager, Webcast Services.

Web Watcher notes that the two companies measured audiences for a different list of clients, requiring one to look back and forth at both lists to determine the relative success of Webcast stations and networks. The new ratings will be known as Arbitron's MeasureCast Ratings.

The former MeasureCast will continue on with a new, but undetermined at press time, name. What will they do?

"We're not disclosing that yet," said Randy Hill, CEO and founder of MeasureCast. "We think we have a very exciting new product that we're working on with some of our partners. This transaction helps both parties: It establishes a single standard in the streaming measurement space, and it gives us the opportunity to focus on new product development."

MeasureCast partners, which include Nielsen Media Research, NetRatings and

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# Cole's Law

► Continued from page 26

In other words, consolidation seems to have caused diversity to dwindle, as there are fewer different broadcast licensees. And there have been indications that national group ownership may not be completely consonant with the quaint notion of truly locally oriented programming.

And as far as "competition" is concerned, the commission has embraced the somewhat unrealistic notion that competition exists in a market in which two huge broadcasters control 80 percent or more of the local audience and revenues, leaving any remaining non-group or small group owners to scratch for whatever portion of the remaining audience and revenues they may get their hands on.

So one might well wonder how any further deregulation of ownership limits could be thought consistent with diversity, localism and competition.

Of course, in the NPRM the commission does not acknowledge that "diversity" and "localism" and "competition" would seem to support at least maintenance of the existing ownership rules, if not a return to the far more stringent rules and limits of yesteryear. Instead, the commission poses a range of questions seemingly designed to justify elimination of all the rules.

## Step one

Which brings us back to Humpty Dumpty.

The NPRM strikes us as a first step in an effort by the commission to redefine diversity, localism and competition in some way that might be seen as consistent with abandonment of its ownership rules.

We could be wrong in this reading. It may turn out that the commission really and truly does intend to regulate in a way logically designed to preserve the values that have historically supported the rules. But we will be surprised if that turns out

to be the case.

This is not to say that the commission is necessarily engaging in hypocrisy or Orwellian newspeak. The commission's ability to act is limited by what Congress tells it to do. So if Congress sends clear signals — like, say, in the 1996 Act — that deregulation of ownership is what Congress wants, then the commission is pretty much required to comply.

The real problem arises when Congress, eager to please those who would benefit from deregulation but reluctant to abandon the longstanding goals of diversity, localism and competition, simply ignores the inconsistency and, in effect, points the commission in two directions at once. The commission can be excused if it has trouble acting consistently under those circumstances.

But that does not mean that the com-

menting public (or, somewhere down the line, the courts) are under the same constraints. So it would be useful if anyone who believes that further deregulation of the ownership rules would be inconsistent with the values of diversity, localism and competition would so advise the commission in comments in response to the NPRM. Any such comments should provide as much detail, with as much supporting evidence as possible.

Of course, anyone able to demonstrate that the opposite is true — i.e., that diversity, localism and competition really would be served by further deregulation of ownership limits — should similarly chip in their two cents' worth.

By declining to make any specific proposals and by asking a long laundry list of questions, the commission has essentially put the primary burden on the com-

menting public. So we at Team Cole's Law urge anyone with a stake in the outcome of this proceeding to speak up loud and clear on the issues.

Only through the development of a complete factual record will the FCC be able to formulate and justify any changes to its ownership rules.

The comment deadline was extended 30 days. Public comments on the NPRM are due Jan. 2, 2003 and replies on Feb. 3.

You should contact your communications counsel if you have any questions about the NPRM, or if you would like help in preparing comments for submission in response to the NPRM.

Harry Cole is a member of the law firm of Fletcher, Heald & Hildreth P.L.C. Reach him at (703) 812-0483 or via e-mail to cole@fhhlaw.com.

RW welcomes other points of view.

## Kennedy Tapped As RAB Chair

David Kennedy, president and COO of Susquehanna Radio Corp., is the new chairman of the RAB board of directors. Gary Fries, RAB president and CEO, announced the election during the RAB fall board meeting recently in Atlanta. Kennedy will serve a two-year term beginning Jan. 1, 2003.

"The RAB has distinguished itself as radio's premier sales and marketing resource, and Susquehanna Radio Corp. has been one of its strongest champions over the years," stated Kennedy.

Meantime, David Pearlman, Infinity senior vice president, has been named vice chairman of the RAB board while Joe Bilotta, COO of Buckley Broadcasting, was voted chairman of the finance committee. These posts also take effect the first of the year and are two-year appointments.

David Crowl, senior vice president, radio, Clear Channel, currently serves as chair of the RAB board and will continue on in that capacity through the end of the year then remain on the board and executive committee as immediate past chairman.

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# EEO

► Continued from page 23

On Nov. 7, a unanimous commission adopted a recast set of EEO rules, focusing on recruitment efforts, in the wake of two straight court rejections of previous incarnations of the agency's EEO regs. Commissioner Copps, at the FCC's open agenda meeting, urged parties not to file a judicial challenge of the new EEO rules.

## Recast rules

However, in a statement released right after the FCC open meeting, the National Association of Broadcasters expressed its concern that the "new rules have done little to reduce" the paperwork burdens associated with the prior FCC EEO regulatory system.

But regardless of whether the courts will be asked to review the new EEO regulations, and unless there is an unlikely "stay" by a court, broadcasters now must abide by the new EEO rules and paper-

soning that discriminatory hiring practices raise serious questions about a licensee's operation in the public interest.

Annual employment reports began in 1969; written EEO programs began in

stations' employment percentages.

In 1987, the FCC changed its EEO focus to place greater emphasis on station efforts to attract female and minority applicants. This *efforts-based* enforcement policy meant more detailed station paperwork concerning outreach to minority- and female-specific sources.

But, in 1998 the U.S. Court of Appeals for the D.C. Circuit found that the Commission's EEO rules unconstitutionally pressured broadcasters to make race-based hiring decisions.

In early 2000, in response to the court's ruling, the FCC adopted rules that gave broadcasters a choice between "Option A" (requiring basic and supplemental outreach) and "Option B" (mandating collection of detailed race and gender-based data concerning job applicants).

But, almost exactly one year later, the same court held that Option B was an unlawful "race-based" classification scheme that was not tailored narrowly enough to support a compelling and well-defined government interest.

Although the court didn't reject Option A, it found that this option was an integral part of the overall regulatory system and could not be separated from the unlawful Option B. As a result, on Jan. 30, 2001, the FCC suspended the outreach, recordkeeping and reporting aspects of the EEO rules.

## EEO now

The new rules, based on former "Option A," have a three-pronged outreach recruitment requirement:

Prong 1: Widely disseminate information concerning each full-time (defined as 30 hours or more per week) job vacancy, except for vacancies filled in "exigent circumstances," such as when your morning drive time person walks at 5:30 a.m.;

Prong 2: Provide notice of each full-time job vacancy to recruitment organizations that have requested such notice; and

Prong 3: Complete longer-term recruitment initiatives within a two-year period. "Broadcast employment units" (meaning single stations or duopoly clusters in a local market) with five to 10 full-time employees, or that are located in smaller markets, must complete two such initiatives during the two-year period. Four such initiatives must be completed biennially by broadcast employment units located in larger markets and with more than 10 full-time employees.

These include, for example, job fairs, scholarship and internship programs and other community events designed to inform the public as to employment opportunities in broadcasting.

The commission also adopted revised recordkeeping and reporting requirements:

(a) Collect, but not routinely submit to the commission: (i) job title listings of all full-time job vacancies filled; (ii) a listing of the name, address, contact person and phone number of each recruitment source used to fill the vacancy (including, if applicable, organizations entitled to notification, which should be separately identified); (iii) dated copies of all ads, bulletins, letters, faxes, e-mails, etc. announcing vacancies; and (iv) documentation demonstrating performance of the Prong 3 menu options, e.g., job fairs and mentoring programs; (v) the total number of interviewees for each vacancy and the referral source for each interviewee; and (vi) the date each

See EEO, page 31 ►

**Just as before, EEO has become a key, if not *the* key, element of the broadcast license renewal process.**

work requirements. And, yes, the FCC is in the process of revising the FCC Form 395-B Employment Report, for periodic filing by stations at the FCC.

The FCC became involved with broadcast employment practices in 1968, re-

1970. Stations that did not employ women and minorities at certain minimum percentages of their local workforce availability received in-depth review of their EEO programs, as did all stations with 50 or more employees, regardless of these larger

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Tower photo taken by and courtesy of Stuart Goettsch • SpectraSite Broadcast Group

# EEO

► Continued from page 30  
job was filled and the recruitment source that referred the hiree.

(b) Place in the station public file annually a report including: (i) a job title list of all full-time vacancies filled during the preceding year; (ii) the address, contact person, and telephone number of each source used to fill those vacancies; (iii) a list of the recruitment sources that referred the people hired for each full-time vacancy; (iv) data reflecting the total number of persons interviewed for full-time vacancies during the preceding year and the total number of interviewees referred by each recruitment source; and (v) a list and brief description of Prong 3 menu options implemented during the preceding year.

(c) Submit the station's EEO public file report to the commission as part of the renewal application and midway through the license term for FCC mid-term review if your station employment unit has more than 10 full-time employees). Broadcasters with Web sites must also post the current EEO public file report on their sites.

## There still are plenty of ways for a broadcaster to screw things up in the license renewal process.

Obviously, this is going to be a lot of paperwork. EEO enforcement will be through the license renewal process, at mid-term for larger broadcasters, and via random audits and targeted investigations resulting from "information received" as to possible violations.

So expect an FCC inquiry letter if someone files a substantiated complaint that you have failed to comply with the paperwork requirements, let alone have discriminated in hiring.

The commission deferred a decision on collecting race/ethnicity and gender data on station hiring. Such data reportedly would not be used to determine EEO rule compliance. The commission said it expects to finish revising FCC Form 395-B before its next due date: Sept. 30, 2003.

Saying that it needed more information to make a decision, the commission also sought additional public comment on whether and how to apply the EEO rule to part-time positions. The new rules likely will be effective (the effective date is to be 60 days after the FCC decision is published in the Federal Register) by mid-to-late January or early February.

Equal employment opportunity and nondiscrimination in hiring are the laws of the land — and they always will and always should be. But, the lawfulness of the commission's revised EEO behavioral and paperwork requirements still remains an open question.

Nonetheless, today is the day for you to confer with your communications counsel as to how your station will be complying with the new FCC EEO rules.

Radio broadcast veterans know that the

process surrounding the renewal of a station license has changed dramatically over the past several decades.

The interval between radio license renewal filings is now eight years, not the earlier intervals of three and then seven. And no longer can someone challenge your renewal application with an application of their own, as the "comparative renewal" process was outlawed years ago by an act of Congress.

### Renewals return

Although parties still can file "petitions-to-deny" your application at renewal time, they have no assurance whatsoever that, if you lose your license, they would get it. Indeed, an auction process governs the re-issuing of revoked licenses.

The radio renewal form, last time around, was only a couple of pages in length — much reduced from the old days (when your author was working at the FCC) when the filing and the required exhibits could stack over a foot high. But, although the renewal form had been trimmed down from pounds to a couple of pages (and soon will be the "electronic" filing of responses to only a few questions) and the substantive areas of FCC inquiry at renewal time have changed and been reduced, there still are plenty of ways for a broadcaster to screw things up in the

license renewal process.

Sure, you probably will be able to check the yes/no boxes and complete the rest of the form in a few minutes. But you will have to stand by the statements you make about the performance of your station over the past many years. And, remember, if you check the "yes" box in response to a question, when the answer should be "no," you've "misrepresented yourself" to the FCC. And that's a big "no-no."

For example, you'll want to say "yes" to the question asking whether you've placed all required documents in your public inspection file "at the appropriate times." But, have you? Was at least one issues/programs list put in late? What about other documents that have to be placed in the public file?

Well, make sure that your "yes" answer isn't a lie. And are you sure that a disgruntled or former employee won't blow the whistle on you if you fib a little? So, the best course is to say "no" and explain the circumstances. That's a far better approach than risking a "misrep" charge.

These are but some of the questions you need to ask yourself as you approach renewal. I'll give you more guidance on renewal in the next *Broadcast Law Review*; but now's the time to confer with your counsel, with license renewal time just around the corner.

Barry D. Umansky, former deputy general counsel of the National Association of Broadcasters, is with the communications practice group at the law firm of Thompson Hine LLP in Washington. Reach him at (202) 263-4128 or via e-mail to [barry.umansky@thompsonhine.com](mailto:barry.umansky@thompsonhine.com).

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Show Hosts Eric Harley and Joe Kelley

### MediaSpan, Art.com Join Forces

Art and the Internet come together in a venture announced by MediaSpan. The provider of online retail music and movie stores to radio is partnering with Art.com, an online marketplace for prints, photos, posters and custom framing.

The association allows MediaSpan radio affiliates to provide listeners access to 100,000 posters and prints through their stations' Music and Movie store.

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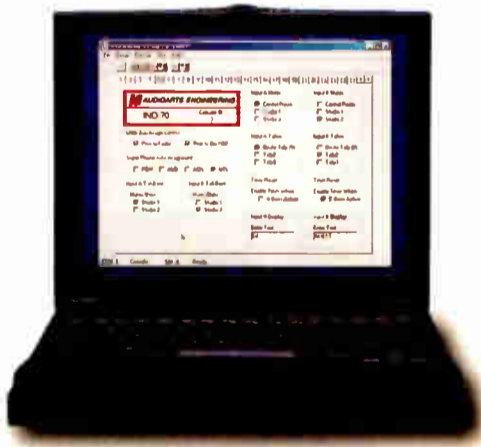


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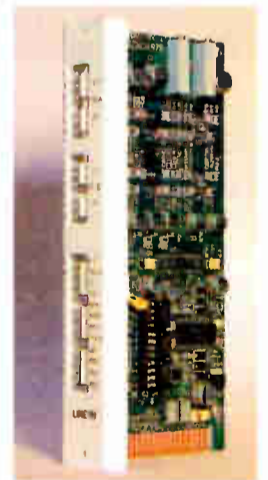
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# Studio Sessions

ARP Gets  
Rheumy



See Page 35

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December 4, 2002

PRODUCT EVALUATION

## POTS Power From Land Down Under

by Alan R. Peterson

From the land Down Under comes the Patriot POTS codec, courtesy of Tieline Codec Solutions in Australia and distributed in the United States by Tieline America, a Tieline Technology company.

While coming from Australia has a definite conversational angle, the units are serviced in the United States, in Indianapolis. If necessary, loaner units are provided within the same day, so downtime is not going to be an issue.

With one of the simplest panels around, the Patriot is jock-friendly. The straightforward rear panel makes it simple to hook up and hit the air quickly after arriving at a remote site.

The Patriot (\$2,595 list price) comes close to another Tieline product, the Commander codec, minus ISDN compatibility and rack mounting. The Patriot does come with its own feature set that makes it attractive to a station engineer

seeking a decent POTS codec for those car dealer remotes, football games and weekend jock appearances.

With a claimed 15 kHz response on bit rates as low as 24 kbps, the Patriot can be used to send music down the line with sufficient fidelity for AM and just enough to swing FM. The Patriot also can connect as low as 9,600 bps.

There are some caveats, which will be discussed below. Suffice it to say the Patriot performs its tasks admirably in an easy-to-use package.

### Guts

The Patriot is constructed in a blue-enameled slant-top chassis, with a footprint slightly larger than an old 45-rpm record jacket.

Two circuit boards are connected by a 40-pin ribbon connector, the same as is found in computers. The top board contains the function buttons, four pots, a rotary encoder and a backlit LCD display.

Big rubber buttons make up the DTMF telephone pad and the function buttons, and all have a positive tactile "click" feel when pressed.

The bottom board



Of interest are two additional sets of jacks. One is a cellphone plug that allows bidirectional operation of the Patriot over a wireless telephone, and a pair of RCA unbalanced input jacks for feeding in an external device.

The former is handy, but only allows phone-quality broadcasts. The data rates of cellphones and those of POTS codecs cannot fully talk to each other yet, so it remains impossible to get 15 kHz over a cellphone.

The latter lets a broadcaster connect a

## AES 2002: Happy In Los Angeles

by Brett Moss

For the first time in a long time it was nice to go to a pro audio trade show where an optimistic attitude prevailed.

While no one proclaimed they were getting rich — and the news of the bankruptcy of Mars Music was a downer for many on that side of the industry — show participants were in a better mood than shows earlier this year. More than one distributor/manufacture offered, "You know, we had a pretty good summer ..."

New gear reflected that thought. Nothing big. No over-the-top splashes. But there were new products.

### Retro mics

A couple of years ago, the craze at AES was for tube-based retro microphone preamps. AES 2002 clearly saw a craze for microphones, especially retro-styled, and especially retro tube. This year many of the new "old" mics, such as offerings from ADK, Electro-Voice, Soundelux and Brauner, were anticipated. But many were not.

Studio Projects/PMI rolled out several "budget" mics including the intriguing LSD-2 stereo microphone.

Perhaps most intriguing was Telefunken North America. Showing copies and updates of several Telefunken classics, notably joining the ELAM 251 sweepstakes, TNA raised eyebrows.

THE (Taylor-Hohendahl Engineering) showed a variety of mics, from lollipops

to test mics to binaural spheres.

Other new microphones included the CO 22 omnidirectional from Sweden-based Pearl Lab and an update of the C 414EB from AKG, the C 414B-ULS/SE stereo set.



Audio Technica AT899  
Microphone System

Wireless mics continue to proliferate. Lectrosonics showed several high-end "Digital Hybrid" wireless mics including the high-sample rate series 400 aimed at location recording and the encryptable series 700 for conferencing.

Sony showed several retail-packaged UWP models aimed more at the burgeoning camera-mounted, conferencing and workout markets than toward radio broadcast.

The Audio-Technica Artist Elite line (wired version) showed further expansion with the 4000 and 5000 series of wireless

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where the brainpower resides.

The semiconductor complement inside the Patriot reads like a "Who's Who" of the chip world. High-quality SMD components are running the show inside the unit, including two Analog Devices 2106 SHARC DSPs, several audio ICs from Analog Devices and National Semiconductor, a few Exar brand UARTs, six Cypress Async SRAM memory chips and a Conexant modem/data pump sending data down the phone line.

Internal construction is first rate and the PC boards are well mounted and ready for some knocking around in the gig bag.

The top panel offers two input pots, a Send and Return pair (for headphone monitoring of audio going out as well as mix-minus foldback from the station), the display with its extensive menu hierarchy, and the big dial-and-click selector encoder.

Once the menus are set, there is little reason to reenter them; the on-site operator must only be concerned with dialing and connecting.

The rear connections offer no confusion as to what gets connected where. A mini-DIN plug takes power from the line-lump supply. A single 1/4-inch headphone jack allows monitoring of the Send and Receive signals.

A mic/line selectable XLR input jack takes a single mic signal or the output from an external mixer, and is controlled by the Input 1 pot. An XLR output plug can feed a PA system or a recorder for the client to have a record of the day's broadcast.

MiniDisc or cassette deck into the Patriot (for playing back the coach's comments recorded before the big game) or a laptop computer soundcard (when the morning show sound effects collection comes along for the ride). This source is handled by the Input 2 pot.

Last on the back is the RS-232 interface port. Using software downloaded from Tieline, the Patriot can talk with a PC to determine and graph changes in line quality, keep an extensive phonebook of numbers the unit could call (on its own, the Patriot has a 50-number capacity), allows configuration of the unit by bypassing the displayed menu items, and can "chat" with the operator/screener at the other end of the line.

### Wired and running

My evaluation consisted of connecting the Patriot units to two local telephones in the greater Washington area and sending various types of program audio down the line.

The manual suggests that a connection of 28 kbps with a line quality of 70 percent was typical and would give ideal results. According to the company, the connections of the Patriot have been improved since the manual was written. Tieline now recommends a line quality of only 35 percent to obtain a stable connection.

Given local telephone use and typical congestion of the system in our area in general, the best connection I could achieve was 26.4 kbps, with a line quality averaging much lower — about 48 percent, within the newer guidelines.

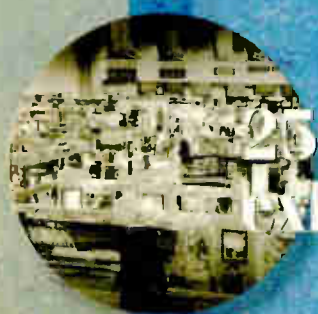
Car manufacturers often say "your mileage may vary," and indeed that is the See TIELINE, page 39 ▶



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# News From 1993 Finally Arrives

by Alan R. Peterson

Radio prides itself as being the one true medium that brings people together in the "me too" experience, where the emotion behind the well-crafted and -spoken words of one is experienced by many.

I have felt this enormous and powerful emotional sway throughout my broadcast career, whether I was listening to someone else's broadcasts, or just listening to myself spin a tale or weave a fantasy for listeners I was lucky enough to earn and keep.

You will forgive me some indulgence, then, if I take a serious tack and share something with you that has been on my mind for a while but only recently has moved to the front of the queue.

There naturally is a vast difference between radio and the printed words in this publication, but this column has been a conduit for both rants and heartfelt observations I have shared with you over the years, and this is one of those times I appreciate your company and readership.

## Proud soldier

In spite of this being a wondrous time of year, it is an uneasy one for me, as I observe the one-year anniversary of the passing of my dad, M.V. "Pete" Peterson, proud U.S. Marine Corps vet, formerly of Mineola, N.Y.



The acorn clearly does not fall far from the tree. The author, age 21, his mother Gloria and father M.V. Peterson in full Groucho mode.

Word of his passing last year came to me in a phone call only moments before I was to head out the door of my newly purchased home, on my way to the 2001 fall AES convention in New York City.

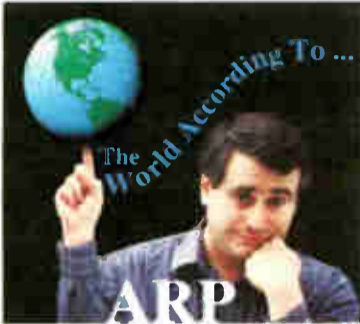
My older brother, who graciously offered to host me in his Manhattan apartment during my visit, stunned me with the news as I was leaving to catch a north-bound train from Washington to the Big Apple. My business trip to cover the convention for Radio World now took on a whole new priority as he and I now had to plan a military funeral.

In the last phone call I shared with my father, only days before, he was shaken but quietly introspective on the events of Sept. 11. The smoke plume from the World Trade Center had been visible from an upstairs window of his house.

He was pleased I was remarried after more than a decade on my own, thrilled I was back on the air and looking forward to seeing a VHS tape of the new house. He groused about something they said that

morning on WABC(AM) radio and hung on every word uttered by Rush Limbaugh day in and day out when it came to the Clintons.

He had no real plans for Thanksgiving or Christmas, but was anticipating seeing me on a visit while I was in New York for the AES show.



It was not the reunion we had planned. Still, he got the sendoff he deserved: a Marine flag ceremony, complete with "Taps."

Here is where the tale becomes entangled in time. Almost a year later — only a couple of weeks ago — my brother called again to tell me

he had found an envelope in my dad's desk that was intended for me back in 1993.

It was addressed to my old Harrisburg, Pa., apartment, only it was in my mother's handwriting. It appeared to be a letter and a bundle of clippings she had intended for me almost 10 years ago, if not for a fatal heart attack she suffered in June of that year.

My brother forwarded it to me, where I let it twirl around unopened in my fingers for the better part of an evening. It was just too eerie, that piece of mail that was never sent in its time. I was not sure if I should open it.

Before I continue, I really need to take you a major step back to the early days — when I was just getting my feet wet

— for you to appreciate my situation. I just hope I can do this without it sounding like some "When I vass your age ..." tale, but you have stuck with me until now, so I'll try my best.

I got out of school in 1978 with a degree in music. Yay. What was I going to do with it? I hated disco, I couldn't buy my own Moog lab-style synthesizer to indulge my real interests, and I sure didn't want to play in wedding bands on Sundays.

I took a job with a music-store chain, but grew weary of that within nine months. My real itch was to get on the radio and do a daily show.

My parents, no doubt pleased that my decision meant I would never endure playing seedy nightclubs or pawn my guitar for booze and gambling money, gave me their blessings. And in spite of their worst fears that I would be unemployed a few times and would probably never make more than \$75 week in my entire career, they let me give radio my best shot. My first job took

See ARP, page 40 ▶



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### Time Sync II

The Time Sync II provides four separate GPS time referenced outputs. The first is a SPDT relay which pulses once every 15 minutes. These times are programmed for 13:00, 28:00, 43:00 and 58:00 after each hour. The second SPDT relay pulses at the "Top of the Hour" (00:00). This time may be user programmed. The third output is an open collector with a 100 ms pulse every second while the fourth output is an

4800-baud, RS 232 serial port providing UTC time in HH:MM:SS format. The final feature is the "SIG" led and SPDT relay, furnished as fail-safe for either loss of satellite or power and invalid time. The Time Sync II is supplied in a small profile chassis, along with a Garmin 12 - Channel GPS receiver with embedded antenna.



ICM-16/MHI



ICM-16/Controller



PSC-II



ICM-16/Tool-Box 2



Time Sync II



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CC-II

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# AES 2002

► Continued from page 33

systems. Both systems include frequency scanning and have added Ethernet ports for PC/Mac control. A-T also re-upped its commitment to the astounding line of subminiature lavalier microphones that actually sound good with the AT899.

## Big rage

The other big rage of the show was high-end digital, especially DSD/SACD equipment.

Several digital audio workstation makers, and software providers too, showed high-end machines. Many of these, notably Merging Technologies and SADiE, demonstrated DSD/SACD-optimized turnkey DAWs.



Crest Audio Pro 200 Amplifier

Carillon, the DAW-optimized computer maker, showed its ultraquiet multiplatform models, including versions for the upcoming Pro Tools 6.0 (when it finally ports over to PC, that is).

And speaking of Pro Tools, Digidesign talked at length about 6.0, which will debut on Mac OS X before porting to Windows (no Mac 9.x legacy at all). Digi also showed the Digi 002 FireWire-based control surface/software package. Helping Pro Tools users is a new kid on the block, Bader. Its 51A is a surround monitoring controller for the Digidesign ProControl mixer/control surface.

Sonic Studio launched a high-definition DAW based on the old Sonic Solutions high-end platform, to which it has acquired the rights. A DSD/SACD upgrade is available.

On the software and plug-in front, Waves offered the 360 Surround Toolkit surround processing and mastering bundle for the Pro Tools HD platform along with announcing a porting of several other bundles to HD. Emagic joined in with PTHD, an interface for using Logic Platinum 5 with Pro Tools HD systems.

Off the beaten Pro Tools path, BIAS debuted a Mac and PC program, Sound Soap, for budget-minded users needing to scrub out a little noise from sound files. Akai showed several VST plug-ins for chorus, pitch shifting and whatnot. The chorus generator, Deca Buddy, was very cool, as was the rackmounted hardware version.

Intriguing was the Voyager Sound Windows-based GraphiMix, a plug-in (for Cakewalk Sonar) and software-based interface for surround mixing (Yamaha and TASCAM digital mixers to begin) that really has to be seen to be understood.

And to store all those recorded, mixed and processed bits, Studio Network Solutions and Storcase Technology showed the latest in storage technologies. SNS demoed Fibre Channel-based systems that offered 400 MB/sec throughput.

Genex Audio showed two much-talked about DSD-capable hard-disk

recorders, the GX9000 eight-channel recorder and its bigger sister, a 48-channel multitracker, the GX9048. The always-tantalizing Mytek Digital had a prototype DSD interface for basic SCSI hard-disk arrays, the D-Master DSD. No self-respecting converter maker dared show anything that didn't spec at least 96 kHz.

Eventide had a particularly interesting show. Besides showing upgrades for its numerous popular processors, DSP7000, Eclipse and Orville, it announced distribution deals with Manifold Labs and Princeton Digital. Interestingly, the sole product from Princeton Digital is the Reverb 2016, an emulator of the old Eventide SP2016 reverb box.

The Manifold Labs Plugzilla, a mysterious black box, was one of the most talked-about items at the show. It is a standalone rackmount device that runs

Steinberg VST plug-ins without the need for a host computer.

Also on the high-end processing front, Sintefex brought out three of their Replicator digital chameleon processors including the 96 kHz-capable FX8000.

## Live sound stuff

Contractors and live sound engineers were not ignored. The new Rane RPM 26z is the latest in a line of system multi-processors — this one with the Rane Drag Net Ethernet-based processor/system controller. XTA showed its line of Series 2 digital dynamics processors.



KRK E8t Monitor

Digigram continued its march into the world of Ethernet audio sound distribution with a pair of network eight-channel I/O products EtherSound ES8in and EtherSound ES8out. On the same wavelength, several companies such as Crest displayed advances into Ethernet networking for things such as amplifiers. For FireWire Otari (and Yamaha) showed an mLAN multichannel networking solution.

There was a mini boomlet of high-grade field recording equipment. The Sony SMX-P01 digital mini mixer gathered interest, as did a new entrant, Tamura from Japan. Working with

sound scenarist Frank Serafine, Tamura showed a battery-powered digital field mixer capable of surround mixing in the field.



Digigram EtherSound Units

Bigger consoles and mixers did not offer a lot new other than upgrades, although a notable name is Otari, testing the waters with the new DB-10, a small broadcast-oriented digital console.

Venerable Cadac finally brought over its S-Type live sound board for the first time, while John Oram/Trident Audio introduced several rackmounted mixers and channel strips. Continuing the Brit board fest, Soundtracs demoed the DS-3B, a 64/96-channel broadcast version of the DS-3 digital board.

inch woofered sub.

Truth Audio put some amps into its TA-1A box to create the powered TA-1P. KRK was even busier showing new mod-

els such as the M1-18 along with upgraded Exposés, KRoks and RoKits.

From Germany, ADAM (pronounced Ah-Dahm) demonstrated much of its line of high-end powered ribbon monitors.

On the installation side, QSC showed the ultralightweight ISIS series — passive boxes with 15-inch, 12-inch and 10-inch woofers and powered subs. Also new for installers are new members of the Celestion KR series, little dome speakers that would look at home on the front of a late 1940s sedan.

## Often overlooked is test gear.

Attempting to reenergize that market,

Rane debuted the RA 30 real-time analyzer.

The new U.S. distributors of Allen & Heath showed several club/DJ mixers, powered mixers and a family of contracting/installation system tools and products. The Sonifex RB-PMX4 is a new four-zone minimixer for contractors.

Back in America, Alesis wheeled out a family of small budget-minded desktop mixers along with a rackmountable eight-channel mixer. Roland also went to the rack with the M-1000, a 10-channel line mixer.

## Speakers not forgotten

One might say speakers had an off year (assuming you were not standing in front of the KRK monster M2-18). The growth of this market is in the smaller desktop monitors, often powered.

Yamaha has upgraded the MSP10, the designated replacement for the venerable NS10. M-Audio is sprucing up its line of powered desktop monitors and Alesis added another member to its ProLinear line of DSP-controlled powered speakers, the 720. Blue Sky simply cut to the chase with its ProDesk, a powered 2.1 system with a 5.25-inch woofer in its satellite base and an 8-

Mundane — but important — were cable introductions from Gepco (an amazingly spaghetti-like analog audio cable, the X-Band) and Belden. Added to that were more retail packaged versions of Mogami cable from Marshall.

Next to its solid core Zaolla cables, Hosa displayed FireWire and lightpipe network/transmission cables and repeaters.

On the amp side, not much was new, though Crest had a new line of amps, the Pro 200.

One area of growth is CD/DVD duplicating. Discmakers had on display its automated (with printer!) Elite series.

Often overlooked is test gear. Attempting to reenergize that market, Rane debuted the RA 30, a replacement for the previous RA 27 real-time analyzer.

Rohde & Schwarz showed test equipment for measuring surround audio devices. For the contractor, Studio Technologies showed the Model 90 Switcher. The 90 is an eight-input mic switcher with USB input for PC control and two outputs. The intended market is test and measurement input. 🌐

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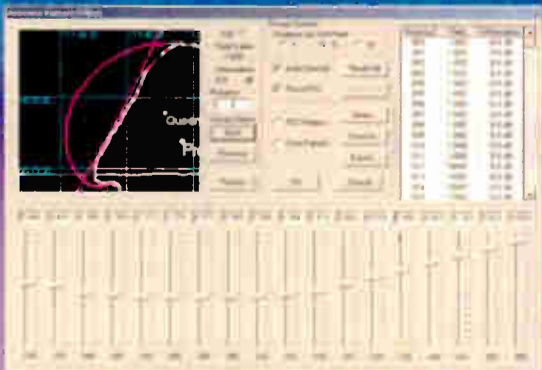
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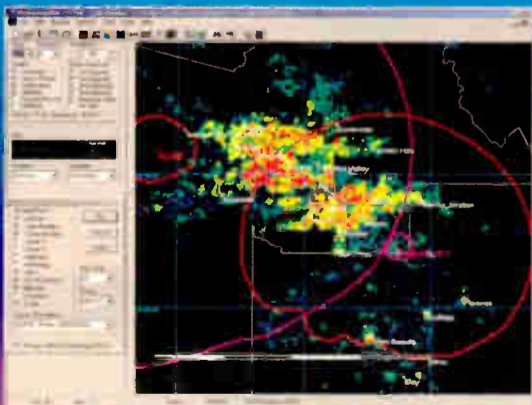
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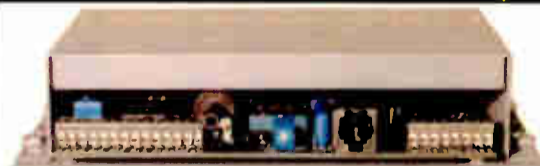
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# Tieline

► Continued from page 33  
case here. My experience has shown that, quite often, better connections and higher bit rates can occur on long-distance hauls. But more often than not, remote broadcasts are a local affair, with little more than a call placed from crosstown or into the next success.

Just the same, a 26.4 connection is nothing to make fun of, and I enjoyed considerable success over it.

My first check consisted of spoken-word transmissions and playback of some produced material. Fidelity at the other end was broadcast-quality, although I did experience some slight high-pitched ringing and artifacts on the voice. I can chalk much of that up to the iffy line quality and the attempts of the Patriot to correct for the losses and "fill in the holes."

The artifacts became more obvious

when I played a spoken commercial containing a solo drumtrack down the line. High-frequency content, such as hi-hat cymbals and tambourines, became chirpy and slightly smeared. Again, not totally a fault of the box, but line conditions which are out of my control.

Music seemed to fare somewhat better. With dense program material (i.e., loud classical music), the edginess I noted on spoken-word audio was less obvious.

This led me to an obvious ancillary application for the Patriot: a backup line-based STL should a station's primary STL be lost. As long as a phone line can make it up to the tower site, and as long as a loss of stereo is not much of an issue during an emergency, the Patriot can come to your rescue if needed.

Tieline claims dozens of stations are using the Patriot as their main STLs. Some of these stations are FMs, a large shortwave station and AM stations.

One TV station uses it for morning traffic audio.

I also noticed some "zippering" of the volume pots on the Send end. In varying the level of the Input control and the Send monitoring, I was aware of the audio stepping to its level, rather than gradually fading to it. Tieline says it intends to address this zippering effect with software upgrades that will smooth it out.

If you use a Patriot at a remote, you must tie directly to an analog line. Digital phones potentially can fry the unit. Also, it is necessary to disable Call Waiting and turn off extension phones at the remote site. Either one can cause a connection to be dropped.

Fortunately, the Patriot will redial the number and attempt to reconnect to the receiving end should the line go down.

Products such as the Patriot would not be fully appropriate as lower-cost alternatives to ISDN devices such as the Telos Systems Zephyr line. For immediate live broadcasts, yes, but as a high-quality delivery device in voiceover studios or airing of full-bandwidth stereo music, no. Some products remain better than others for their intended purposes.

## Observations

I have almost no quibbles about the Patriot. In fact, I enjoyed testing it out. There is something about getting 15 kHz audio out of a system designed for maximum 3 kHz that I find entertaining.

The presence of digital artifacts on compressed audio pumped down the phone is just a way of life for us right now. They can be minimized, but line conditions often force the issue. Metaphorically speaking, it is difficult to stuff that much sausage down such a little tube, although the unit tries hard.

When trying to handshake the line and settle on a data rate, the Patriot will engage audio, then mute out and step up to the next allowable level. As long as you don't have to fire up the unit and be on the air immediately, give the system a moment to settle out and pick a rate everybody can live with.

There is no shame in ending up with a rate lower than the ideal. At a connect rate in the 19 kbps range, my line quality was better and voice transmission still sounded fine and was perfectly airable.

Obviously, lower bit rates cost you fidelity in the upper end, but the connection seems more stable. In fact, you may manually dial in the range you wish as well as select a codec optimized for music or for speech.

Engineers read manuals; jocks do not. As the box was designed to be brought out and run by Mr. Morning and the promotions manager, the inclusion of a quick-start sheet (also unfairly

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called an "idiot card") would be a welcome addition. Not much, just a laminated card with some basic troubleshooting tips and a simplified diagram of the gazintas and the gazoutas.

This is not meant to replace instructions created by the station engineer for unique applications the Patriot may be put through, just enough to make things easier.

One item in the manual gave me pause for thought. In order for the Patriot to operate at its best, other devices with the potential for adding interference must be removed from the line. One piece mentioned is "clandestine devices." Well, forgive my observation, but how would you know if a clandestine device was tied to the line, much less try to remove it? And why would the boss have such a device tied to the line in the first place?

Not enough inputs for your taste? Connect a small mixer to the Patriot. It was intended for fast set up and go, and multiple inputs add expense while not always needed by everybody.

With the telephone company all but out of the business of leasing full-bandwidth analog audio lines, a POTS codec is the only way to go today without engaging in the expense and hassle of setting up a temporary ISDN line at a remote site.

The Tieline Patriot is an effective solution. As it uses a proprietary coding algorithm, I suspect the unit will not talk to other manufacturers' devices (such as a Comrex product). So if you obtain a Patriot, you will likely only be able to talk to another Tieline codec.

The trend for POTS codecs these days is to be as easy to use as possible, allowing a single talent to set up a remote with little effort. Products such as the Tieline Patriot make this possible and deserving of your attention. 🌐

## PRODUCT GUIDE

### AudioScience Pursues Lower Price Points

The ASI5111 PCI audio adapter from AudioScience, featuring a microphone preamp with phantom power, is being marketed as an affordable unit at \$549, with volume discounts available. The ASI5111 provides one stereo analog and digital input, one stereo analog and digital output, a microphone input, two record streams and four play streams. Audio formats include 8-, 16- and 32-bit PCM.

Analog and digital interfaces are standard on the card. The analog interface is balanced and uses 24-bit oversampling converters.

The balanced microphone input is designed to work with pro studio mics that require +48 V phantom power. Gain is software-adjustable up to 60 dB.

According to Stephen Turner, vice president and cofounder of AudioScience, the ASI5111 represents a new price and performance benchmark for the pro audio card market. The card is aimed at such broadcast applications as production, which does not require onboard audio compression. The mic preamp provides the user with a low-cost recording studio that is suitable for producing spots and promos.

For more information contact AudioScience in Delaware at (302) 324-5333, e-mail [sales@audioscience.com](mailto:sales@audioscience.com) or visit [www.audioscience.com](http://www.audioscience.com).



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Henry Engineering is out with an update to its venerable 20-year-old Matchbox.

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# ARP

► Continued from page 35  
me 360 miles away.

When we spoke on the phone on weekends, Dad would always jokingly call me "Dr. Johnny Fever," while my mother would beg me to look for a station closer to home.

They would come for visits in cities where I worked. Mom would bring a boombox to tape me off the air for her cassette collection. She would send me clippings of the radio columns from the New York Daily News and Newsday, just to keep up on what was happening "back home."

That was in 1979. She kept sending me clippings and letters until 1993.

The closest I got to home was my stint in Danbury, Conn., where many of my favorite

RW columns were penned and where I am pleased to say I picked up many of you as regular readers. I was well into my 30s, the letters and clippings still came from Mom and I was still Dr. Johnny to Dad.

Only three weeks into my Harrisburg experience in 1993 was when the letters stopped. My mother had a heart attack and never survived the operation to save her. It was the only time in my series I ever missed a deadline in RW, as I could not bring myself to write about anything.

Dad was never the same after that. He became moody and withdrawn and would never travel to visit me anywhere. Just to get him to walk the south shore beaches of Long Island with my brother, we practically had to abduct him from home.

I was no longer "Dr. Johnny," although when I came to Washington, he facetiously called me "Senator" for a while.

He never once questioned my decision to enter broadcasting as a career; he only wanted me to do what made me happiest in life. In spite of my classmates who went on to law careers or launched businesses, he never once gave me that speech ... "I talked to Cliff Jones' mom yesterday. Yeah, Cliff's making good money, has a house in Manhasset Hills blah blah."

He was pleased that he could talk to me about Rush, about Imus, about Larry King, about Art Bell, and I was happy to indulge him and his tirades about those #%^&\* Democrats. When he went last year, things got too quiet too quickly.

But I never expected to see a letter from my mother. Not a full nine years after I thought I had seen the last. The emotions of handling that envelope, thick with clippings, mixed with feelings of my Dad's anniversary hanging in the air, made it dif-

ficult to open it.

How would I feel about reading about some new neighbor down the street or how my grandmother was doing at age 99? What about the awkwardness of her standard closing line, "We'll talk on Sunday?" Would there be some mention of "when are you coming to visit?" Was anything in there worthwhile enough to be said after so many years?

And most grating of all, *why didn't Dad just send it to me?* Unfortunately, like the composition by the great composer Charles Ives, it will forever remain The Unanswered Question.

### Not exactly as expected

When I finally opened the envelope, it was after everybody in the house had gone to bed, leaving me alone with my thoughts and whatever emotions might overflow during the moment.

But when the moment came, it came with a raised eyebrow and an audible, "What on earth is this stuff?"

There was no letter. Perhaps she had begun to collect the clippings first, intending to write one just before sending it all off.

However, inside there was a photocopied recipe for some budget macaroni-and-cheese casserole that could feed four, some pieces from Consumer Reports, a report on seasonal allergies and the obligatory radio columns.

Both mentioned radio hosts that had come and gone in that fickle market that is New York City, although one concentrated heavily on the arrival of Pat "Paraquat" Kelly at WNEW(FM), and what big news it meant for the city. If memory serves correctly, Paraquat was at WNEW for maybe seven months between May 1993 and January 1994.

It was a moment that made me grin. I had all but forgotten this was the same stuff that she had been sending me since I hit the road in 1979.

I have long sworn off mac-and-cheese cuisine, having learned to cook creatively and being able to afford decent ingredients. Yet she must have hung onto the belief that I was still starving in cold, dark, third-floor flats.

The radio columns were completely useless now. I never heard of two-thirds of the people mentioned in those pre-consolidation-era days. Hell knows where Paraquat is today; the Internet just has where-are-they-now listings and little else.

Needless to say, I won't be using the Consumer Reports clippings. A toaster oven made in 1993 would be of little use to me now. As for my seasonal allergies, I find that by cutting out white bread and minimizing my use of sugar seems to cut my sensitivity.

It may sound callous, but I had no problem disposing of the clippings after I flipped through them.

I have better memories of my mother than a set of yellowed recipes and a jock press release. I eventually recovered her cassette collection, grateful for her diligence in capturing my early years on tape.

I wonder what Dad would have said had he still been around. I would have told him during one of our Sunday calls what was in the envelope, and he would have said, "Yep, that sounds like your mother."

So while I may be feeling low over entering the holidays without Dad around anymore, I have the memories and I can still draw motivation from the encouragement both he and my Mom gave me when they told me to chase my dream.

But man, do I miss him ...

## Enter to win one of 26 great prizes in Radio World's reader appreciation contest giveaway!

Dear *Radio World* Reader: Last year, many of the greatest names in our industry teamed up with *Radio World* for a year-long sweepstakes extravaganza that resulted in almost \$50,000 in prizes given away. Due to the overwhelming response from you, we've decided to do it all again in 2002 as a way of showing our appreciation to our loyal readers.

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To enter the contest you need to complete these three easy steps:

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## ◆ READER'S FORUM ◆

### GUEST COMMENTARY

# Do J-Schools Need A New Approach?

*Columbia Debate Sparks Heated Discussion Among Educators, Students and Professionals*

by **Barbara Cochran**

*The author is president of the Radio-Television News Directors Association.*

The president of Columbia University, Lee Bollinger, delivered a bombshell last August when he announced that Columbia would suspend its search for a new dean of the Graduate School of Journalism and instead form a commission to make recommendations on what the mission of the journalism school should be.

The most controversial sentence in Bollinger's announcement was this: "To teach the craft of journalism is a worthy goal but clearly insufficient in this new world and within the setting of a great university." Some thought the president was deprecating skills courses, such as writing and reporting. Anyone who has taken such classes, led by an inspiring instructor, can vouch that excellent writing and sound reporting are the very foundation of any intellectual endeavor.

The decision and the letter sparked a debate among alumni, journalism educators and news executives who might employ Columbia grads. Some feared that the school would put too much emphasis on research and critiques of the field and not enough on preparing bright students to enter it. Others said it was high time to shake up an outdated curriculum.

I've watched the debate unfold with mixed emotions, because I can honestly say that the Columbia Journalism School changed my life. Without my year at Columbia, I would never have gotten my foot in the door of a newsroom. I chose journalism as a career path late in college when my advisor pointed out to me that I was spending twice as much time editing the campus newspaper as I was on my studies.

But my college did not offer journalism as an academic subject. When I went to look for a job, my lack of training was a major handicap.

Columbia's graduate program was the perfect solution. In one year of intensive study, I was able to learn the basics, sample a variety of media and soak up the history, legal framework and philosophy of journalism. Our instructors — luminaries like Fred Friendly — had real-world experience, and many were full-time employees at the New York Times, NBC and CBS. I'll never forget the day Dick Schaap, a legendary sportswriter, brought Tom Wolfe and Jimmy Breslin to class.

With my degree, I was able to land a spot on Washington's afternoon newspaper, The Washington Star. Throughout the years, I've used the lessons I learned about libel

law, about writing a compelling first paragraph, about digging for a good investigative story.

Because of the Columbia program, I have been able to enjoy the excitement and satisfaction of working in journalism. I would not want to see the program changed so that it no longer prepares young people with the needed fundamentals.

The debate has spilled far beyond Columbia to engage all journalism educators. On a visit to the University of Missouri School of Journalism and at a meeting of the council that accredits journalism schools, I witnessed many discussions of what the Columbia debate might mean.

Nor is this just a matter of interest to educators and students. Journalism schools not only provide new employees, they also serve as laboratories, research centers and standard-setters, and they have enormous impact on the practice of journalism. Professionals have a big stake in this debate.

One way for professionals to have influence in journalism education is to reach out to nearby campuses, to visit classes, accept interns and serve on advisory committees. Another way is to participate in Radio-Television News Directors Association's Excellence in Journalism Education program, which places college instructors in a newsroom for a month during the summer, so that the educators can bring current ideas and techniques back to class.

RTNDA fosters the connection between professionals and educators. The annual convention, RTNDA@NAB, features sessions for educators and students. An educator representative serves on the RTNDA board. RTNDA also has a seat on the Accrediting Council, a group of educators and professionals that evaluates campus journalism and mass communications programs.

The Accrediting Council is adopting new standards that will emphasize the competencies that students should master. Among these competencies: respect for the First Amendment; a commitment to work ethically in pursuit of truth, accuracy, fairness and diversity; and the ability to think critically, creatively and independently.

These are much more than the craft of journalism. They are the principles that will prepare students to work in journalism no matter how much it changes. This is the kind of education I hope Columbia's students, and all others, will be fortunate enough to receive.

*This article first appeared in the November issue of RTNDA's Communicator magazine and is © RTNDA.*

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Ralph Ulrich, Vice President  
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Radio World, December 4, 2002

GUEST COMMENTARY

## A Solution to Low-Power Problems

*An AM Owner in Connecticut Says It's Time To Explore LPAM and LW Options*

by William Walker

I read Naina Chernoff's article "Pirate Radio Still Afloat" (July 17). It is apparent neither proponents nor opponents of alleged illegal unlicensed broadcasting don't have tangible solutions for solving the problem. With a finite number of frequencies available on AM and FM, it is not likely to get better in the years ahead.

Those in the broadcast establishment fail to understand fully what this is about. While a few select pirates simply like to rebel against authority under any circumstance, this issue is more about free speech and returning a local voice to our communities than a criminal issue.

Let's face it. We'd still be a British colony today if we had not created a civil disobedience over the right to govern ourselves free from British tyranny. People who broadcast with alleged illegal stations are doing this out of frustration because the system will not allow them to gain their own broadcast station.

### Angry and frustrated

Part 15 rules on FM offer miniscule power levels that render this service useless for any real substantive community service. Part 15 AM broadcasting does offer a better solution for achieving some means of an audience, but that will depend entirely upon the ground conductivity of a given location and how high up you can locate your antenna above the roof or surrounding structures.

If you are lucky and happen to be in a good spot, you can cover a small city or town with Part 15 AM, but for most it will be just a neighborhood or two.

**This issue is more about free speech and returning a local voice to our communities.**

These people are frustrated and angry at a system that has literally legislated genuine low-power community broadcasting out of existence and put full-power broadcasting out of reach for all but a handful of wealthy private citizens or major corporations. Desperate people do desperate things when the system no longer works or represents them and their social and political beliefs.

I have consulted with several broadcast engineers on this subject in recent months, and we've come to a conclusion that it is going to be impossible to implement any kind of new low-power broadcasting service on the existing FM band

or most of the AM band.

The possible exception may be the expanded AM band due to the limited number of stations slated to take to the air there in the next few years. Of the 85 or so approved to broadcast in the expanded band, about 50 to 60 seem to indicate they will move to the expanded band. It may be possible to add a new low-power service to the expanded AM band in many areas of the country as long as it would not interfere with existing TIS or expanded-band stations and those stations confirmed to move to the new frequencies.

I believe I have a better solution to this mess, one that has been overlooked by both sides.

### To-do list

First: The FCC should open up AM 1710 to unlicensed LPAM broadcasting. Change the Part 15 rules to allow a 1- or 2-watt service with a 10- to 20-foot antenna and simple ground system.

This still won't provide a signal strong enough to interfere with local AM broadcasters, yet should provide enough signal strength to cover a mile- to two-mile radius with a listenable signal even in areas with poor ground conductivity such as hilly and mountainous New England. Currently only one TIS has ever been licensed to use 1710; yet to this day no one seems to know if it ever went on the air. This frequency is literally unused, yet the FCC refuses to allow it to be used for something constructive such as LPAM broadcasting.

Second: Allow some form of licensed LPAM in the expanded band.

Again, not every metro area will be

able to support a station. New York City is filled with TIS and a licensed station at 1660 that essentially renders the expanded band useless for such broadcasting. But most areas of the country could benefit and see another station or two added to the AM dial without causing any additional interference problems. Rural areas would have little trouble getting a station and would only have to contend with nighttime skip.

Third: Long Wave, or LW. Popular in Europe and Asia but relatively unknown and unused here, this would seem to offer the most potential for large-scale development.

The FCC is clearing out a large part of the LW spectrum that is inhabited by weather beacons and airport stations. According to my engineering sources, the FCC has no plans to use these frequencies on LW in the near future. This would clearly indicate a large number of frequencies will be clean and free from any interference from existing stations.

Long Wave does not have the same kind of skip that is found on the AM band, thus allowing more stations to coexist on the same frequency without causing as much interference to a nearby station. Some skip does exist, but it is far less active than the standard AM broadcast band.

## People who broadcast with alleged illegal stations are doing this out of frustration.

Both licensed and unlicensed stations should be allowed in the LW band. Unlicensed stations should be able to run sufficient power along with a 20- to 50-foot antenna to cover a 5-mile radius allowing for signal saturation of a small city or rural community. Probably something in the range of 10 to 25 W with a short antenna could cover that radius. Licensed LW could run at higher power levels in order to create local service on par with that of a 250-watt to 1 kW standard AM broadcast station.

Critics will point out that people won't listen to LW because people would have to buy new radios. Well, people did the same thing when FM came along and then TV. Now it is HDTV and eventually IBOC AM and FM. New radios will be needed for each service, and given that many inexpensive LW and multiband

radios are available abroad and a few in this country, it will be easy to put these LW radios into the hands of potential listeners. I borrowed a page from Henry Ford's own blueprint for business when I came up with this concept.

### Call for action


Both commercial and noncommercial broadcasting should be allowed in each new service. By depriving small, independent enterprises an opportunity to advertise their services and products on radio like the Wal-Marts of the world, we create a hostile environment in which to foster entrepreneurial business ideas and allow big businesses to get bigger while cutting the throat of our corner markets, shoe stores, delis, record stores, etc.

Our local stores cannot afford to pay \$50 a spot on the smallest AM station, but certainly could afford to spend \$1 to

\$10 a spot on the local low-power station.

Neither side wants to give an inch on this issue, and neither side has offered any logical solutions to the problem. From a technical standpoint, I believe the proposed ideas for new services I've outlined are logical and technically feasible.

Let's give these some serious thought and put an end to the elitist system that dominates broadcasting. It is time for the broadcast establishment to create a logical and reasonable low-power broadcast service that won't leave out 90 percent of those who want in, and it is up to the alleged pirate operators to start working together to achieve some kind of meaningful dialogue with the FCC and NAB and come up with a solution to the problem. I believe I've given you a good start.

William Walker is the owner of WILW(AM) in West Hartford, Conn. 

### Sliding into sleaze?

The current Radio World ad by Radio Systems (Nov. 20) for their Studio Hub makes me wonder what happened. Has the ownership changed? Did they get convinced that because many (secular) broadcast stations use sex to sell, that *broadcasters* can be influenced by sexy photos of (implied) naked young women?

Oh, I know what happened — the cartoonist wanted more money, or ran out of ideas for new strips, and they were able to pay the dumb blonde about half as much to take off her top and hold a couple of wires for a photo — that's it.

This is about the third or fourth company that RW has accepted sleazy ads from. I do not have time to read RW at work anymore. And if the ads are going to become so suggestive I cannot take the magazine home and have my wife and children see it laying on my desk, then I may have to stop reading it.

Other trade magazines seem to focus more on humorous pictures, or just showing how good their product is. When a manufacturer resorts to sexy ads, perhaps they don't have anything good they can say about their product.

John Stortz  
Chief Engineer  
WKES(FM), WKZM(FM)  
St. Petersburg, Fla.

## ◆ READER'S FORUM ◆

### Satellite radio vs. IBOC

In his Sept. 25 opinion piece "Satellite Radio Falling to Earth?" Frank McCoy missed one factor that could rescue XM and Sirius: IBOC DAB.



If the experience of testing IBOC in Washington is any indication of how IBOC will work out, IBOC will result in the slaughter of terrestrial radio stations.

### 'IBOC test station WJFK(FM) reduced the receivable range for adjacent station WWMX(FM) down from 58 miles to 25 miles.'

IBOC test station WJFK(FM) reduced the receivable range for adjacent station WWMX(FM) down from 58 miles to 25 miles.

If this kind of experience is typical, listeners could lose the ability to receive between one-third to half of the stations they now receive!

Most of the stations lost will be the mom-and-pop, community, college and religious niche eclectic stations that are so few and far between, but have about 20 percent of FM's listenership.

That 20 percent will largely have no reason left to listen to terrestrial radio anymore post-IBOC jamming of their favorite stations.

*Christopher Maxwell*  
Secretary  
Virginia Center for Public Press  
Editor, DigitalDisaster.Org  
Richmond, Va.

Regarding Steve Sullivan's article on satellite radio ("Keeping an Eye on the Sky," Oct. 9):

I owned radio stations for 17 years, heavy on news and information, plus sports. Nearly a year ago, I put an XM Satellite radio in my pickup, and I can tell you I hardly ever tune in to regular radio anymore.

I get my news from TV and newspapers — the local station does a horrible job of local news — my weather from the Weather Channel, and if I need to know of traffic accidents blocking our road to Missoula, I usually have my scanner on.

Most radio stations now are jukeboxes with commercials; and when they do have announcers, they seem to be impressed with inane talk. I made a trip from Montana to visit relatives in Minnesota and not once turned on regular radio. I only lost the satellite signal once, very briefly, when I was going through a mountain pass here in Montana.

No, if I still owned radio stations, I'd be worried; but most can take heart, as so many folks I talk to are not familiar with what is offered on satellite radio. When they listen to mine, my friends go and buy one. I see that continuing.

*Ted Storck*  
Stevensville, Mont.

### Progress for AM

Paul McLane's article and the unnamed engineer's comments on the AM debacle were good (Sept. 25, "He Thinks AM Doesn't Need IBOC"). I wonder if it will cause anyone to act, though.

As an owner/operator of a few AMs, I appreciate the dialogue but desperately want to see forward motion. It has been said too many times, but we do not need another AM stereo situation (I had two AM stereo stations in my group), where it's too little, too late.

The Powerside idea is a good one if everyone will comply. Two of my stations use Powerside and clear, and there is a noticeable difference. To wait for the utility companies to bury millions of miles of cable is just a dream. A good AM station with a good audio chain being received on a good radio will do very well.

I would like to see the changes the engineer prescribed, in my lifetime, but I just do not possess the magic wand necessary to get the job done.

*Jonathon Yinger*  
President and CEO  
Midwest Broadcasting Corp.  
Detroit

## Is More News Too Much?

News is breaking. Is it okay to break your music format? Is it necessary to bust into J. Lo's latest record for a police briefing?

Given the events of the past year or so, this is not a casual question.

The folks who listen to news/talk radio expect the latest information. Your news/talk station probably even has a special sounder for breaking news.

But what serves music listeners best? When there is a crime spree in your market, or when terrorism warnings are at elevated levels, should your jocks break away for scheduled news briefings? How does one judge the level of the crisis? How often should your station crack format to cover breaking news? How much is too much?

Do you break the regular programming model — one your listeners have gotten used to and have expectations of — to report "breaking" news? Define "breaking."

This is where program managers step in. It is essential to put clear plans in place to handle such situations in advance.

Discuss these questions among senior managers now. Train your air staff, including part-timers, to handle such situations. Admit the tendency of music jocks to hype even a simple snowstorm. Discuss the implications of information delivery in a highly charged situation such as an active crime investigation or terror attack.

Here in Washington, as with the rest of the world, late summer found us commemorating the anniversary of the attacks on the World Trade Center and the Pentagon. Then autumn brought the Beltway Sniper, as he was dubbed. A madman (or, authorities now say, madmen) violated us, frightening an already-skittish populace with the cold randomness of the shootings.

For three weeks, terror and uncertainty, not unlike the days after 9/11, crawled back into our consciousness. People dashed from car to house, car to business. Parents ushered children into the safety of school buildings shielding small bodies with their own. Hand-lettered service station signs proclaiming "We will happily pump your gas for you" replaced "\$19.99 Oil Change" advertisements.

If action cures fear, then information creates control, or at least a sense of it. What more can you ask for in an uncertain situation? A theory to run by a neighbor as you process the emotions and uncertainty of the madness. Something to talk to co-workers about. Friends. Frightened relatives far away. "I heard on the radio ..." "Fox News is reporting ..." "According to the Post ..."

Radio and other forms of the media provide a vital service in such situations. The public had an insatiable craving for information in the sniper investigation, whether obtained via radio, TV, newspaper or the Internet.

Who cares if you dumped out of scheduled traffic and weather programming to air a press conference from the police chief and all that was announced was there would be no briefing? Listeners understood the unpredictability of the situation. They were as frustrated as programmers were.

The sniper investigation certainly was "breaking" news. Every aspect of it. Without continuing coverage, would the middle-of-the-night radio listener who heard the suspect car's tag numbers read over the air have tipped off police to the location of John Allen Muhammad and John Lee Malvo on Oct. 24?

We urge station programmers to err on the side of caution in this volatile time in our nation's history. More news is better news at times. If information is power, let your listeners hold onto what they can, to feel a bit in control. Let's err on the side of more information, responsibly delivered.

— RW

### Emmis and babies

I'm writing regarding the story "Emmis Gives Birth to 'Baby Shares,'" which appeared in Radio World's online NewsBytes on Oct. 21.

I find Emmis' present concern for its employees and their babies very hypocritical since in 1999 I was an Emmis employee at KHON(TV) in Honolulu and, while on FMLA maternity leave, I was reassigned from my anchor position to a general-assignment reporter position.

After complaining of this violation of my FMLA rights, Emmis "eliminated my position." My lawsuit against Emmis is set for trial in federal court in Hawaii in January 2003.

*Mary Zankis*  
TV Reporter  
Honolulu

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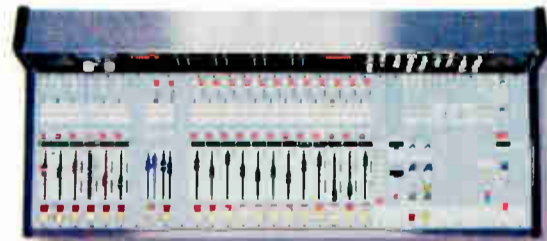
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