Save the Fine

Suddenly backordered for months, makers of profanity delays begin to upgrade a familiar class of products.

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Two views on how the indecency debate affects radio.

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Radio World

$2.50 The Newspaper for Radio Managers and Engineers April 23, 2004

INSIDE

Times Square Project Is Complete

by Randy J. Stine

NEW YORK Finished slightly behind schedule, but ahead of its time.

That's how project coordinators for the Durst Organization, owner of the Conde Nast Building at 4 Times Square, are describing the new 385-foot broadcast structure built atop the 53-story building.

The project was completed in mid-March despite being hit with heavy rain from Hurricane Isabel last fall and pounded by wind and snow this winter. The multi-tenant site is home at present to one primary transmitter site and eight auxiliary facilities, but has plenty of room for growth; the master FM antenna can handle 21 stations. The facility also serves several New York television stations.

Work began on the project in April 2003 with the dismantling of a 132-foot tower that had been built just four years earlier. Radio stations were moved to a temporary

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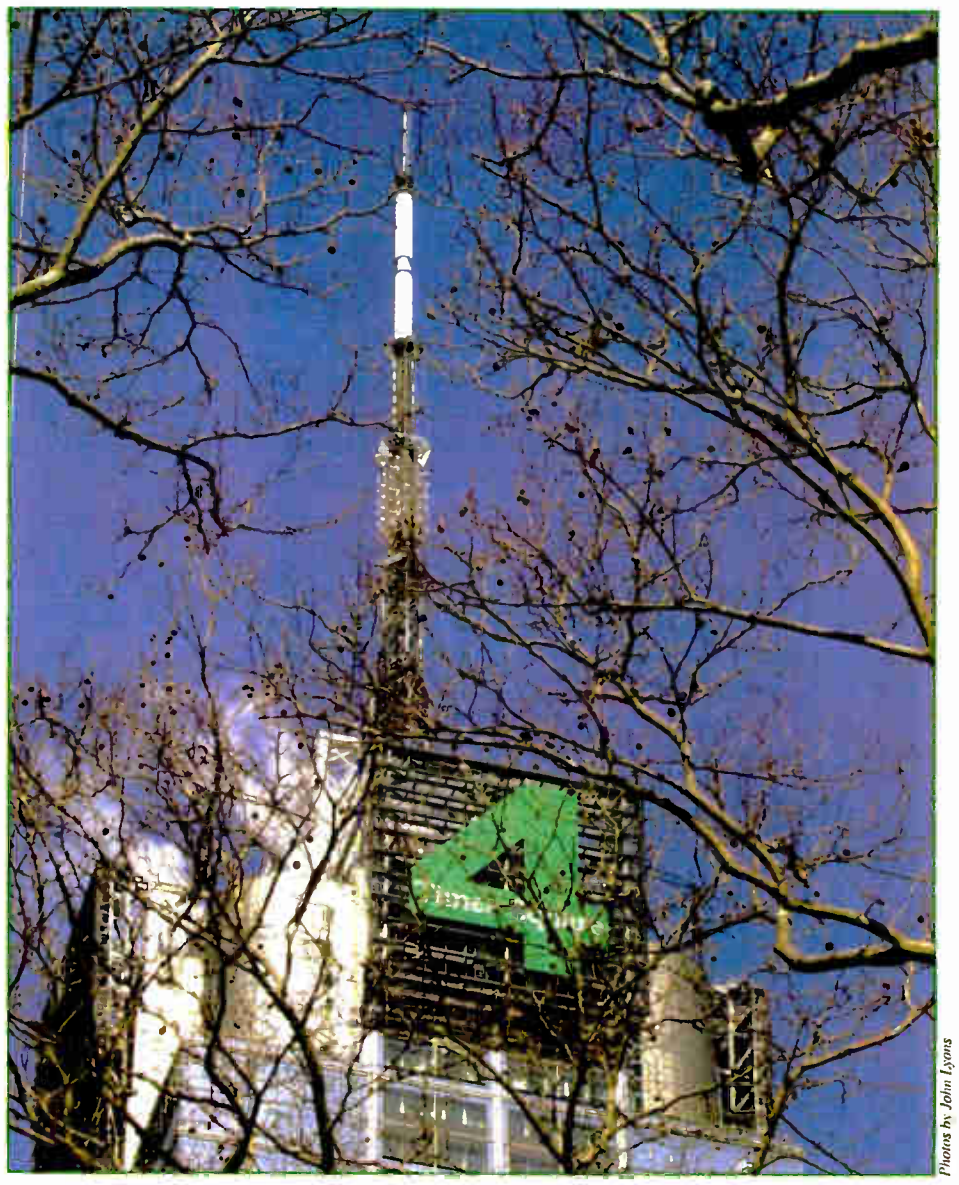

Photos by John Lyons

Fritts: Indecency 'Long-Term' Issue

by Leslie Stimson

WASHINGTON At the NAB spring convention, the association's executive committee and its radio and TV boards hoped to hold substantial discussions concerning broadcast indecency. Members of the FCC and Congress have encouraged broadcasters to develop a voluntary indecency code.

However, NAB President/CEO Eddie Fritts has that broadcasters' response to the issue is "not something that's going to be resolved in 30 days or 60 days. It will be long-term."

Meeting the day after NAB's March 31 indecency summit, its executive committee announced plans to form a Task Force on Responsible Programming. It will review options including the possible implementation of an NAB Code of Conduct.

Fritts called the trade association's summit on responsible programming "historic" and "constructive." He told reporters, who were not allowed in the room for the discussions, that the talks were not all one-way criticism of broadcasters and that attendees offered several ideas to combat indecency.

Several broadcasters and panelists said cable and satellite TV and radio should be included in the debate, Fritts said, adding that NAB has had recent discussions with the cable industry about this issue.

Among ideas discussed were a voluntary programming code, zero tolerance policies and lists of best practices, he said. These options and others were to be forwarded to the NAB executive committee for discussions at the spring show.

Asked about the likelihood of bringing back the programming code, NAB Legal EVP Marsha MacBride said, "We have options we didn't have in the 1970s when the old code was struck down by the court, such as the V-Chip."

She said discussion of the earlier code is a starting point and does not necessary indicate expectations it may be revived in some form.

The NAB programming code was eliminated after a Justice Department lawsuit over antitrust issues in the 1970s.

FCC Chairman Michael Powell "strongly encouraged" broadcasters to craft a new voluntary programming code. "Setting your own standards is your best defense" against indecency charges, he said.

As for broadcasters who've called for clear indecency guidelines from the agency, Powell said that would be unwise. Infinity President/Co-COO Mel Karmazin has called the commission's definition of indecency vague.

Powell said at the summit, "You do not want the government to write a 'Red Book' of Dos and Don'ts." Heavier government involvement in a so-called "Dirty Conduct Code" will not only chill speech, he said. "It may deep-freeze it."

The debate about media ownership has had a spillover effect on the indecency issue, he said, one he predicted broadcasters would feel for a long time. This is happening as traditional broadcasting faces competition from "the rise of satellite radio, the Internet, video gaming, and of course, TiVo."

FCC Commissioner Michael Copps challenged stations to eliminate indecent programming from the airwaves and "put the FCC on the enforcement sidelines."

"Anyone in industry or at the commission who thinks they can 'politick' this problem for a few months and it will magically disappear needs to crawl out of his or her cocoon."

Asked by Radio World what he thinks about zero tolerance policies begun by major radio groups, Copp called them a "good start."

Sen. Sam Brownback, R-Kansas, believes the Senate will vote on his broadcast indecency bill soon. His bill would increase fines for broadcast indecency dramatically, fine on-air talent for indecency and impose a "three strikes and you're out" provision, culminating in license revocation. It also includes a "shot clock" to ensure that FCC enforcement decisions are made in a timely way.

Indecency: Tempest or Teapot?

Two Views on the Broadcast Indecency Brouhaha

by John Wells King and John Crigler

Janet Jackson's breast exposure was the spark that lit the broadcast indecency controversy — a flame likely to continue burning until the fall elections. John King and John Crigler of the law firm Garvey Schubert Barer in Washington illuminate differences of opinion on the issue in this written exchange.

King: It's an entertainment bonanza! Look what a Super Bowl flash of flesh hath wrought. Democrats and Republicans alike get a win-win election year issue on indecency. Broadcast executives take heat in Hill hearings to jack fines up to half a million dollars. At Clear Channel, Bubba, Howard Stern and others are canned. The FCC says you're damn right that "f****** brilliant" is indecent. But does that get us anywhere?

Crigler: We are getting a lot more than we bargained for. The Super Bowl "fumble," as Sen. McCain likes to call it, is producing significant changes in the regulation of indecency. Congress may not only give the FCC authority to increase fines for indecent broadcast programs, but push the commission to extend its regulation of indecent material to other media, such as cable and satellite TV, that have not previously been subject to content regulation.

The FCC is also thinking hard about new ways to use its existing authority to "crack down" on broadcast indecency. The "flash of flesh" that lasted less than a second may have regulatory implications that last for years.

King: But you can't blame broadcasters for thinking that this, too, shall pass, since enforcement has been so sparse and selective. As my brother says about speeding, "Why worry? There are too many cars and not enough cops."

How is the FCC complaints staff of 20 lawyers going to process complaints that number in the hundreds of thousands for the Super Bowl halftime show alone?

Crigler: The agency is out to prove you wrong. It's true that the commission responds to complaints, and in the past this complaint-driven approach resulted in a good deal of inefficiency. The great majority of complaints were never investigated.

Now "indecency" is a hot political topic; it's easy to record programs; and even easier to e-mail a complaint to the FCC. Special interest groups, such as the Parents Television Council, are organized to facilitate the complaint process, and seem to be doing a remarkable job.

Within days after the Super Bowl incident, the FCC received more than 200,000 complaints — a record number. Complaints are now unlikely to fall on deaf ears.

The FCC is eager to regulate. The commission home page provides detailed instructions for filing an indecency complaint.

In the past, most complaints were dismissed because they did not satisfy technical requirements for establishing the likelihood of a violation. For example, the complaint may not have identified the station involved, the time of day when the allegedly indecent program aired, or attached a tape or transcript of the program.

John Crigler, left, and John King do their best to 'hear no evil' and 'speak no evil.'

Expect to see the agency become much more "consumer friendly." Complainants may be required to make only a minimal showing, and broadcasters forced to prove that they did *not* air indecent material.

King: Or convince the FCC that what they did air is *not* indecent. That's what bogs down the entire process. Many broadcasters who may find themselves in an unwilling but competitive "race to the bottom" must decide when entertainment turns into raunch, and when raunchy becomes indecent.

The FCC did not make that decision any easier when it adopted its definition of indecency: "language or material that, in context, depicts or describes, in terms patently offensive as measured by contemporary community broadcast standards for the broadcast medium, sexual or excretory organs or activities."

How would you analyze the flash of a bejeweled breast against that standard? FCC staff decisions more often confuse rather than clarify.

In a future case, when a multi-million-dollar fine may be at stake, an indecency dispute may wind up in the courts and take years to resolve.

Crigler: I'm not sure whether you're getting all excited over Janet Jackson's anatomy or the case it will take you years to resolve, but I certainly agree that there is something ridiculous about FCC indecency decisions.

Anyone interested in understanding the indecency standard has to ponder such illuminating decisions as whether "pissed off" is now part of our vernacular or an offensive reference to bodily fluids, whether "crap" any longer denotes excretion and whether the f-word is an adjective or a noun.

But you know as well as I do that the commission is going to say — as it already has said in many rulings — that there's nothing at all "vague" about a standard that punishes broadcasters only for material that is "patently offensive." The agency will point to its 2001 Policy Statement that establishes an elaborate analytic approach for determining whether a particular program is indecent.

Apply this two-tiered, mutlti-factor legal analysis to the flash of a bejeweled breast, and you'll have your answer. The process may be ridiculous, but what's vague about it?

King: Take one part broadcast program, add one policy statement, sift, divide into offensive and inoffensive portions (chaff and wheat, we might say), and simmer on the brain for 30 minutes at 98.6 degrees. It's a perfect lawyer's recipe in a perfect world.

In practice, it's as amorphous as an English fog. Whose "contemporary community broadcast standards" are we talking about? The FCC's? Does the agency apply differing contemporary community broadcast standards whether a complaint comes from Des Moines, Denver or Dallas?

Is what may be indecent in Newport News acceptable in Newport Beach? Or is the entire United States the "contemporary community"?

Does "in context" take literary merit into account? Would the broadcast of a Lenny Bruce monologue or a reading from "Lady Chatterley's Lover" be indecent?

The perpetual challenge the government will always face in ruling on issues involving social mores is that one person's artistic salsa dance is another's wicked and erotic, er, crap.

Crigler: Now we're getting somewhere, although I still don't think "vagueness" is the problem.

The indecency policy is based on "contemporary standards for the broadcast medium." Amazingly enough, these standards have nothing whatsoever to do

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A Life Among the Rooftops of N.Y.

From the Editor

Paul J. McLane

John Lyons thinks about 9/11 every day.

You can hear it over the phone as he recalls that morning. His voice constricts; he picks his words with care.

He remembers engineering colleagues who died atop World Trade — people like Steve Jacobson of WPIX(TV), a facility Lyons once helped rebuild.

"He was quite a character," Lyons recalls of Jacobson. "At the end of the day you'd say, 'Have a good night.' He'd always come back with, 'Don't tell me what to do.' ...

"I think of him putting on his hat, closing the door and slowly walking home."

Lyons isn't maudlin. He's one of the more clever and engaging people you'd want to meet. But when a guy spends most of his working day in the clouds, among the rooftops of New York, he can be excused for pondering 9/11 a lot.

Engineers who lost colleagues "think about these people every day," Lyons said. "Whenever one of the broadcasters is up here, the conversation tends to go in that direction."

World at his feet

"Up here" is Lyons' office on the 51st floor of 4 Times Square. From his chair he sees FM combiners a few feet away. Looking out the window, his view is of the Empire State Building.

4TS is the home of the newest facility serving radio and TV stations in the Big Apple, as reported in Randy Stine's cover story. Lyons is manager of communications and broadcast operations for The Durst Organization, a developer, owner and site manager that has 4TS and seven other buildings (soon to be eight), all within walking distance of each other.

Think of him as a landlord's agent for companies that need access to the high rooftops. He deals with broadcasters, microwave tenants, wireless facilities and laser links.

New York is his home. Broadcasting has been his life. For much of the past five years, 4 Times Square has been his focus.

Lyons started in broadcast engineering at age 17 and has worked in New York since. He began at WRFM(FM), a Bonneville station, in September of 1966. He worked at the transmitter in Queens, then moved that facility in 1967 to Empire, where he remembers throwing the switch the first time at 4 a.m.

He spent nine years at Sonderling stations WWRL(AM) and WRVR(FM). He worked for RKO General at WOR(AM) and earned his first chief engineer's position for RKO's FM station WRKS. But the FCC eventually forced the company to sell off its assets as an "unfit parent" in the 1980s. Lyons then went to DSI Communications for four years, designing facilities for broadcasters.

John Lyons pauses during inspection of the upper UHF steel tower spine as shipped from ERI, before Dielectric mounted the antennas, transmission lines, power dividers and radome.

The year 1994 saw him back in the engineer's office, working for Viacom at WLTW(FM); then he was named chief of WAXQ(FM). Both stations were sold to Chancellor Media, which became AM/FM, then Clear Channel.

In the course of these jobs, he has been involved in the planning, designing and moving of RF and studio facilities throughout the city.

Lyons has served on the SBE board and was president of the NYC chapter. He's an SBE Fellow and a member of the original certification committee; he is Life Certified as a CPBE.

He helped design the first broadcast facility at 4 Times Square as a tenant, representing Chancellor and AM/FM. His employer used it as a backup site for five stations. The structure, built in 1999, was designed to handle 12 stations and possibly a DTV master antenna addition.

But when the World Trade Center north tower fell, it took much of New York's broadcast infrastructure with it. The structure on 4TS suddenly looked too small.

It's doubtful anyone was more qualified than Lyons when Durst needed a manager of communications and broadcast operations. He joined the company in 2002 but certainly knew his way around up there before that. I suspect he already had a key to the men's room.

He has gone from broadcasting to real estate.

"It's been wonderful. ... I don't get the call at 3 in the morning saying the CD's skipping. I don't carry a pager."

Lyons has a personality trait I admire: a willingness to change direction, explore new things, extend his education. At age 55 he has earned a state real-estate license. He finds himself studying commercial property management, learning about leasing and marketing. After his subway ride home, he joins his wife Natasha, an aspiring children's author, and their 10-year-old son Matthew in doing their respective homework.

"Going back to school is not only a benefit for me, but it shows my son you're never to old to learn," he said.

Now he manages a site that is home to five TV signals, one primary FM and eight backup FMs. There's room for many more in both TV and radio.

This puts him in competition with Empire for broadcast tenants, but he sees the relationship as synergistic. He says 4TS "supplements" Empire, and he cites the importance of a backup site for stations that need to service their primary facilities.

After all his years in engineering, he says, this job "is me giving back to the broadcast community. ... I love that I'm still in broadcasting even though not working for a station. I kind of work for all of them. ... I'm here trying to make their lives easier."

If you scratch a broadcast engineer, you'll find something you don't expect. It's true of Lyons. He met his wife in Siberia, of all places; 10 weeks later she married him, during the 1992 NAB show in Las Vegas. Why had he been in Siberia? Because he is a former U.S. Pro/Am champion ballroom dancer who competed around the world. Also, he was a world-class dance photographer.

Lyons also collects historic documents, and possesses paperwork signed by every Russian czar and czarina from Elizabeth I through Nicholas II — including Catherine the Great — and every U.S. president from Monroe to Bush II.

As to his feelings about the big project he's just finished:

"I look up at the tower and go 'wow.' The fact I worked in this market for 38 years — just seeing a new tower go up in midtown Manhattan is kind of astonishing."

But 9/11 comes into his mind numerous times each day. He watched the first tower fall from the window of a taxi in front of St. Patrick's Cathedral as he was rushing to the studio of WAXQ. He remembers feeling that his work was "lying at the bottom of the pile, like everything else."

He remembers the engineers. And the guy who ran the window-washing rigs and was so friendly to visiting broadcasters. And the woman who operated the elevator from the 106th floor up to the 110th.

"I lost a lot of friends."

Texas Tower Replaced After Crash

by Kathy Merritt

MOUNT PLEASANT, Texas J. R. "Bud" Kitchens is breathing a sigh of relief. The president of East Texas Broadcasting Inc. has lived through every broadcaster's nightmare: seeing his tower on the ground.

The story begins on Jan. 26 at around 1 p.m., when an unusually strong windstorm sent the tower, which served four of the company's eight stations, crashing to earth.

"We had a cold front blowing through that day. There was a lot of rain. It was real wet," Kitchens said, blaming the fall of the tower on "a microburst."

The windstorm also blew over a billboard and highway signs and knocked panels out of a McDonalds restaurant sign nearby.

The tower, a 248-foot model built of steel pipe, had three sets of guy wires. According to Kitchens, the tower was erected in 1968; he did not know the name of the manufacturer.

He purchased the stations and tower in 1991. Four years ago, his company had new guy wires installed and the tower replumbed. When it fell, he said, the tower pulled the guy wires out on the west side of the tower. "The guy anchors, the whole concrete and everything came up."

Photo: Johnny Flanagan

The fallen tower is shown near the transmitter building.

The ground shook

The tower had stood behind the main studios and corporate offices of East Texas Broadcasting, headquartered in the town of Mount Pleasant, about 100 miles east of Dallas.

It held STL dishes for three FM stations: KALK(FM), Mt. Vernon; KSCH(FM), Sulfur Springs and KSCN(FM), Pittsburg, Texas. The tower also was the antenna for KIMP(AM) in Mount Pleasant.

Kitchens, who was 10 minutes away when the incident occurred, said staff members told him "the ground shook" when the tower toppled. No one was hurt.

As he rushed to the office, Kitchens grabbed his cell phone and called the firm that maintains the towers for East Texas Broadcasting, Threlkeld and Co. of Mineola, Texas. Someone from Threlkeld was at the site within 90 minutes, he said.

They began work immediately to get the stations back on the air. Within hours, Threlkeld's workers constructed a 120-foot temporary utility tower that would hold the STL dishes for the FM stations.

All three dishes had been destroyed in the crash. Kitchens said the facility had one back-up antenna and had to buy two used dishes. There was no back-up system in case the STLs went out, so putting up the temporary tower was the only to deliver the signals.

Kitchens said one FM station got back on the air the morning after the tower fell.

Another resumed broadcasting the day after, and the third FM was back on less than three days after being knocked off.

"I thought it was miraculous we had all three FMs back up in 96 hours," he said, giving credit to the sole engineer for East Texas Broadcasting, Bill Hughes.

The more difficult fix was getting the AM station back on the air. Kitchens rented a TGR50 temporary AM antenna system from LBA Group in Greenville, N.C. The station was back in business on Feb. 5 at its full power of 1,000 watts.

Make-goods

While the company scrambled to get its stations on the air, local news media reported on the fallen tower, letting listeners know what had happened. East Texas Broadcasting's four other stations in nearby Paris, Texas, kept the public informed, and the company provided updates on its Web site.

Kitchens said public support was phenomenal.

"Advertisers said, 'Go ahead and bill us, and then we'll take make-goods. The listeners were understanding. A lot of people called to see if we were all okay. We were missed."

Still, the company suffered financial losses. Kitchens said January is a tough month for revenue anyway, so getting back on the air quickly was critical. He said, however, that the 12-year-old East Texas Broadcasting Inc., a private company owned by three shareholders, was sound enough to weather the crisis.

One lesson learned, said Kitchens, is "to always make sure you check your insurance. Our insurance will pay 75 to 80 percent of costs. But that doesn't cover temporary towers."

According to Kitchens, the tower fall has cost the station about $70,000, including the $50,000 cost of a permanent new tower and its installation. Kitchens said insurance would cover about $45,000.

A permanent replacement was under construction and slated for completion in mid-March, built by World Tower of Mayfield, Ky., and erected by Threlkeld. The solid-steel-rod tower will be the same height and occupy the same location as the old structure.

The crash is not under investigation by any federal or state agency.

Indecency

▶ Continued from page 3

with the values of any particular community, or any actual listener or viewer.

They are based on what, in the FCC's view, is offensive to a mythical, "average" person. Behind what you characterize as an English fog is power that is anything but amorphous. Not to be too subtle about it, indecent material is material that offends the sitting commissioners.

At any given time, this group may consist of intelligent and well-intentioned people, but they are nevertheless political appointees who primarily consult their own tastes in deciding what is offensive. Those tastes are unlikely to find redeeming value in low-brow or "popular" culture — a race to the bottom — or in high-brow works of recognized artistic merit — such works that may well not appeal to the "average" person.

As a result, the FCC's indecency policy must constantly war with the First Amendment, which protects points of view that are not average. These voices include dynamic forces of cultural change and political dissent, the most creative impulses of our society.

A standard that empowers the agency to punish "offensive" speech may not be vague, but it is certainly arbitrary, since such a standard invests the power to determine what we hear and see not in the American public, but in government officials.

Go back to your own question: Do you really think the FCC would exonerate a broadcaster who aired Lenny Bruce or "Lady Chatterley's Lover"? Does that power seem "amorphous"?

King: I love a good rhetorical question. I'll return to the question I first posed: Does increasing fines for broadcasting indecency get us anywhere?

On the amount of fines and the rigorousness and extent of regulatory enforcement, clearly the bar has been moved. On the standard of review and clarity for broadcasters, your assessment is realistic: Indecent matter is what the commission says it is.

Crigler: The FCC is not only doling out bigger fines, but acting faster on complaints, so get set for more indecency rulings, if not clearer standards.

Reach the authors at jking@gsblaw.com *and* jcrigler@gsblaw.com. *Radio World welcomes other points of view to* radioworld@imaspub.com.

◆ NEWSWATCH ◆

Hinchey Seeks to Reform Media Ownership

WASHINGTON Rep. Maurice Hinchey, D-N.Y., introduced the Media Ownership Reform Act of 2004. The bill would reduce media concentration and ensure broadcasters meet their public interest requirements, he said.

"The current state of today's media threatens the ability of our democracy to function because it does not allow for the wide dissemination of information from diverse sources and viewpoints, thereby shrinking the marketplace of ideas," he said.

If passed, the bill would prevent any single entity from owning more than 5 percent of the total number of AM and FM broadcast radio stations nationally. The measure also seeks to set "reasonable limits" on the percentage of radio stations one company can control in a single market.

The measure would strike down the FCC's new media ownership rules, passed by the commission June 2 but now suspended due to court appeals; restore the Fairness Doctrine; and roll back the TV audience cap to 35 percent.

Allan Leaves Harris Broadcast

MASON, Ohio Harris is looking for an executive to head its broadcast communications division.

Bruce Allan, who held the job six and a half years, resigned in March.

In a statement, Harris Corp. CEO Howard Lance said Allan had resigned "to pursue other career opportunities."

"I want to acknowledge the many contributions that Bruce made to Harris during his tenure with the company," stated Lance, who's also serving as the division chief executive while the company seeks a replacement. An external search is underway, according to Harris.

Harris had no explanation beyond the statement by Lance about the reason for Allan's departure. It comes after a period of declining sales in that division. The broadcast segment reported revenue of $66.4 million and operating income of $2.6 million in the second quarter of fiscal 2004. Those figures were off about 30% and 56% respectively from the same period a year earlier.

At that time, Harris also said sales had increased for studio products and systems, an area heavily affected by the economic downturn. The company also said it was encouraged by the release of HD Radio receivers at the Consumer Electronics show and a $96 million contract to modernize the Iraqi Media Network.

'Regular Guys' Suspended

ATLANTA At the end of March, the Regular Guys remained suspended from Clear Channel's 96Rock, WKLS(FM). It was unclear when or if they would return to air.

Earlier in the month, the company suspended the morning duo after sexually explicit material was aired on the show accidentally.

Under the company's new zero-indecency tolerance policy, "Regular Guys" hosts Larry Wachs and Eric Von Haessler would remain off the air until an internal investigation was complete, said a Clear Channel spokesman.

The jocks planned to air an interview with a porn star backwards. But while taping the segment while a commercial played on the air, a mic was left open and the sexually explicit interview was aired under the commercial.

Omnia, Radio Experience Partner In RDS Deal

In a deal that revolves around RDS, Omnia Audio is partnering with The Radio Experience in a joint venture.

The companies said they will provide dynamic data technology for broadcasters wishing to datacast to RDS, HD Radio and Internet Web pages.

Frank Foti, president of Omnia, said, "Broadcasters have really begun to realize the positive potential in displaying dynamic information related to their on-air activities."

"RDS has been used widely in Europe since the 1980s," said Allen Hartle, president of The Radio Experience. "Now, as more cars sold in the American market come equipped with advanced radios, broadcasters see the advantages of adding the system to their service."

DG Systems Board Supports Ginsburg Despite Setback

IRVING, Texas DG Systems said its board "affirmed its support" for Scott Ginsburg as its chairman and CEO.

In March a panel of U.S. circuit court judges reinstated an earlier insider-trading jury verdict against Ginsburg, the former CEO of Evergreen Media, in a case involving stock tips to family members about stock in EZ Communications and Katz Media. The jury found that he had violated SEC rules and was liable for a $1 million civil penalty. The case didn't involve DG Systems.

DG Systems and its StarGuide division are a supplier of digital media exchange services.

Loh Goes to Rival Station

SANTA MONICA, Calif. Part-time commentator Sandra Tsing Loh, fired in March for leaving an obscenity in a taped commentary that aired twice on noncommercial KCRW(FM) in Santa Monica, Calif., has been hired by rival pubcaster KPCC(FM) in Pasadena, owned by Minnesota Public Radio. Loh's commentaries begin airing in June.

When she was fired, Loh blamed her engineer for leaving the obscenity in the commentary. KCRW took Loh off the air and fired her, fearing an indecency complaint to the FCC and possible license revocation due to the current heightened awareness surrounding the broadcast indecency issue.

The station later offered to re-hire her after learning that Loh had been in the practice of leaving questionable content to be edited out later — a practice station manager Ruth Seymour called a "mistake waiting to happen."

But Loh declined the offer to return, saying she wouldn't be comfortable at KCRW.

More information about the firing has emerged since. KCRW said it responded at first in only a "limited fashion" to Loh's account of the incident, and now says she hired a PR firm and maligned the station after the firing.

Loh will do part-time commentaries during KPCC's local inserts on NPR's "Morning Edition" and possibly "All things Considered," according to the station.

Anti-Satellite Radio Ads Have 'Flip' Side

WASHINGTON Should stations air ads pointing out the negatives of satellite radio? One attorney has says the practice might work to radio's disadvantage.

John Garziglia of Womble Carlyle says if satellite radio should only run national programming, the reverse argument could be brought to bear — that local broadcasters should only run local programming. "Which would mean no more voice-tracking," he said.

That's part of the undercurrent of recent FCC localism hearings, he thinks.

"The conclusion is stations should not be running one hour of public affairs programming on Sunday morning. Stations might be distraught at what the public thinks. Do they really want the flip side applied to them?" he asked.

Entercom in March launched ads on some stations pointing out the "negatives" of satellite radio compared to local radio, such as fees and signal problems.

Edwards: I'm Here for the Long Haul

by Leslie Stimson

WASHINGTON Bob Edwards says he's at NPR "for the long haul."

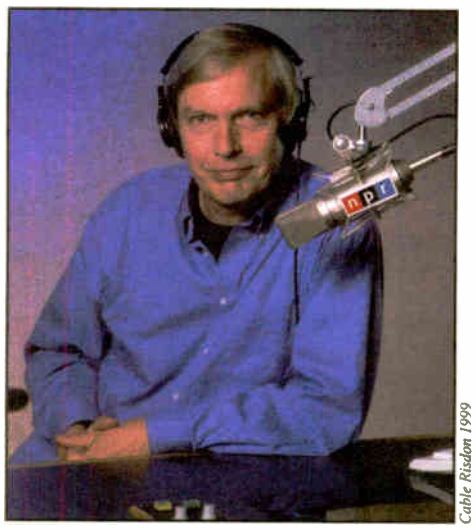
The announcement in March that Edwards would leave NPR's "Morning Edition" after 25 years was met with dismay by many long-time listeners.

The job change wasn't his idea. NPR spokeswoman Laura Gross called it a programming and news management decision. She said the network has been making changes to many shows and that the host change is part of a natural evolution.

"A new host will bring new ideas to the show."

She said Edwards would still be a part of the show and other NPR programs and that "his influence would be a mark on NPR programs for years to come."

Edwards was quoted by the Washington Post on the day after the announcement, saying he'd rather have stayed with the show and wasn't clear why he would no longer be on the program.



Cable Risdon 1999

NPR's Bob Edwards

NPR executives said Edwards is going to become a senior correspondent. But Edwards initially told the Post the announcement about his next job was "premature. We haven't settled up on what I'm going to do and what I'm going to be paid for it."

Gross said he had accepted the position of senior correspondent. "We're working out the details," she said. Edwards saw the news release before the network issued it, she said.

In a letter to listeners on the NPR Web site a few days later, Edwards stated:

"I want to take this opportunity to assure you all that I will be here at NPR for the long haul. And while this transition will be difficult for me — I am leaving a post that I have loved and have given my heart to — I look forward to continuing to be a significant part of NPR and the amazing program lineup."

He continued, "After April 30, I will become a senior correspondent for NPR, and while it is true that we are still working out the details of that position, I have no doubt that all my needs will be met and that I will continue to do journalism for this fine institution."

As the network looks for a successor, Steve Inskeep will co-host the program from Washington, and Renee Montagne will co-host from the NPR West studios in Culver City, Calif.

Some public station managers like the lively delivery of Montagne and Inskeep, while others prefer Edwards' more soft-pedal approach. Some expressed concern that the change might affect spring fundraising.

"I am proud to have served with my 'Morning Edition' colleagues, who perform a daily miracle at ridiculous hours when resources are not abundant," said Edwards in the news release on March 23. "I am grateful for the many years of support from NPR member stations and look forward to continuing to visit them and meet our listeners. 'Morning Edition' will continue to be my first source for news. I wish all the best to its new host."

The 56-year-old joined NPR in 1974 when the organization was in it third year. He was a newscaster and later co-host of "All Things Considered" before moving to "Morning Edition" as its original host in November 1979. Today "Morning Edition" is the second most-listened-to national radio program in the country, after Rush Limbaugh, and the top morning program.

"Morning Edition" has nearly 13 million listeners, according to the network.

NPR's Senior Vice President of Programming Jay Kernis said, "During the past 25 years (Edwards) has had one of the toughest shifts in American broadcast journalism. In his new position as senior correspondent, Bob will have more time to pursue stories that are of interest to him, place those stories on different NPR news programs, and get to wake up at a normal hour for the first time in a quarter of a century."

Edwards is the author of two books, "Fridays with Red," which chronicles his radio friendship with sports broadcaster Red Barber (1993); and "Edward R. Murrow and the Birth of Broadcast Journalism," to be published in May 2004.

Edwards joins several other senior correspondents at the pubcaster, including former "Talk of the Nation" host Juan Williams and former "All Things Considered" host Susan Stamberg.

His last day as anchor is April 30. He said he planned to go on a book tour.

Times Square

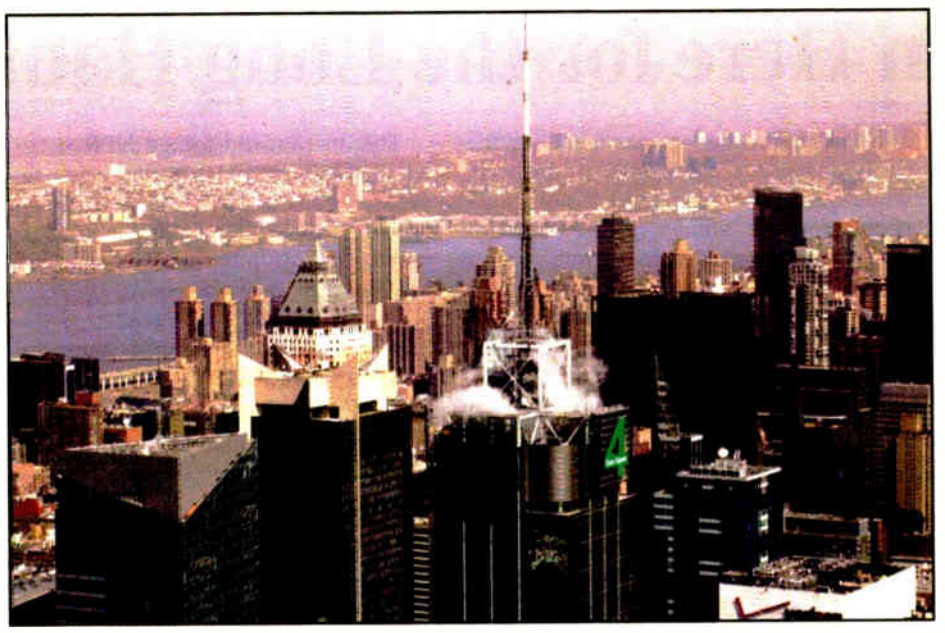
▶ Continued from page 1

master antenna during construction.

The Durst Organization conceived the idea of building a larger tower after the 9/11 terrorist attacks, which destroyed the broadcast facility atop the north tower of the World Trade Center. Durst hired John Lyons, former chairman of the master FM antenna group at the Empire State Building, to lead the project.

The 4 Times Square transmission facility is an auxiliary site for Clear Channel stations WAXQ, WHTZ, WKTU, WLTW and WWPR; Spanish Broadcasting's WSKQ and WPAT; and noncommercial WNYC. It is the primary site for Columbia University's WKCR.

Project coordinators call the $25 million structure state of the art thanks to its "plug-and-play" combiner design and RF detection system. The new FM master antenna, a Shively Labs 6016-3/4 modified master, is a half-wave-spaced antenna in both the vertical and horizontal planes. The new master FM is HD Radio-ready.



The new structure is a notable presence in midtown Manhattan. Times Square is on the right.

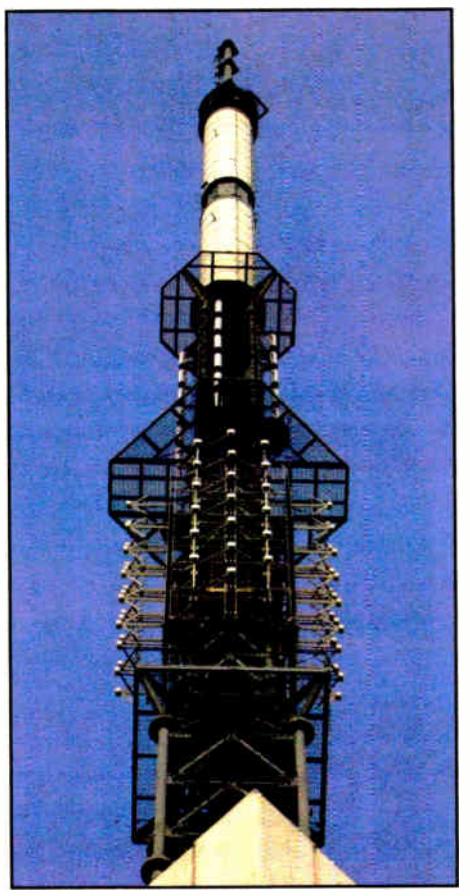
A lot of people want to sit and see how the site performs before they will commit to it.

— John Lyons

The Shively 6016-3/4 modified has twice as many dipoles as the company's typical 6016 and is designed to diminish downward radiation to allow for a more flexible maintenance schedule, according to Shively officials.

The master FM antenna is a "four around" or four-face system and has a modified feed system that provides the equivalent gain of a seven-bay, half-wave-spaced array.

"The winter was very tough and the hurricane brought us a lot of rain last fall. In total we lost maybe eleven weeks to weather," said Lyons, manager of communications and broadcast operations for Durst. "We had electricians ready to go many days, and they couldn't physically work and were simply frozen out."



The Shively antenna is at the bottom portion of the picture, below the octagonal ice shield. Ascending above it is a high-band VHF Dielectric open-grid antenna; a low UHF Dielectric antenna in the bottom half of the white radome; a high UHF Dielectric in the upper half of the radome; and, on top, Channel 68's Andrew Trasar.

Electronics Research Inc. designed and constructed the new rooftop structure and coordinated work by suppliers on the project, including Shively. Dielectric Communications handled several TV antenna projects.

"I would say everything went fairly smooth. ERI has developed the reputation for pulling off these types of projects. Just moving the iron workers, steamfitters and plumbers in and out of the building was a chore," said Lyons, who expressed delight that he was involved in putting up a new broadcast tower in Manhattan.

"That's something very few people have had an opportunity to say," Lyons said.

The Conde Nast Building's highest occupied floor is the 48th, with the remaining five floors dedicated to housing HVAC and mechanical systems, two-way communications gear, and radio and TV transmission equipment.

Architects had designed to the building to include a broadcast structure, Lyons said, which meant little structural retrofitting had to be done to accommodate the larger broadcast structure.

"We are air-conditioning all transmitter rooms from our central plant, providing power backed up by 5.5 megawatts of generators," Lyons said, "and have chilled water for any tube transmitters installed."

Lyons said several television stations have penned agreements for both analog and digital transmission from 4 Times Square.

"We have the capacity for several more television antennas and room to serve as an aux or primary site for every FM in the city. A lot of people want to sit and see how the site performs before they will commit to it," Lyons said.

Lyons said there is no "buy in" required of stations wanting to join the 4

See TIMES SQUARE, page 10 ▶

4 Times Square Broadcast Facility

Tower Designer:
ERI

Structural Engineer:
Ernie Jones, P.E.

Antennas:
FM: Shively
VHF & UHF Master Antennas: Dielectric
Channel 68: Andrew

Transmission Lines:
FM: Myat
TV: Dielectric VHF & UHF from combiners to antennas
Channel 68: Andrew

Combiners:
FM: Shively
TV: Myat

Monitor System:
Harris Recon

Pressurization:
Andrew Nitrogen Generator with H&E custom manifold for pressurization and vacuum

Riggers:
Delro Industries
Superior Tower

Construction Manager:
Tishman Construction Co.

Tower Electricians:
Hatzel & Buehler Inc. (installed antennas and TX lines)

Empire Mini-Master Is a Go

NEW YORK The 4 Times Square project is not the only new broadcast structure going up in New York City this year.

At least three stations are sharing the expense of adding a "mini-master" antenna and combiner system at the Empire State Building.

Jim McGivern, chief engineer for Emmis-owned WQHT(FM), said the Empire State Building Mini-Master Operations Group has placed an order with Electronics Research Inc. to build the system and handle installation on the $3 million project.

Broadcasters have scrambled to find alternate transmission sites since the collapse of the World Trade Center buildings on Sept. 11, 2001. The ERI master combiner system at the Empire State Building is at its maximum capacity of 16 radio stations. A handful of other stations broadcast from Empire but are not part of the master antenna group.

"It's basically a turnkey installation by ERI for us. The hardware has been ordered and work should begin sometime during June. A lot depends on the multiplicity of TV work going on there this summer," McGivern said.

The stations going on the mini-master are Disney/ABC-owned WPLJ, Emmis' WQHT and Infinity's WCBS, all FMs. The mini-master will have room for five stations total, McGivern said.

"We have a 60-day window for installation scheduled, so that puts us into August to have it completed. Then we'll go through the certification process," McGivern said.

The project also calls for a new two-bay ERI antenna for backup transmission capabilities for the three radio stations on the mini-master, he said.

The mini-master will be on the old WQHT aperture, directly below the Electronics Research Inc. master antenna, McGivern said.

ERI Product Line Manager Bill Harland said the mini-master FM antenna will be a single-bay ERI COG4-60S-120-1, which is omnidirectional in the horizontal plane. The auxiliary antenna will be a two-layer standby. An ERI 970 series constant impedance combiner will complete the project.

"The main antenna and the combiner are designed with IBOC simulcast capability," Harland said.

Mark Olkowski, chairman of the master FM antenna group at the Empire State Building, said there has been a lot of movement of television antennas since 9/11, but not much that has affected radio stations on the ERI master.

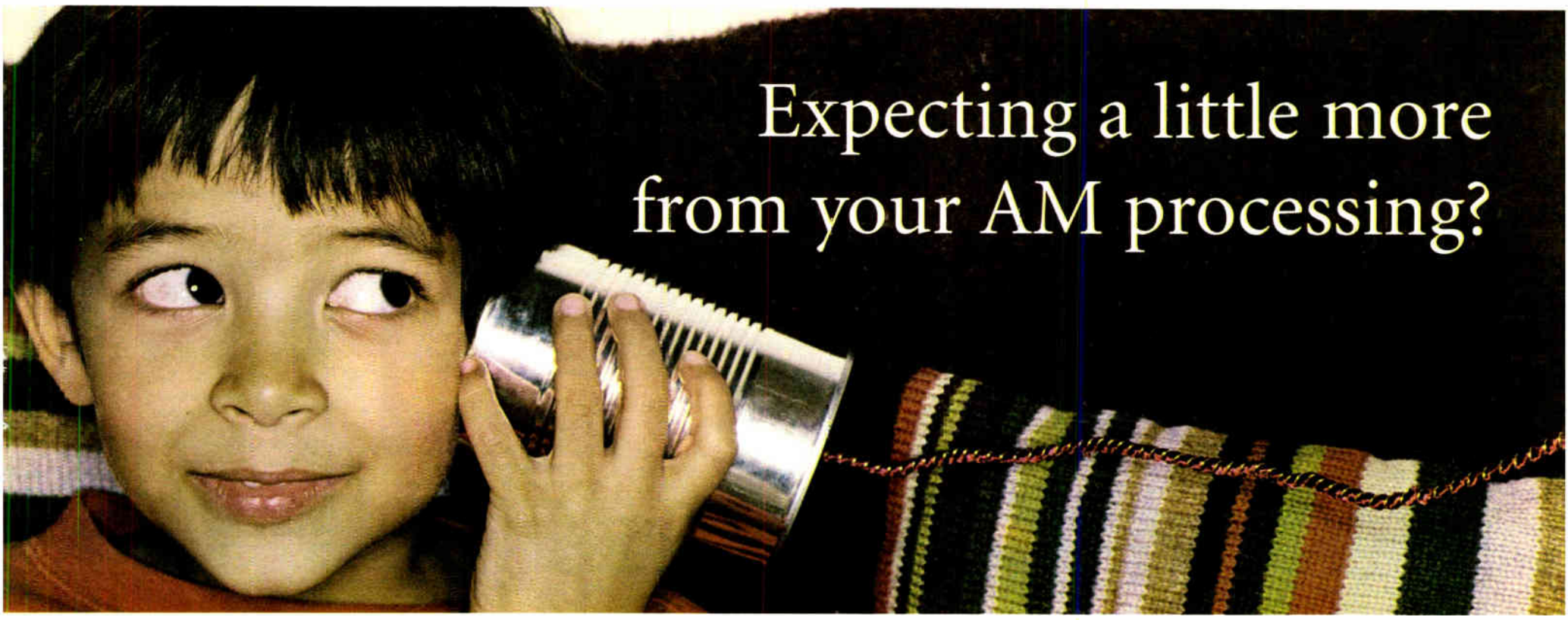
"We are just waiting to see what shakes out of all the TV movement. (TV) guys are scrambling for deck space like they are on the Titanic," Olkowski said.

The Metropolitan Television Alliance, a coalition of a dozen television stations organized after 9/11, intends to place a broadcast tower on the proposed redevelopment project at the site of the World Trade Center, called Freedom Tower. Sources say that project will not include radio broadcasters.

Since 9/11, most New York City television stations have been relegated to broadcasting from the Empire State Building at reduced power, Olkowski said.

The Empire State Building claims to have erected the first master FM antenna system in the world in 1965. The original Alford master antenna was the first to allow individual FM stations to broadcast simultaneously from one source.

— *Randy J. Stine*



Omnia-5EX for AM delivers.

Many people are saying that HD Radio will benefit AM stations most, because the fidelity improvement will be so dramatic. Probably so. But you'll need a processor that gives you maximum quality on a low-bitrate coded channel. You need a processor designed by people who understand both processing and audio coding - and nobody knows these audio arts better than Telos / Omnia.

The new Omnia-5EX HD+AM has enhanced processing for standard AM, and a second limiter section and digital output for HD Radio. Both limiters and outputs are included as standard.

The new Omnia-5EX HD+AM is the only processor that accomodates **both your analog and digital channels** in a single unit that easily integrates with your HD encoder and transmitter.

Processing for the HD Radio side is smooth and clean, capably handling AM's programming variety - and really showing off the digital channel to listeners first sampling the new medium.

For those who don't need HD Radio capability, there's Omnia-3AM, with a four band limiter, wideband AGC and our famous high-performance, non-aliasing final limiter for sweet, clear, natural audio that keeps listeners hooked.

And you get a **potent upgrade for your analog AM.** Consider: Omnia AM processing is already on many legendary 50kw stations. Understandably, most of these want to keep their advantage a secret. But if you imagine the major AM signals - the real flamethrowers that sound great - you may very well be hearing an Omnia. CEs at these stations tell us, "Phone calls are clearer than before. And the bottom end is phenomonal, so the promos really punch." "Amazingly clear - even when we're in the 5 kHz analog mode for HD Radio compatibility."

You should expect more from your AM processing. More clarity, more presence, more power, more flexibility. Omnia-5EX HD+AM delivers.

Omnia
A Telos Company

omniaaudio.com

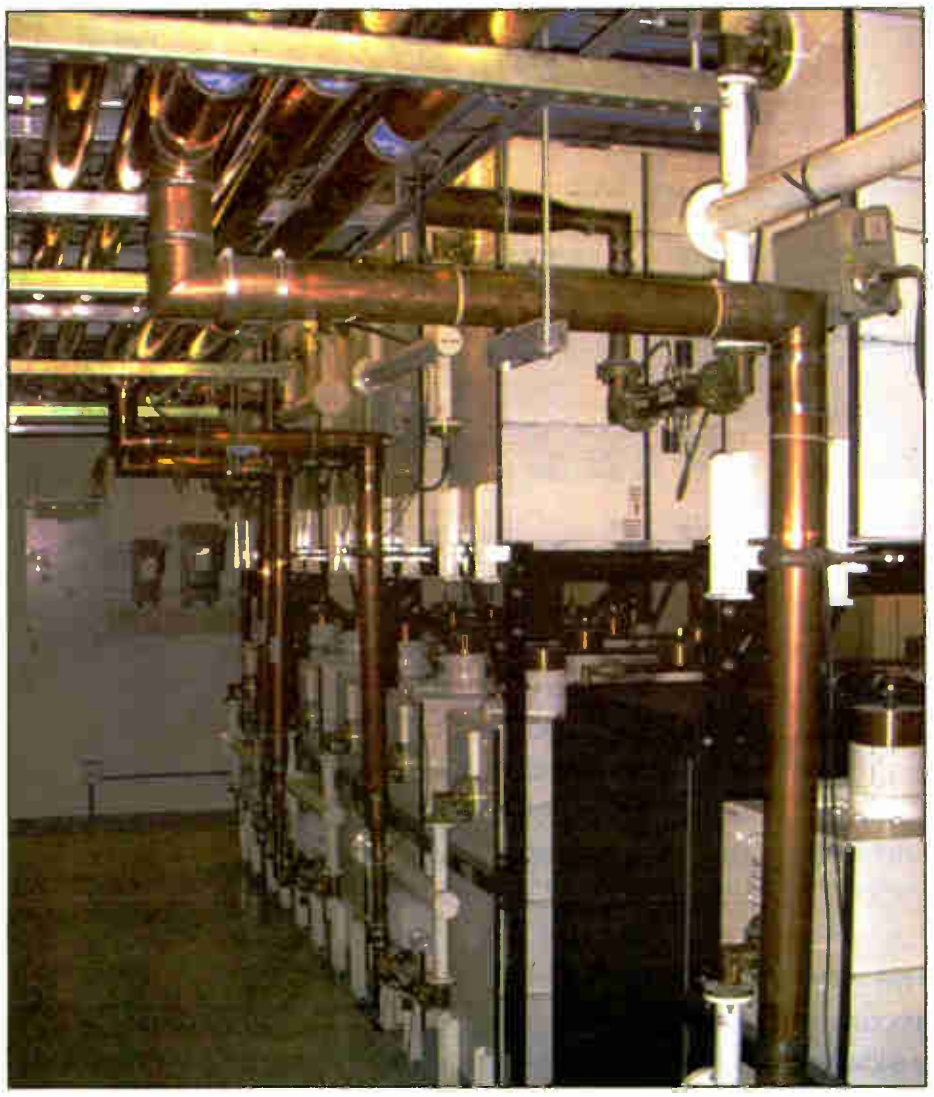
Times Square

▶ Continued from page 8

Times Square master FM. Stations negotiate individual leases with Durst, typically for 15 years including renewal options. Lyons declined to release financial details of such agreements.

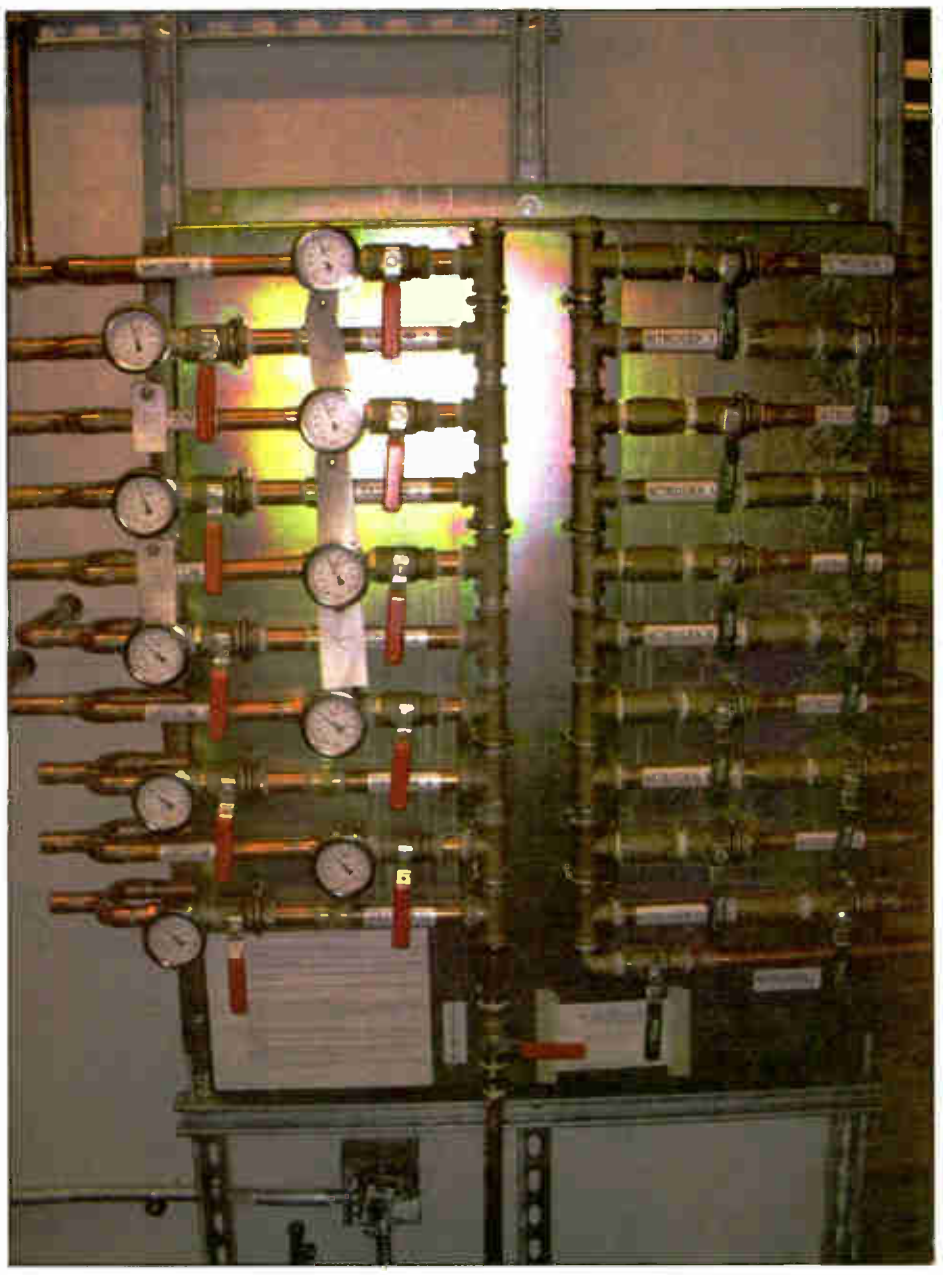
David Allen, sales manager for Shively Labs, said the Shively "balanced combiner" is designed to give broadcasters flexibility when joining the system.

"It's designed so any station can join in any order. Some combiners, as you add to the station to the chain, it has to be in a set frequency order. Not this one," Allen said. "Stations just show up with their transmitter and Shively combiner module and plug in."



Shown is part of the input side of the Shively FM combiner system. The short black rack is the Harris Recon Monitor System cabinet.

Having to move modules and reconfigure the combiner every time an expansion occurs is labor intensive and require a lot of downtime, Allen said.



An Andrew NXT-2000 Nitrogen Generation system pressurizes the transmission lines; the pressurization/vacuum manifold is shown. Gauges at left show pounds per square inch when pressurizing and inches of mercury when vacuuming.

"As the combiner gets larger, so does lost air time."

An FM combiner system mixes signals of multiple transmitters over the same transmission line and antenna in such a way that they will not interfere with each other.

"Every transmitter feeds a combiner module that keeps the signal moving up into the master antenna and not back into the transmitter next to it," he said.

The FM master is IBOC-ready, with parallel analog and digital feed systems. The radiating elements of the antenna are fed through four-port hybrids, Allen said.

"The analog and digital feed systems each feed an opposite input port of the hybrid. The hybrid then combines the analog and digital signals and distributes them to the radiating elements."

"This is the classic back-feeding concept," Allen said.

Like all skyscraper installations, floor space was a special consideration for the 4 Times Square project. "Things are always tight," Allen said. "This new combiner is very compact, and module design in this case was square instead of cylindrical to take up the minimum amount of space."

Lyons said the FM master antenna was the last to go up during the project, with television antennas placed above it.

"The TV antennas went up fully assembled. So you're talking 26,000 pounds coming over the side of the building from the street," Lyons said. "The FM master had to come up in parts ... the panels, tower dividers and hybrids."

The top of the new 385-foot structure at 4 Times Square, clearly visible from the observation deck of the nearby Empire State Building, is 1,018 feet above street level, Lyons said.

The digital studio system with the feature nobody else offers: Pay 50% of the cost with spots!

Barter may be offered to stations in top 200 markets only. Trade-out ratings and 36 month cash lease on balance. Ask for details.

Rated stations in the top 200 markets can conserve cash and still get the new Scott SS32 or Computer Concepts' Maestro digital systems they want. Our exclusive new ***trade*** option lets you cut your monthly cash payments in half by adding a barter ad schedule.

Best of both worlds

Barter ads can be booked as revenue, yet most stations can fully capitalize, depreciate or expense the new equipment. The bonus 9/11 tax write-offs may make it very advantageous for your station to get new capital equipment right now.

Use the barter power of your unsold air time to add those helpful extra features your announcers have always wanted. Trade-out several wireless PDAs with recording, editing and upload software that can go on the air quickly—even when your Scott studios are unattended.

Barter Voice Trackers, extra CD rippers and production studios. When announcers can record bits at home, they'll spend more time on show preparation. Get our fast phone recorder-editor, remotes over the Internet, co-host and large touchscreens. Add stretch and squeeze (without pitch shift) for perfect spot timing in network breaks or slipping an extra minute of spots in a time shifted network show. You may want our obscenity delay, logger, newsroom, a backup system at your transmitter, or bells and whistles you've never had before. Scott's barter program makes these more affordable than ever.

Scott Studios' SS32 has a new look, new power and new features.

Always stay within your budget

Your new Scott system has no hidden costs. Support fees and all shipping can be included for barter. Your studios will always be state-of-the-art. You'll get new features quarterly and new computers every 3 years. You get a 3 year warranty, plus on-site service by the computer's manufacturer.

Group owners can run spots in top 200 markets but install bartered Scott systems in large and small markets anywhere.

Shown is a two-screen SS32 at WGFX, Nashville. Citadel has Scott systems at virtually all its 200 stations. Of the 25 largest broadcast groups, all but one has bought several Scott Studios systems recently.

Saving cash through 50% barter is just one benefit Scott Studios offers that other digital audio vendors don't. When you compare the "great new features" others introduced at this year's NAB, note that Scott Studios' SS32 had virtually all of them a year or two ago!

Even before we offered barter, more radio stations chose Scott Studios' and Computer Concepts' air studio systems than the second and third ranked vendors combined.

Fast phones

Every time a jock answers the phone, it can be auto-recorded. No need to start, stop or make labels (unless you want to). Editing and airing great phone calls is as quick as a flash!

Segue editor

Fine-tune music, sweeper and jingle transitions to perfection, either in Scott's Voice Tracker or air studio.

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Promos with hooks—short clips of upcoming songs—are easy to build in SS32.

SS32's hook promo stacker

Voice Tracker

Scott's Voice Tracker via Internet doesn't require corporate or duplicate music libraries. Our Voice Tracker stations usually sound better than live.

Emmis' SS32 studio at WKQX, Q-101, Chicago. The guest microphones are used during Mancow's Morning Madness.

Remotes by Internet

Scott gives you money-making abilities to run remotes on short notice, anywhere, at any time. Without anyone in the studio, announcers can run the board with a laptop PC. Remotely start, stop and play anything. Adjust levels, edit the log, add requests and read live copy, all over the Internet.

Start right, stay right

Every new barter client gets an on-site visit from a technical trainer. We spend a week fine-tuning your system and helping your people learn all about it.

Not Proprietary!

Within your budget

Scott's and Computer Concepts' systems are in your price range. We work with any hardware. Our software building blocks mean you only pay for features you'll use.

Whether you buy, barter or lease, Scott has a system that's right for you. Get details at scott-studios.com or call 1-888-GET-SCOTT.

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Barter percentage and availability varies by station and subject to change. Some features are options. Systems are tailored to needs and budgets.

HD Radio News

Dual-Antenna STAs: What to Tell the FCC
Page 14

STATION PROFILE

WYCT(FM) Starts Life in HD Radio

by Tom McGinley

PENSACOLA, Fla. A new station has launched in Florida's panhandle, run by a husband-and-wife ownership team and operating from scratch in both digital and analog.

Dave and Mary Hoxeng of ADX Communications completed construction of studios for the 100 kW FM station on 98.7 MHz just in time for the December holidays. It serves the Pensacola/Mobile area.

Mary is general manager and Dave serves as director of engineering. WYCT(FM) features a country format, called Cat Country 98.7, promising "Pensacola's new country and the all-time country legends."

The Hoxengs also own WBUB(AM), recently constructed and still being tested. On-air programming is due to start May 1. The couple plans to convert the AM station to HD Radio also, using a Harris DX-10 transmitter and 152-foot Nott Unipole antenna.

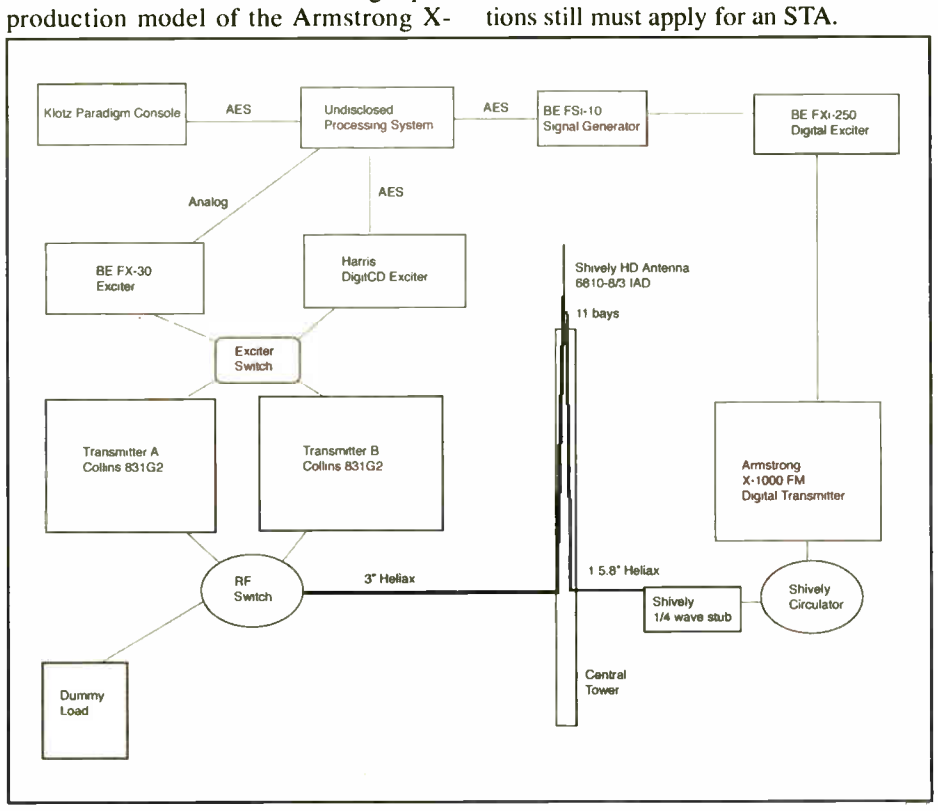
Hoxeng invested $1.6 million building WYCT for the long haul with equipment comprising an all-digital air chain that included an additional $104,000 investment for HD Radio transmission. Hoxeng said, "Time will tell if HD Radio was worth it. It's a long term investment in the future of terrestrial radio."

All digital, linear

A Klotz digital console powers the studio. The air-chain is all digital with a MediaTouch audio digital storage system.

"It is 100 percent linear, as we decided in the beginning to have the best-sounding station in our market. Our goal was to have no compression on the analog side and only Ibiquity's one-step compression on the HD Radio side," he said.

Hoxeng is proud of the pristine quality of his air sound and says the processing lineup is being kept secret while it is being tweaked. WYCT transmits using a Broadcast Electronics exciter driving a pre-production model of the Armstrong X-1000FM transmitter for the HD Radio signal and a Collins 831G2 for the analog signal.



At press time the exciter had been shipped to BE for a software upgrade. As soon as it is again operational, WYCT plans to kick off a promotional campaign for HD Radio with a car stereo store in the area and bill itself as the only "All Digital" station in the market.

Hoxeng was the first customer for the new Shively dual HD Radio IAD antenna model. Because it consists of two separate but interleaved antennas, a special temporary authorization was obtained from the FCC. Although the commission has since approved the use of separate antennas if certain criteria are met, stations still must apply for an STA.

Known as a 6810-8/3IAD, the Shively dual HD Radio IAD antenna employs eight 6810 bays for analog and three interleaved 6810 bays for HD Radio. WYCT's antenna is designed with a directional pattern to protect a first-adjacent station to the east.

'Impressive' digital signal

Shively tested a model of the IAD antenna and proved the pattern on its test range. Central Tower erected the antenna on a pole mounted on a 939-foot tower near Interstate 10 at the Alabama/Florida border.

Hoxeng said coverage to the west appears to be less than expected and he is investigating possible solutions, including field measurements and follow-up with Shively.

The audio quality of the digital signal is impressive, Hoxeng said, although he's concerned about coverage performance. In hindsight, one thing he would do differently is to have the antenna manufacturer on hand for installation and RF proof-of-performance tests on the first field installation of a new antenna design.

He reports no interference complaints from existing analog listeners. He does not have plans as yet to use the data capabilities of the digital system.

Hoxeng thinks the analog signal of his station will remain operating for many years to come, saying it will not be turned off, "in my lifetime."

The 54-year old Hoxeng began his broadcasting career in Chapel Hill, N.C., as a TV engineer for WUNC(TV) while a student at the University of North Carolina. He's also been a radio engineer, sold TV and radio airtime and produced TV programs.

He spent 18 years with Waterman Broadcasting, a five-station group with properties in San Antonio, Texas; Charlottesville, Va.; and Ft. Meyers, Fla. With Waterman, Hoxeng served as marketing manager, station manager and director of strategic planning, before turning his attention to ADX Communications in Pensacola.

Mary Hoxeng is GM of ADX Communications. She began her career as a media buyer in New York City and then went into TV sales with Blair TV and subsequently MMT Sales.

She was a senior account executive and a national sales manager for Sinclair TV in San Antonio. In radio, Mary was local sales manager for KTFM(FM) and for KSMG(FM) in San Antonio.

Tom McGinley is Radio World technical adviser and director of engineering for Infinity Seattle.

It's Zephyr's 10th birthday (But you get the present).

Get two award-winning codecs – Zephyr Xstream & Zephyr Xport POTS – for just $4,995 US MSRP. Add ISDN capability (with G.722 and low delay MPEG AAC-LD coding) to your Xport for just $399 more, or...

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

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

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

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

Best of all, you'll receive your Zephyr 10th Birthday Bundle for the special price of just $4,995 US MSRP – **over $1,800 in savings.** (There are more special Zephyr bundles to fit specific needs; just ask your Telos dealer.) But don't delay — this special offer is only good through ~~February, 2004.~~ JUNE 30TH, 2004!

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GUEST COMMENTARY

HDAM: No Static at All!

by Frank Foti

The author is president of Omnia Audio.

In the popular song by the well-known music group Steely Dan, part of the lyrical refrain says "No Static At All." Those lyrics apply to the topic to be discussed here, except the name of the tune needs to be changed to "AM ... No Static At All!".

Yes, hard to imagine that AM could be thought of in a manner that was once held only for its "kissing cousin," , FM. With the rollout of AM HD Radio, the senior band not only offers *no static at all*, but wide frequency response that is equal to FM, *and* — ready for this? — *stereo!*

The number of AM stations that have flipped the switch is growing each week, and. I've recently spent time, earlier this year, listening to the AM HD Radio system on well-known signals in New York City, Philadelphia and Boston.

The sound performance is quite striking when listening between the conventional (analog) and the HD Radio (digital) signal. It's still a bit surreal to realize that the audio signal emanating from an AM radio contains 15 kHz audio response, stereophonic sound, low noise floor ... and ... no static at all!

When switching between the *analog* and *digital* sections in the HDAM receiver, the sonic perception is analogous as switching from analog AM to FM, but in this case, it's still on the AM band!

A good Rx

The new HDC audio codec employed by Ibiquity for the AM system was just what the doctor ordered. A good case can be made that puts HDAM audio on par with FM stereo.

In listening to these stations, all of them were using audio processing on the HD Radio channel, but they were not over-doing it. The processing was setup so that the conventional path was generating high average modulation, while the HD Radio channel was lightly processed.

Basically it could be thought of as normalizing the audio on the HD Radio channel, yet the blend between analog and digital was smooth with no loss of loudness between the two paths. An internal level offset in the receiver accomplishes this.

One of the myths to be dispelled is the notion that the HDAM system does not need audio processing. If for the sole reason of level normalization, audio processing must be a part of the system.

Field experience has proven that light to moderate processing actually further improves the listener experience of HD Radio on AM.

Due to the low bit rate characteristics of the HDAM system, heavy processing on the HD channel should be avoided, as it can exaggerate coding artifacts. Also, a processor that is designed for this application must be employed.

Relegating an old unit that was designed for FM will not suffice, as older FM processors contained clipper sections, and those do not agree with the coding process.

A well-designed processor for HD Radio should use a look-ahead limiter as the final peak controller for the HD Radio path. The conventional signal is still processed the same as before.

Now, a combined single-box solution is available, one in which all processing for both the conventional and HD Radio signals is performed in a one processor. This method reduces configuration issues and helps to contain installation costs.

One of the myths to be dispelled is the notion that the HDAM system does not need audio processing.

Time alignment of the two transmission paths is another factor that will further the benefit to the listener. This requires lining up the diversity delay of the conventional path so the blend function will transition as smooth as possible.

One element that has been we have learned so far, and I and have communicated this back to discussed with Ibiquity Digital, is that the need to reduce the conventional audio bandwidth down to 5 kHz, can actually be loosened up to 6 kHz. This "loosening" does adds a bit more *presence* to the conventional audio spectrum. Now in

In order to do this, your audio processor *must* provide a tight rejection response of the 6 kHz low-pass filter, and insure that any processing spectral artifacts are suppressed extremely low. The testing we did in New York City revealed that good 6 kHz low pass filtering on the conventional analog path, actually improved HD Radio coverage.

This occurred, due to no spectral content from the analog segment polluting the HD Radio spectrum. (This "pollution" problem, by the way, was happening on their prior processor.) These spectrum constraints apply to any audio processor, even when using the 5 kHz bandwidth setting.

The context of this article is based upon the sound performance of the AM system, and does not touch on the RF aspects. Glen Clark of Clark Communications recently offered his overviews regarding coverage and RF performance. As of this writing, the NAB awaits a reply from the FCC to its recommendation that the commission authorize nighttime deployment of HD Radio on AM.

My company's The efforts of our company have been focused on the audio aspect characteristics for digital broadcasting. This includes dynamics processing and codec performance.

We view the RF section as the transport that relays the aural content to the receiver. We don't even pretend to apply ourselves towards anything more than the audio front-end portion. For those of you who wish to debate the RF attributes, please direct your comments to that forum and/or arena.

We live in exciting times! Think about it: communications and computing technology has changed the broadcast industry in so many ways.

The PC and associated networks have dramatically impacted how radio programs are produced, distributed and put on-the-air.

On the transmission side, consider what we've observed in our industry in the last five years alone: Digital Broadcast Satellite, HDTV and now DAB (or Eureka-147), Digital Radio Mondiale, as well as HD Radio. The last time we've had innovation with similar significance was nearly a half-century ago when color television and FM stereo were introduced.

We have seen a lot of change in little time, and we're the lucky ones who get to have the experience of implementing these exciting new technologies. It really is exhilarating.

Are these new systems what we, as broadcasters, need to take us into the digital era? While there may be some who are skeptical, our experience is that the technology works and it is ready for the world.

Is it perfect? Of course not; all engineering involves trade-offs, and digital radio is no exception.

I'll bet when FM stereo was introduced, it prompted a bit of nay-saying — some justified: audio bandwidth was reduced to 15 kHz, and broadcast engineers were soon to encounter the infernal beast known as *multipath.*

Yet, we did our best to learn and understand the medium, and we've been able to improve the performance of the FM stereo system over time.

Certainly, the same will be true of the new mediums. We, together, have the opportunity to take this technology and make it sound the best possible.

Just as there were aural limitations imposed upon the FM stereo system and we learned to live with them, we will also have some sonic challenges with new technology. I don't dispute those, but nevertheless there are ways to unlock the benefits of these systems.

A point that everyone should consider: HD Radio is in the early rollout phase. In many markets, the number of radios that exist are still just a few, but growing. We as an industry need to look at and work on the elements that will assert our business broadcasting forward.

This does not mean that issues and concerns should not be raised; quite the opposite.. Obviously,Pprogress does not occur unless challenges are expressedraised and then met.

Our job, collectively, is to seek out the valid issues and concerns, thenrectify them, as this will propel our industry broadcast even further.

RW welcomes other points of view.

Your Dual-Antenna STA: What the FCC Needs to Know

WASHINGTON As reported last issue, stations officially may now use two antennas for their HD Radio and analog signals, rather than one. For this implementation, the agency considers HD Radio antennas as auxiliaries.

The FCC gave the go-ahead for dual antennas in cases where certain conditions are met:

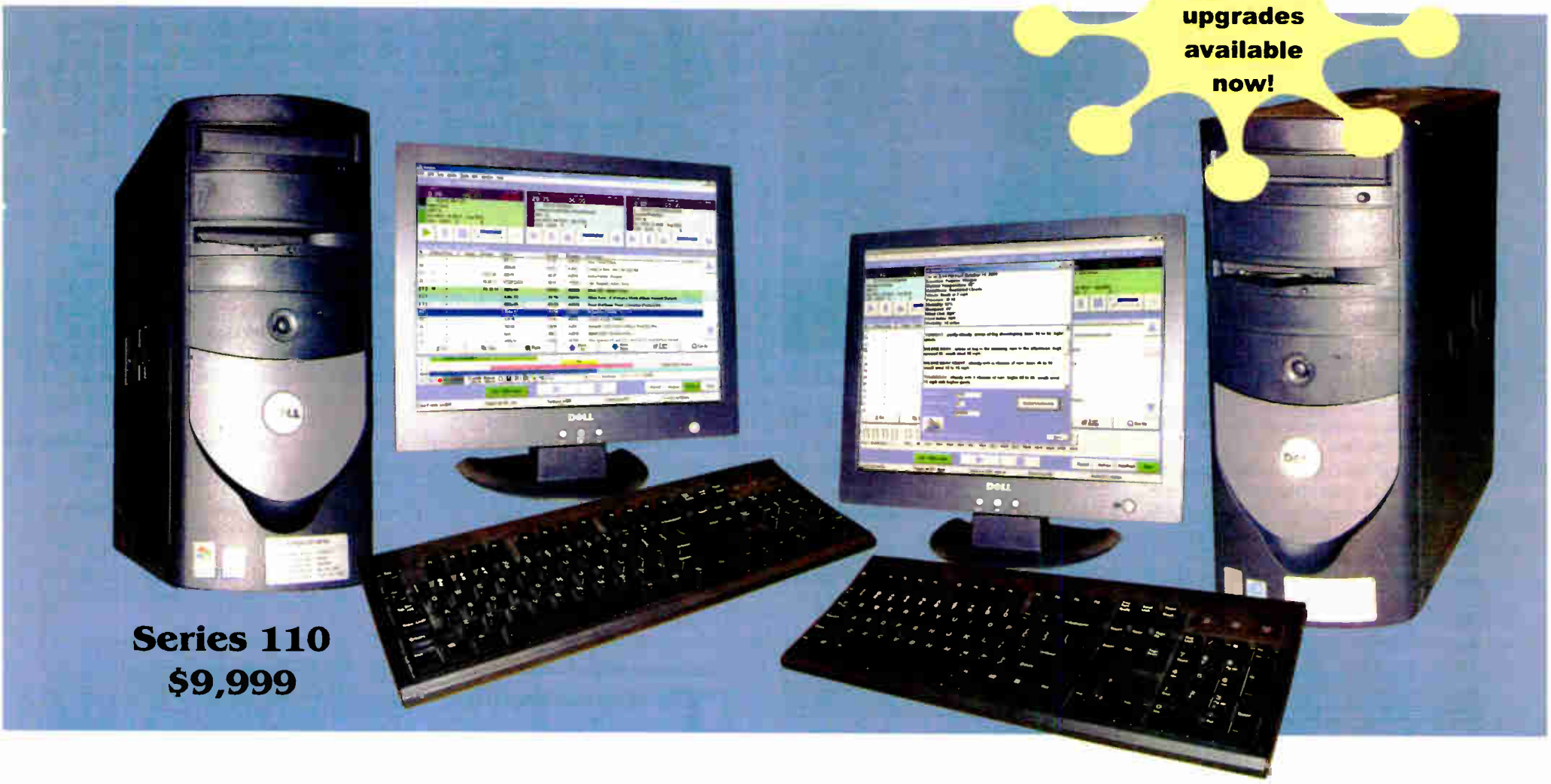
— The digital transmission must use a licensed auxiliary antenna.
— The aux (digital) antenna must be within 3 seconds of latitude and longitude of the main (analog) antenna.
— The height above average terrain of the auxiliary antennas must be between 70 and 100 percent of the height above average terrain of the main antenna.

Stations must apply for special temporary authority to use dual antennas at least 10 days before they begin IBOC transmissions.

Here is what stations must tell the commission in their STA applications:

✓ The start date for IBOC operation;
✓ Certification that the IBOC facilities conform to the Ibiquity hybrid specifications;
✓ The name and telephone number of a technical representative the commission can call in the event of interference;
✓ Transmitter power output for the analog and digital transmitters;
✓ Certification that analog effective radiated power remains as authorized;
✓ Certification that the interim IBOC operation would not cause human exposure to levels of radiofrequency radiation higher than what the FCC allows. Any station that cannot certify compliance must submit an environmental assessment and may not begin interim operation until the agency rules on that EA;
✓ Geographic coordinates, elevation data and license file number for the auxiliary antenna to be used for digital transmissions; and
✓ For systems using interleaved antenna bays, a certification that adequate filtering and/or isolation equipment has been installed to prevent spurious emissions higher than the limits specified in 47 C.F.R. Section 73.317

Powerful Automation from BSI



When you purchase a BSI system, you're buying years of research into what makes an automation system both versatile and reliable. Dell computers, AudioScience sound cards and BSI software make a great combination. Right now, BSI systems include 120 GB Hard Drives, 1 GB RAM and 17" flat panel monitors. Order yours while supplies last.

Our team of professionals installs and configures your software and hardware and each system comes with telephone training and a full year of Standard support and upgrades.

If you already own a BSI system, don't forget to take advantage of your software updates to get the latest features!

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BSI

Ibiquity Looks to Commercialization

by Leslie Stimson

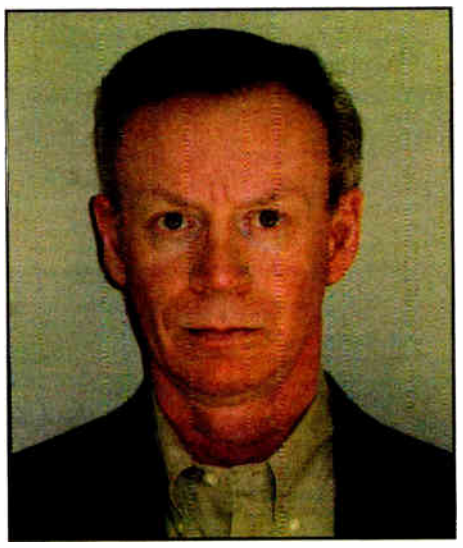
COLUMBIA, Md. How should radio stations promote HD Radio?

Managers will get some help from Ibiquity Digital Corp. as they seek to answer that question. The technology company has added to its commercialization team for station marketing and receiver hardware.

The company, which developed the HD Radio system for digital broadcasting, has hired program consultant and marketer Don Kelly to help stations market its capabilities. Kelly joins the commercialization team as the broadcast strategic marketing manager.

It also tapped Peter Brady, former director of sales for Sony Electronics Inc., who joins as director of aftermarket business development. Bob Dillon, former chief executive officer of chipmaker Enikia, assumes the role of director of IC strategic marketing.

"The engineering half of the broadcast industry is light years ahead of the sales side of HD Radio technology," Kelly said. His role will include talking to program and music directors, promotions and sales personnel to create local awareness programs that highlight a station's use of digital radio technology and generate interest in the HD Radio brand. Kelly also will work with retailers in conversion markets.



Peter Brady

Don Kelly

Howard University's WHUR(FM) in Washington began broadcasting in HD Radio in January and is promoting it on the air. The station has a van decorated with HD Radio signs and equipped with a Kenwood HD Radio to demo the sound to clients and the public.

Kelly said, "We'd like to see more of that across the country. It will create demand for (digital) receivers, and the end result is great for radio."

Kelly will help stations plan promotional events with retailers, to help push Kenwood and Panasonic HD Radios at first, adding JVC products later this year, he said.

The most common question he hears from programmers about digital radio is, "When am I going to get receivers in the marketplace?"

> **The engineering half of the broadcast industry is light years ahead of the sales side of HD Radio technology.**
>
> — Don Kelly

He has worked in radio for 25 years in various roles including air talent and program director, helping build stations including KIOI(FM), San Francisco and WRKS(FM), New York. He has consulted on programming and marketing matters for major- and medium-market stations including KPWR(FM), Los Angeles and WQHT(FM), New York.

He launched and developed adult contemporary, rhythmic CHR and urban formats in New York, Los Angeles, Chicago, Philadelphia and San Francisco. He was part-owner and station manager of WJKS(FM), Canton, N.J.

The company said Kelly will help broadcasters develop nontraditional programming that uses HD Radio's data capabilities, with the goal of enhancing a station's value to its listeners and advertisers.

Kelly was named Billboard/Monitor consultant of the year in 1996 and served on the NAB Committee on Local Radio Audience Measurement in 1998 and 1999.

Ibiquity added Brady and Dillon to its receiver hardware team. Brady will work with receiver manufacturers to bring more HD Radio products to market and with retailers to increase the outlets for those products. At Sony, Brady worked with retailers to launch consumer electronics products.

Dillon is in charge of strengthening Ibiquity's ties with semiconductor suppliers to help increase the availability of HD Radio chip sets. He has worked in the semiconductor and networking industries in business and engineering roles.

Kenwood Runs 'Future Ready/Already' Campaign

LONG BEACH, Calif. Kenwood ran a big media branding campaign in March timed to support the introduction of Kenwood 2004 lines, including HD Radio and Sirius Satellite Radio products, as they reached dealers. The consumer electronics firm said it was Kenwood's first consumer branding launch.

For years, Kenwood has focused on attracting store traffic through dealer events and rebates.

Kenwood used radio, TV, newspaper and outdoor advertising in three markets: Denver, Detroit, and Phoenix. Strength of dealer bases and market demographics played roles in market selection for the campaign.

Part of Kenwood's print ad campaign included products like this DVD receiver that support HD Radio, Sirius Satellite Radio and 5.1 surround sound.

Research will be used to adjust the ad rollouts in other markets later in the year. Point-of-purchase kits tied with the theme were sent to dealers nationwide.

The "Future Ready/Already" ads conveyed to consumers that Kenwood's audio/video products work with current and future entertainment technology. Such products include car audio systems that accept satellite radio, HD Radio and surround sound.

The Kenwood plan for each market included buys on local FM stations, billboards and the top urban weekly paper as well as broadcast and cable networks — CBS, Fox, UPN, WB, Comedy Central, VH1, Spike and Fox Sports.

— Leslie Stimson

FIRST PERSON

The Day Cat Stevens Saved My Life

by Ken R.

Cat Stevens saved my life in 1971.

This was way before he changed his name to Yusuf Islam. Before my secretary was even born. Before disco made everyone dance goofy and even before CB radios caused people born in Wisconsin to talk with a southern accent.

Warped programming

I was employed, sort of, at a small radio station in the middle of nowhere. What I mean by that is that I was on the payroll, but even though I was working 40 hours a week, I was taking home about enough money to buy a good pair of shoes each week.

Our station consisted of several small climate-controlled rooms. In the summer they were extremely hot and in the winter quite cold.

> **Upon closer inspection, we could see flames lapping at the base of our transmitting tower.**

The space heater mercifully supplied to the announcers in the control room occasionally blew a circuit and took us off the air. The albums we played warped with the changing temperatures and humidity. I remember in particular an album by Big Brother and the Holding Company that got rather wavy, hypnotizing those so inclined as it spun on the turntable.

The studio was located in a small house where the plumbing usually worked, although we were advised not to test that too often.

Our format at the time was something we called "underground." There was no formal playlist and the announcers were encouraged to put together sets of thematically related music on the assumption that anyone would give a rat's petoot about that.

With our mighty signal, I'm sure it was mostly puzzled farmers who listened, with the faint hope that we would soon give up this devil music and return to our former country format. We had about 132 listeners, according to a rating service we didn't pay for.

But we cared not a whit about getting big numbers like the "rip-off AM stations." Right on, Jack!

The people vs. The Man

Long hair was popular with the announcers, as was incense, hanging macramé and other trappings of our cultural times. The secretary wore love beads and had a hairstyle I'm sure was quite fashionable, although easy to mistake for hair that merely hadn't been washed in a long time. In fact, I don't recall hygiene in general being a big issue with anyone working there.

While I myself did not partake, illegal substances including but not limited to marijuana were used routinely. My fellow air personalities were always worrying about "the man" busting us.

Our advertisers included two stores that openly referred to themselves as head shops. And there were a few pathetic sponsors who didn't know we no longer played country music and continued to send us spots that sounded like "Hee Haw."

All of us jocks were fond of talking softly and using meaningful ... pauses.

Frequently we ran public service announcements for a macrobiotic food co-op, a ride board that people ostensibly used to find or offer transportation to others, and similar groovy, hip things.

The establishment, and by that we meant any concern which was profitable, was the enemy. And that certainly wasn't us. We were there for "the people," but apparently not a heck of a lot of them, if one could believe the ratings.

.One spring day as we were spinning our Chicago and our Melanie and our Weather Report albums, we heard a rumor that one of the highly rated AM stations across town was going to buy our lowly little FM operation and turn it into an easy listening outlet. Rumors are to the broadcast industry as water is to plants.

And indeed it soon became clear that our days as a progressive radio station were over.

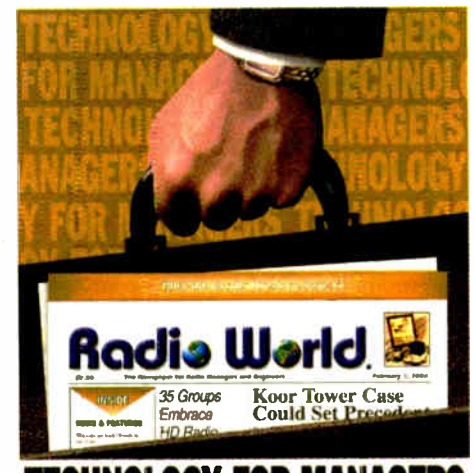
We made a valiant stab at keeping our self-indulgent but unique format, going so far as to petition the FCC to stop the sale. But the popular AM station had lots of money and we had none. They had a high-powered lawyer in Washington who could grease the purchase and we had a only a pre-law student at the local university who was ineffective at best.

We stayed on the air until the truck literally pulled up in the driveway to haul out our old turntables and used cart machines and cheap microphone. We got to keep the albums, which were ours anyway. The last song we played was "Sounds of Silence" by Simon and Garfunkle as we imagined that our loyal listeners were with us all the way.

The loss of this station on the radio

See CAT STEVENS, page 19 ▶

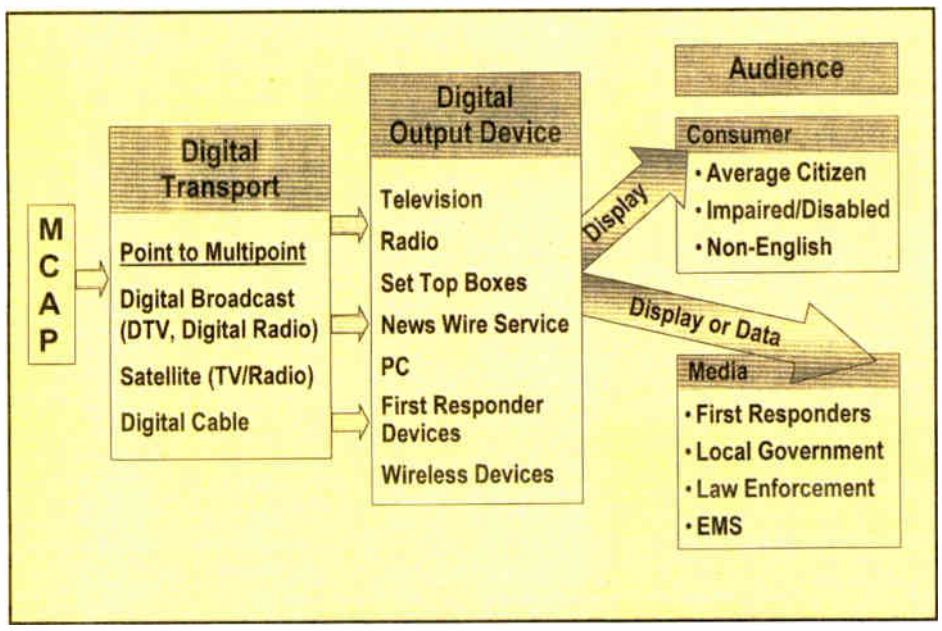
Asset Management: Staying on the Air



by Tom Vernon

"Expect the unexpected."

It's always been a good maxim, but it is especially true for broadcasters, who are dependent on AC power and information suppliers for the services they provide to the public.



The Media Common Alert Protocol Distribution Matrix is shown in a graphic by the Media Security and Reliability Council.

Being off the air means not only a loss of advertising revenue, but also the inability to provide emergency information in times of crisis. It takes a lot of careful planning to create an infrastructure that can survive natural disasters and terrorist threats. Managers need to ask designers and equipment vendors the right questions to ensure that such a system exists.

Buy what you need

Surge protection usually is the first line of defense against lightning and other AC disturbances. It is possible to protect the broadcast plant without spending large sums of money. John Pecore, president of Stormin' Protection Products, said, "Avoid suppression devices with dry contacts or surge counters unless you intend to use them." Surge counters are notoriously inaccurate, and dry contacts are for autodial devices. These items can add hundreds or even thousands of dollars to the purchase price, he advised.

Pecore urges broadcasters to be wary of equipment specified by Professional Engineers.

"There is no way that a PE will specify a $1,800 suppressor if a $25,000 unit is available, as they get 10 percent value of the specification." Stations can just as easily purchase the equipment themselves and have an electrician install it.

It is not the current but voltage that triggers surge suppression, and Pecore recommends no less than 200 KA for a single phase 240-volt circuit, and on a three-phase 120/208 3Y, use 300 KA surge suppression devices.

The practice of mounting lightning rods on top of towers to protect beacon lights is obsolete, according to Pecore. A better strategy is to use static dissipaters that decrease your chances of being hit by lightning.

There are several manufacturers of dissipaters; most work by providing multiple points to safely discharge the energy in storm clouds.

Finally, don't overlook phone lines as entry points for surges and transients.

"Unprotected telephone lines are the most common path for surges to take out broadcast gear," he said. Pecore sells the OptiLator, which has 5 inches of fiber cable for isolation. A T1 OptiLator is available for stations using digital circuits.

No downtime

While many stations have emergency generators, covering the brief time between the AC power failure till the generator is online also requires an uninterruptible power supply.

A comprehensive recovery plan requires managers to form alliances with counterparts at competing stations, a role some engineers may find uncomfortable.

Ted Gladis, regional sales manager for Superior Electric, said several issues need to be understood when selecting a UPS.

"A true online unit is preferred over less costly units because it will regulate both voltage and frequency, which is especially important when running for extended periods on a generator."

A true online UPS feeds power to a device continuously, while the less expensive line interactive and standby units switch over and feed power to a device only after a power failure, he said.

Gladis cautions that the UPS, like all broadcast gear, must be maintained. Batteries in particular will need to be replaced periodically.

"Battery life depends on factors such as exposure to temperature extremes, time in service and how often the UPS is online," Gladis said. Many UPSs come with communications software, which can inform customers when the batteries are nearing the end of their life. Alerts are usually sent from the UPS to users via pager or e-mail.

Most models will provide backup power for 10 minutes at full load, plenty of time for the generator to come on-line. Gladis adds that if necessary, external battery packs may be connected to the UPS and daisy-chained together for hours of reserve power.

Being able to stay on the air during times of crisis doesn't do much good if your station is cut off from emergency information sources. Having a working EAS receiver and conducting regular tests may give broadcasters a false sense of security.

Dan Rau, sales director for Comlab, which makes site monitoring and other broadcast products, said that in many states, the EAS infrastructure is extremely fragile.

"EAS messages must often pass through a daisy-chain system. A successful transmission assumes all links in the chain will receive and relay the message, which is often not the case."

Rau said the growth in unattended sites and automated stations has made this situation even worse. "Even when all the stations do receive and relay EAS messages," he said, "the process can take time, which is critical in many situations."

Broadcasters need to be proactive in understanding how their state's EAS system functions, and create informal networks and alliances to relay critical information in the event of disasters.

The right plan

There's more to surviving a natural disaster or terrorist attack than having the right gear installed. Jay Adrick, vice president for strategic business development and chief technologist for Harris Corp.'s Broadcast Communications Division, said it also takes a great deal of planning and organization.

"Most mid-small market stations don't have redundant facilities, and don't have a disaster recovery plan, or if they do have a plan, it has never been rehearsed."

Adrick said the California wildfires of last summer caught many broadcasters unprepared, as fires burned power and telephone poles, as well as many remote transmitter sites.

An industry-wide survey of commercial and non-commercial stations cited by Adrick found that 85 percent of all radio stations have no disaster recovery plan.

See ASSETS, page 19 ▶

Assets

▶ Continued from page 18

Of those that do have a plan, only 11.5 percent updated it after Sept. 11, 2001, and only 7 percent have rehearsed their plan. Only 7 percent of radio broadcasters have reciprocal agreements with other local media companies in the event of an emergency.

Adrick recommends that large groups purchase both AM and FM restoration packages, consisting of a frequency-agile transmitter and antenna kit. Such packages should be stored in a central location, so they can be quickly deployed in an emergency.

For stations in smaller markets, it's important not only to have a recovery plan that is rehearsed, but also to nurture cooperative agreements with other stations for use of tower and transmitter space.

Staying on the air requires an understanding of product classes such as the uninterruptible power supply, like these from Superior Electric.

"When a tower comes down," Aderick said, "it is immediately deleted from the database. Reconstructing a tower involves filing paperwork with both the FCC and the FAA, and there can be local ordinance issues to deal with as well." In some cases, he said, it has taken two years to have an exact replacement tower built on the original site.

Cooperative agreements can also be made to include use of studio space and STLs. Don't overlook the local cable company when making plans; their network can sometimes be used as an STL, and one of their spare modulators can put your signal on cable FM, if all else fails.

Finally, when your station has the equipment and a recovery plan in place, Adrick urges broadcasters to take the acid test, pull the main AC breaker and run on emergency power for 24 hours. During last summer's blackout in New York City, he said, several groups who had standby equipment and recovery plans found oversights and problem spots when they had to survive for an extended period on backup power.

Engineers usually cooperate with each other in times of crisis. Having a comprehensive recovery plan, however, requires managers to form alliances with their counterparts at competing stations, a role many may find uncomfortable. Those with misgivings should keep in mind that their station could just as easily be the one off the air or with no studio space as that of the guy down the street.

Tom Vernon is a multimedia consultant in Philadelphia. E-mail him at tlvernon@blazenet.net or call (717) 367-5595.

Cat Stevens

▶ Continued from page 17

dial in the market was comparable to the loss that occurs when one removes his hand from the ocean.

This brings me to Cat Stevens.

Thanks Cat

One fall day before our station died I was staring out a window and saw smoke. Lots of it, just outside in our station's backyard.

Upon closer inspection, we could see flames lapping at the base of our transmitting tower. Apparently the newsman had been burning some trash, and the whole dry back yard down to the mosquito breeder we called a creek was gloriously ablaze. He came running into the studio flapping his arms, about as helpful as our pre-law attorney.

Because I was on the air at the time, I put the needle down at the beginning of the first album I could grab and just let it track while I tried to save our station.

We had no fire extinguisher. Even if we had a hose, the water pressure in the bathroom was, as I mentioned, problematic. We thought we were all soon to be toast — until I got an idea born of desperation.

In our lobby we had promotional life-sized cardboard cutout of Cat Stevens. It was pretty thick and had a flap in the back that was used as a stand. I grabbed it and ran out behind the station and started beating the flames.

Our secretary filled a bucket with water, which took her quite a while, given our pathetic water pressure. She ran out several times to wet down the now-blackened Cat Stevens display for me.

The newsman succeeded only in catching his pants on fire and yelling a lot.

After about 15 minutes, the inferno was under control and we trooped back inside and called the local volunteer fire department to hose down the ashes. No, actually, we called the hardware store in town, and the owner drove over and fetched the fireman.

In retrospect, had we let the station burn to the ground it would have been a more heroic ending than the sad fate we suffered at the hands of the mighty AM station. But Cat and I certainly gave it our best shot.

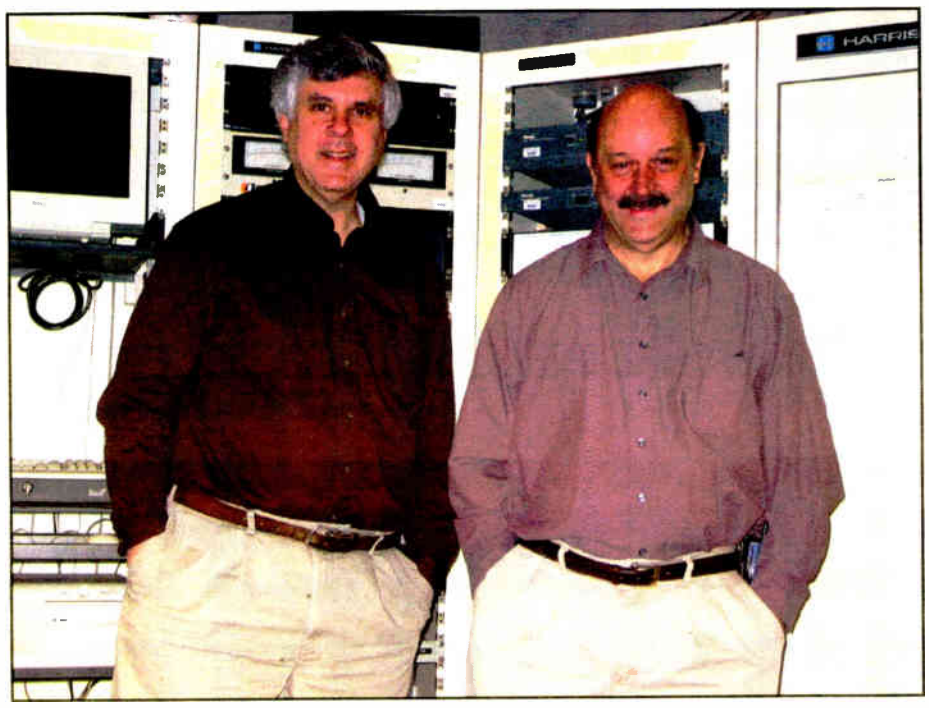
This article is adapted from the book "Up and Down the Dial," by Ken R. Visit www.kenr.com.

Job Hunting Tips for Engineers

by Sharon Rae Pettigrew

Whether you're a seasoned engineer looking for a fresh gig or a new grad looking for your first job in engineering, we can help.

We've done the homework for you — chatting with some of the top pros in the industry to put together a series of practical and relevant tips to ensure you show up on a potential employer's radar screen.



Bonneville's Art Rose and Dave Garner. Note crisp khakis and neatly pressed (matching!) shirts — the perfect outfit for certain types of job interviews.

"Networking is key," said Jeff Littlejohn, senior vice president of engineering at Clear Channel Radio (rookies, he's a good guy to know!). "You've got to get your name out there and let everyone know you're looking for a job."

Littlejohn recommends sending a résumé to the vice presidents of engineering of all of the top groups. He also says broadcast equipment reps are a great way to get your name out when you are looking to find a job.

The late Scott Beeler, director of worldwide sales for ERI, once told Littlejohn, "A list of qualified engineering leads is the best value-added service that I can offer a customer."

Networking helps, Littlejohn says. "Pick up the phone and call the chief engineer of the biggest station in town. Offer to buy him lunch if he'll give you a tour of his facility. Most jump at the chance to show off their work, and very few engineers walk away from a free meal."

Michigan engineer Kevin Larke has been in the business for 20 years. His career started at a small AM/FM combo in the thumb area of eastern Michigan. The interview for his first job is the only *official* interview he's ever had.

Since then, the story goes something like this: "Mike knew Greg ... Greg had bought some stations in Lansing ... he took me to lunch, we talked a while over a couple of burgers, and he hired me. I never did do a résumé."

Larke serves as the chief engineer (the *only* engineer, he clarifies) at Mid Michigan Radio Group, made up of four FM stations in Michigan's capital city. He says he never really actively looked for a job after his initial hire, depending instead on word-of-mouth.

"There are so few radio engineers now," Larke said. "Radio managers say, 'I know so-and-so, maybe *he* would do it.'"

Do your homework

Gary Kline, director of engineering for Cumulus, takes a more formal approach to searching for a potential part of his team.

"I like to interview a candidate who knows a little about our company and where our markets are located," he said. "Do not give me the intention that you've not specifically targeted our company and done research on us."

Gary Kline of Cumulus

Research is important to Jeff Schroeder when he's interviewing candidates for a job. Schroeder, corporate director of digital technology at Citadel, says a common mistake he sees applicants making is not researching the *position* they are applying for.

"If the position requires certain skill sets, then the applicant should adjust their presentation to that particular position. Highlight past experience directly related to the skill set being looked for," he said.

No foolin'

Schroeder said one essential in the job hunt is honesty.

"There's nothing worse than hiring someone who looked great on paper, interviewed well and was the perfect fit until he walked in the door," said Schroeder. "Then you find out that he went to a seminar on transmitters five years ago, has a brother who is a computer geek and really does know the ITC Delta cart deck upside down and backwards."

Art Rose, assistant chief engineer for Bonneville, Washington, agreed.

"Don't try to pull the wool over our eyes," he said. "If you don't have experience in a certain area, don't pretend that you do."

Rose cites a perfect recent example.

"We were talking to someone who was going to help us in remote transmitter sites. He said he felt perfectly comfortable taking field readings. When I questioned him further about what he had done in the way of field readings and what types of values he got, he gave me a reading with four decimal points. Obviously that didn't make sense."

Dave Garner, Bonneville Washington's chief engineer, says you should definitely reveal your strengths during an interview, but don't be afraid to say "I don't know."

"Generally we are looking for an employee with special skill sets," he said. "Then we can use on-the-job-training to build up the areas that aren't so strong."

If you are new to the business and are looking to get in the door of a broadcast operation, Garner said experience in the field is essential.

"College radio, high school multimedia ... amateur radio experience, your own Web site, anything close to broadcast is beneficial."

How important is that college degree?

Garner, who holds a degree in economics, says most employers expect a college degree in some discipline, but that piece of paper is *not* absolutely essential in his eyes.

Roll out the résumé

Do you need a traditional résumé when embarking on your job search?

"More often than not, the first contact I have with an applicant will include a résumé," said David Remund, vice president of engineering for Regent Communications. "The best ones I see will have a brief introductory cover page with the résumé. The cover page should be brief and specific to the position being applied for. The résumé can be more general, but should only be one to two pages."

Remund says he's more interested in breadth of an applicant's experience in broadcast engineering rather than expertise in one specialty.

"IT seems to be over-emphasized in many résumés," he said. "And while IT experience is desirable, it shouldn't be to the exclusion of experience with high-power FM transmitters or AM DAs, for example."

Clear Channel's Littlejohn recommended you stay away from employment and educational information that's more

See JOB TIPS, page 21 ▶

Job Tips

▶ Continued from page 20

than 20 years old or goes back more than three or four jobs.

"Remember: The only goal of a résumé is to make sure you get an interview," he said.

Citadel's Jeff Schroeder

John Bisset, Radio World *Workbench* columnist and Northeast regional radio rep for Dielectric Communications, also recommends a formal résumé, but suggests including a bit more.

"Highlight any SBE certifications and FCC licenses," he said. "Did you attend any classes or special training on specific equipment like transmitters? Include a sample of your writing. You will need to write clear, easy-to-understand instructions for your air staff. If you prepared an operating handbook at your last job, make a copy and bring it along to show the manager."

And after the interview, send a thank you note.

"You will stand out from the others as a class act," said Bisset.

"No flip-flops for a first interview is a good rule of thumb," joked Bonneville's Garner. "Khakis and a nice pressed shirt are completely appropriate. White socks and a pocket protector not necessary."

Slacks vs. suits

Others said it all depends on the impression you want to make and the position you are applying for.

"If it is more of a desk job, a suit and tie is mandatory," said Regent's Remund. "But for a hands-on, get-dirty position, it is not. For that type of position I would rather see an applicant in clean and neat business-casual attire than in a brand-new suit and tie that he will never wear again."

Most engineers interviewed for this article highly recommended contacting the Society of Broadcast Engineers for networking opportunities and job leads.

"The SBE offers a placement service that will give you information about some jobs," said Clear Channel's Littlejohn.

Regent's Remund pushed attendance at local SBE meetings.

"Engineers seem to be introverts by nature," he said. "Break out of that shell and get to know more people."

The SBE provides its members résumé tools, mentor groups, engineering certifications and an online jobs service. A list of broadcast engineering jobs are posted at *www.sbe.org*.

"Using a candidate's résumé, SBE develops an individual profile that is available for prospective employers to review," said John Poray, executive director of the SBE. "When an employer sees a profile they like, they receive a copy of the résumé for that person and make contact directly with the candidate."

Poray suggests making your job search a commitment.

"Work at it every day," he said. "Be sure you have clearly defined career objectives that include the responsibilities you are seeking, the minimum pay and benefits level you require and whether or not you are willing to relocate."

"If you are a skilled engineer with a desire to work and a good attitude, there is a job for you," said Littlejohn. "There are always openings available, especially if you are willing to move."

Pettigrew is a free-lancer at WTOP(AM-FM) in Washington and owner of Rover News Services in Virginia. Reach her via e-mail to rovernewsservices@yahoo.com.

What Not to Do

Don't forget to follow up. Be persistent, and make periodic follow-up calls but do not be obnoxious or overbearing. Use judgment and moderation.
— David Remund, Regent

Don't contact me a second or third time not realizing you've already contacted me.
— Gary Kline, Cumulus

Don't forget an interview is a sales job. You are the product to be sold. Promote yourself and show your prospective employer how you will save him money.
— John Bisset, Dielectric Communications/Radio World

Don't pretend you know something you don't.
— Art Rose, Bonneville

Don't limit your search geographically. In doing so, you vastly reduce the available number of job openings.
— Jeff Littlejohn, Clear Channel

Workbench

Radio World, April 23, 2004

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

Rebuilt Tubes That Work

by John Bisset

I've only worked with one engineer, now many years retired, who made soldered RCA plugs a work of art. As widely used as these plugs are, they are without a doubt the most cantankerous. The insulation melts on the center conductor wire, many times shorting it out when you screw on the barrel shell. And if you don't get the center pin hot enough, you'll end up with an intermittent cold solder joint.

The list goes on. How these plugs gained such popularity in our industry amazes me.

If you have tips on how to handle RCA plugs, send them in, we may learn something.

Retired RKO Washington CE Henry "Chic" Leyh taught me how to solder these plugs without melting the conductors. "Patience is a virtue" certainly applies to soldering RCA plugs.

For RF applications, there is a better way.

Bomar Interconnect Products has released an RCA crimp-on plug that couples signal integrity with efficient installation. Shown in Fig. 1, this addition to the company's specialty connectors is constructed of precision-machined brass, with heavy nickel plating.

The corrosion-resistant interconnects feature gold-plated, semi-captive contacts for durable connections. Shielding technology provides isolation from EMI and RFI interference. A crimp tool is available optionally.

Prices for Bomar's RCA Crimp-On Plugs start at $1.49 each in quantities of 1,000. Delivery is from stock to eight weeks. Bomar is located in Ledgewood, N.J. Reach them at *www.bomarinterconnect.com* or by telephone, (973) 347-4040.

Let them know you heard about their product in the pages of Radio World.

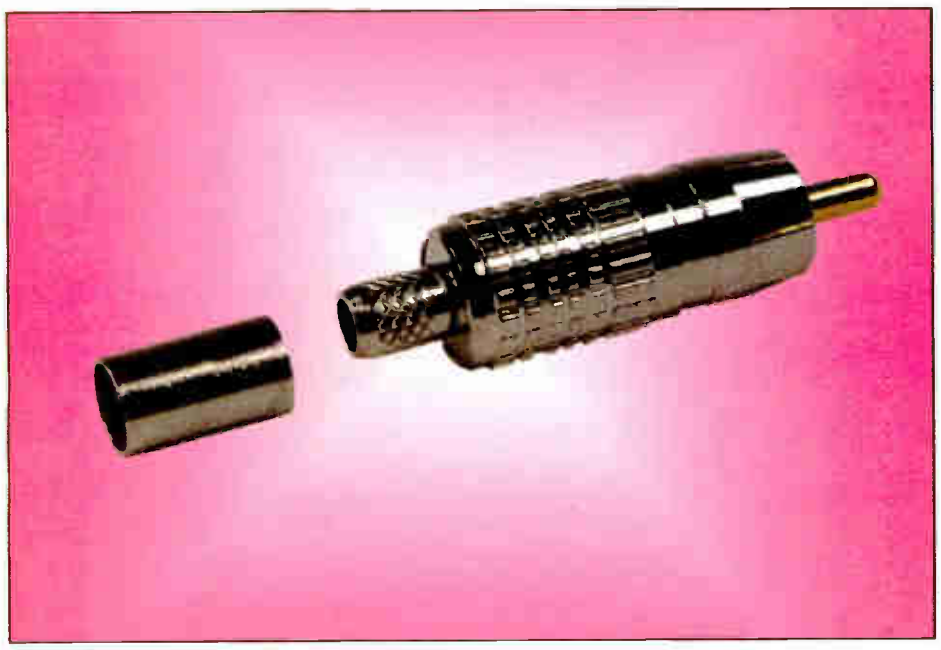


Fig. 1: Bomar's crimp-on RCA plug ends the frustration in terminating wires in this type of connector.

Fig. 2: Dirt inside the heat transfer fins of a compressor/evaporator can impair air-conditioning efficiency.

★★★

Louis Bornwasser practices broadcast engineering in Kentucky. He writes (with a grin, I'm sure) that he's old enough to have a First Phone. For the uninitiated, this is the FCC First Class License once required of every broadcast engineer.

Louis wrote to us about a Collins transmitter that used two 10 kW finals driven by a 1 kW driver. One of the problems using this rig was what to do with the excessive driver power when operating with only one 10 kW final.

See WORKBENCH, page 23 ▶

Workbench

▶ Continued from page 22

Louis solved this problem with a "three-way" switch on the plate transformer. Feeding 120 volts to the 220-volt transformer lowered the output to the exact amount now required. With plenty of these old rigs still in operation, Louis' modification just might help.

Louis weighed in on our parts ordering discussion. He too orders two parts when one fails, to help build up a spares kit. However, if any part fails a second time, in short order, he'll order enough to carry two spares.

★★★

It won't be long before the summer heat really taxes your transmitter — and studio — air conditioning. Fig. 2 shows some of the dirt inside the heat transfer fins of this compressor/evaporator, located outside the building. A high-pressure washing of the coils will improve the air conditioner's efficiency. The maintenance is cost-effective when you consider the replacement cost.

I've had several engineers report that they've obtained reasonable package deals from HVAC contractors to clean the condensers at several transmitter sites, as recommended in a previous column. Don't heap this kind of maintenance onto your plate; pass it on to a contractor. Concerned about cost? See if your sales manager can work out a trade.

★★★

We've had two engineers write about problems with rebuilt tubes. Here's another point of view from Carl Campbell, chief engineer for Salem Music Network.

"I'm perplexed after reading these two accounts. Does anyone know *why* the rebuilt tubes behaved this way? I remember that Winston Hawkin's situation involved a CCA transmitter. Is there something about the CCA that makes it incompatible with rebuilds?"

Good question. I've known lots of engineers who used rebuilds in all types of transmitters, most with good results. Carl writes that he was responsible for a pair of Harris FM20Ks 16 years ago. He used rebuilds for this transmitter, but remembers that when shipping in the dud for rebuilding, you had to declare which *model* of transmitter you were using.

It turns out there was a difference in the grid circuit that varied between models. The variation required a different tolerance inside the tube.

As for today's rebuilds, Carl can't remember the last time he installed a brand-new Eimac, because of the cost disparity. He's always gotten good service from the rebuilds.

What's your experience? Any tips to ensure better use of rebuilds? Send them to me at *john.bisset@dielectric.spx.com.*

★★★

Parts of the country had a pretty rough winter, with lots of snow and rain. Result? Moisture that can attack your transmitter building.

That's not a shadow along the threshold of the door in Fig. 3; water has leaked under the threshold and into the building.

Not around the transmitter building when it rains? Pour a thin line of colored powdered chalk — sold at hardware and lumber companies — along the threshold, inside the building. If water enters, it will smear the chalk line.

Usually, a bead of caulk along the outside of the threshold will control the problem. Otherwise, grade the earth away from the building.

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

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

Fig. 3: Inspect transmitter building doors for water damage.

'True' AM Coverage and 'QOS'

Glynn Walden Touts a New Methodology For Presenting AM Coverage Data

by Jeff Johnson

An interesting technical concept — one that didn't get a lot of attention when it was presented last fall —was a study of signal levels and interference in the AM band. It was advanced by Glynn Walden and titled "New Methodology for Presenting AM Coverage and Interference Data."

The new study methodology emphasized listenability or Quality of Service (QOS) as the factor determining the point at which listeners tune out and where that will occur within the service area.

Walden said the methodology, when combined with "subjective evaluations producing Mean Opinion Score (MOS) ratings, can be effectively used to determine 'true' AM coverage by relating listener acceptance to specific 'cells' in the grid."

He said he hopes this approach will allow station owners to understand more completely the real-world "fate" of their signals than that seen with simple contour analysis. The effects of co-channel and adjacent channel interference, including night-time skywave effects, may be graphed clearly with this grid-based computational method.

Walden made his presentation at the fall NAB Radio Show prior to accepting his current job as senior vice president of engineering for Infinity Broadcasting. He is familiar to the industry also for his work at Ibiquity Digital in the development of IBOC.

The methodology utilizes the "FCC's accepted rules and propagation models to produce an AM grid-based analysis of coverage and interference during day and nighttime receiving conditions," he said.

"While computationally more expensive than contour analysis, the methodology uses a structured grid approach that produces data with a fine degree of granularity which is much better for computing combined groundwave and skywave signals."

He called the approach ideal for determining signal and interference for any location across the United States and for analyzing population and other statistics of the entire frequency band.

"These advantages combine to produce a model of the AM allocation scenario that can be used to produce many different quantitative metrics and conclusions concerning the existing levels of interference and how that may change with the introduction of new services."

Showing maps generated by his studies, Walden stated, "Look at the noise floor across the U.S. That is why the AM channel is noisy or interference-prone. The co-channel eats ya before the first-

See QOS, page 25 ▶

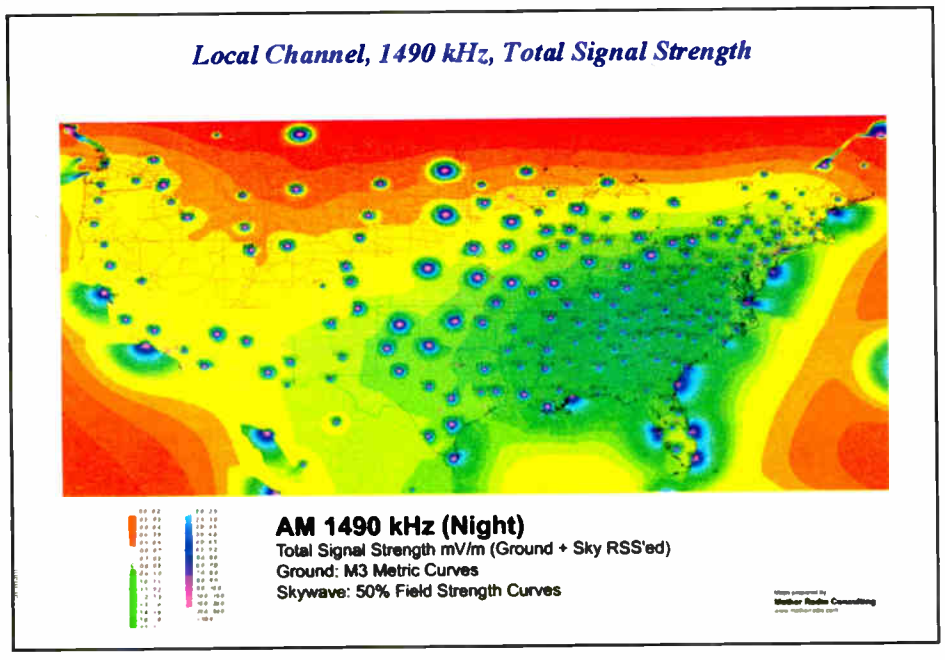


Fig. 1

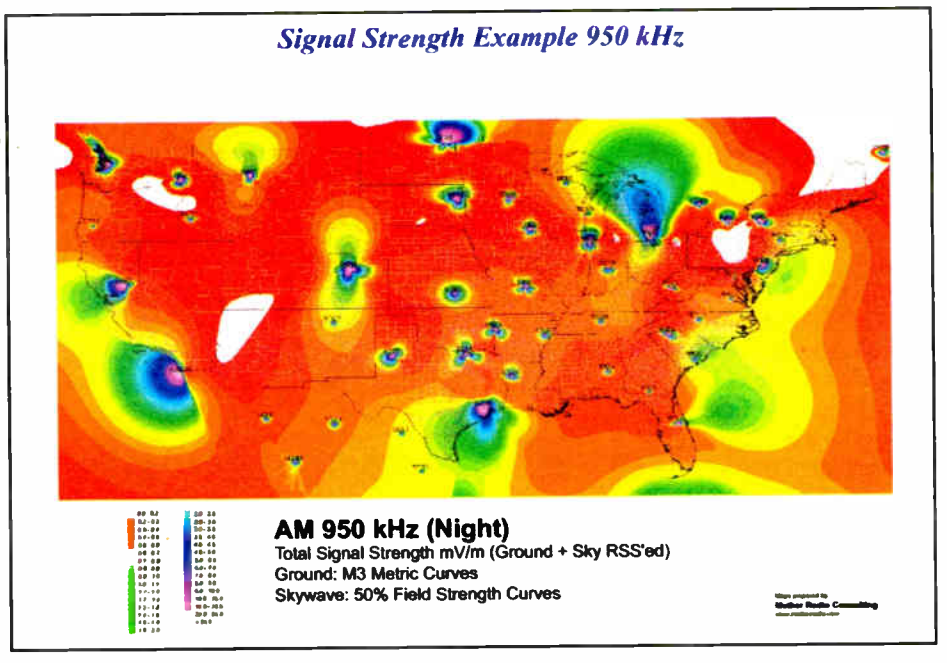


Fig. 2

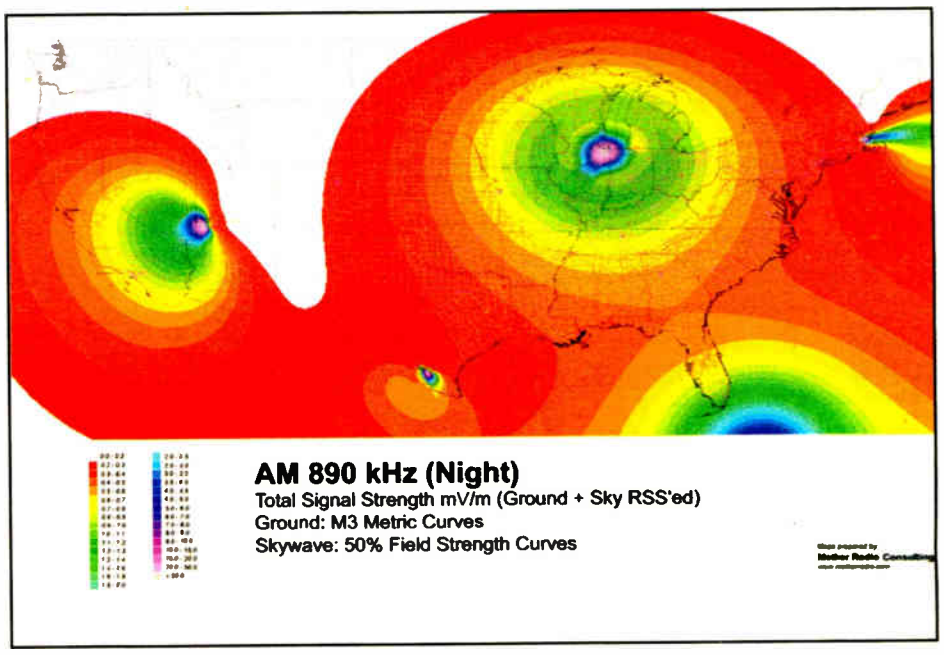


Fig. 3

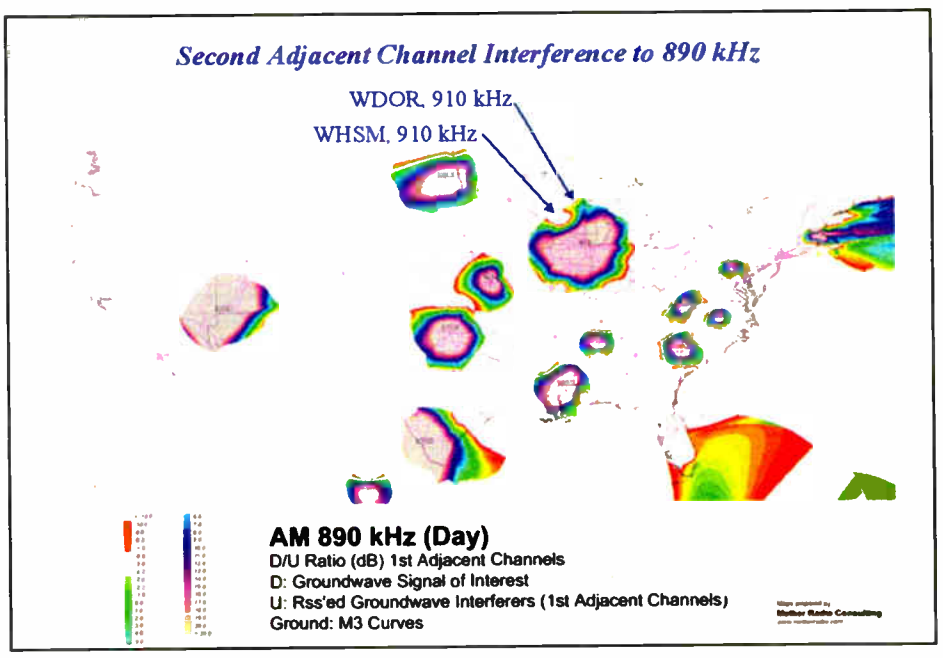


Fig. 4

QOS

▶ Continued from page 24

adjacent ever gets ya!"

Walden said most radio stations, with the exception of the clears, are not limited by first-adjacent interference but by *co-channel* interference! See Fig. 1. This most disturbing form of interference, co-channel, results in listeners hearing two stations at once.

"The effects of two sources of overlapping audio are extremely disconcerting," Walden said. These conditions cannot be reduced through receiver design. Co-channel interference is the dominant source of degraded QOS under nighttime skywave conditions.

Too much noise

In preparing the studies to ascertain the effects of introducing new services into a broadcast band and their influence on QOS, a number of existing conditions needed to be evaluated.

These were the levels of the existing signals, the levels of interfering signals on co- and adjacent channels, the effects of these signal levels on the quality of reception on existing receivers, and, most important, the relationship between the listenability (QOS) and channel conditions.

Look at the noise floor across the U.S. That is why the AM channel is noisy or interference-prone. The co-channel eats ya before the first-adjacent ever gets ya!

— Glynn Walden

At what point of reduced QOS will the listener tune out? Where is there too much noise. Where will that occur in the service area? Referring to the color code of the maps, it is through the blue to green areas where tuneout occurs. See Fig. 2.

"In this study, a 410 x 901 element grid was drawn over the entire continental United States, based upon a 4-minute interval in latitude and longitude," Walden explained. "The total groundwave and skywave signals from all nearby, relevant stations were computed at each point on the grid.

"The study resulted in the ability to produce color-coded tiled matrix maps for every U.S. broadcast licensed AM station depicting: 1) Total RSS'ed groundwave for daytime and total RSS'ed groundwave and skywave signal strengths for nighttime 2) The co-channel D/U (desired-to-undesired) ratios, 3) The first-adjacent-channel D/U ratios and 4) The second-adjacent-channel D/U.

"The technique, when coupled with subjective listening measurement, has produced various Quality of Service maps with the data presented in tiled cells of Mean Opinion Scores (MOS)." See Fig. 3.

Granular

Grid-based analysis, Walden said, produces data with a fine degree of granularity that is more suitable than contour analysis for computing combined groundwave and skywave signals and determining signal interference for points all over the United States.

"Grid-based mapping produces data that can be combined with other metrics to produce quantitave/qualitative analysis of a station's coverage — its QOS at a given location," he said.

"This study used the FCC's accepted ground wave and a 50 percent skywave propagation model adapted to grid based analysis. The decision to use 50 percent skywave curves rather than the FCC's 10 percent curves was made as it was assumed that a large number of interferers would typically be involved and that 10 percent curves would over-report interference."

A station's programming format will affect first-adjacent interference as a talk format typically exhibits narrower bandwidth than a music format and will impinge on the station suffering the interference to a lesser degree, he said. In addition to co-channel interference maps, first- and second-adjacent-channel interference maps were generated by calculating the desired station's groundwave signal D (desired) to the combined upper and lower adjacent interference signals U (undesired) resulting in a D/U ratio map. See Fig. 4.

The characteristics of existing receivers are an important factor affecting QOS. AM receivers with a wider IF bandwidth are more susceptible to adjacent-channel interference. Inexpensive receivers obviously fall in this category; however they must be included in the study as they probably comprise the majority of receivers.

Walden said he expects that QOS can be generated by subjectively evaluating the existing base of receivers. The broadcast community, through the NRSC, has gained a great deal of expertise in using MOS scores for audio quality determinations, he said.

"When the results are made available of subjective MOS ratings vs. interference, this study can then be extended to show coverage as a function of QOS in the tiled matrix grids."

The grid maps accompanying this article are of objective signal interference and do not yet include these subjective ratings.

TECH TIPS

It Sure Can Be a Zoo Around Here

by Rolin Lintag

Engineers can be notorious housekeepers, but your station doesn't have to be a *zoo*.

Here's a quick list of common creatures found lurking throughout many broadcast facilities, and how to keep them from taking over!

Crawlers — These guys take up so much floor space you can hardly get through the building. You might even merit a fine for not observing fire code. Carton boxes on the floor — empty, or containing spares — can unintentionally become permanent. We come in and out in such a hurry that we don't even notice we've lost the use of part of our floor.

Consider implementing the following principles in your station:

Keep factory packaging for use should you need to ship out the item for return or calibration. Encourage the sender to avoid using the "peanuts" style of cushioning. They are harder to keep in one place than bubble wrap or foam.

Fig. 1: It's a jungle in here: Crawling cables can rob you of space to work behind the rack. Plan out AC wiring on the rack itself when it is installed.

Fig. 2: These harmless-looking spools of guy wires are waiting to uncoil at you. Hundreds of feet and a ton of 7/8-inch EHS guy wires can unreel into a big lump when rotting wooden spools finally give up to the tension produced by the 'spring.'

I refer to problems or accidents waiting to happen. Sometimes you simply have no control over them. But if you plan sufficiently, you'll find you can at least influence the matter.

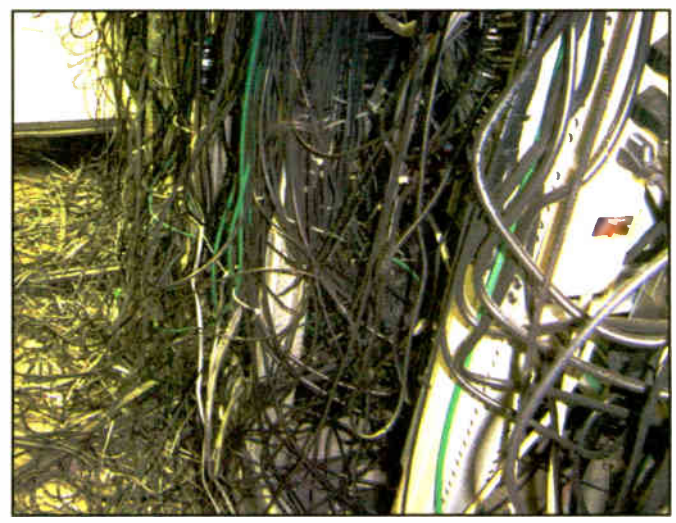


Fig. 3: Touch me not!

Make use of vertical storage space. This requires that you have wall organizers. Empty equipment boxes that cannot be folded and are used only once a year can go somewhere else if not on top of the wall organizers.

Any packaging, any *item* that you won't need in the future should go straight to the trash bin, charity or recycler.

Schedule a clean-up time at least annually. This is when decisions are decided and actions taken on all these crawlers.

Plan wiring projects and document them prior to installation. This way, RF and A/V wires have their own harness, and AC power is accessible on the sides of the rack. Fig. 1 shows what happens when AC power is not planned for on the racks.

Organize.

The Tiger — This cat is a silent predator that will sooner or later jump you from behind and bite you.

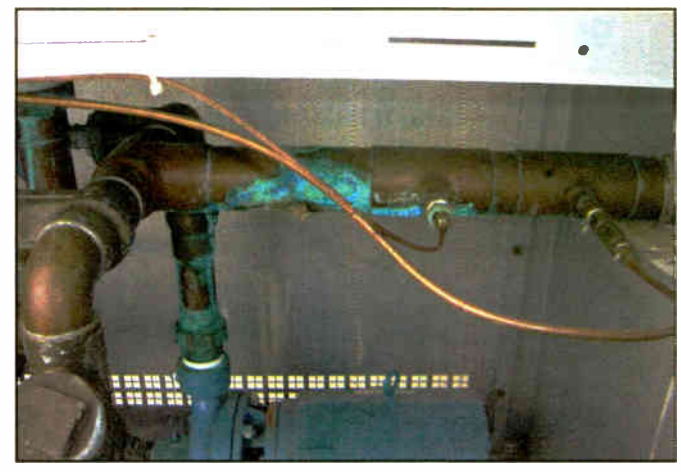


Fig. 4: Expert trackers know the signs: Glycol leaks on copper piping can make a real mess inside the pump module. Inspect this module regularly. Even a small leak can drain the system in minutes.

Conduct regular inspections (with checklist) of facilities and property. Consider annual tower inspections by a competent company and also by a safety expert. The objective is not only to identify possible regulatory violations but also to stop brewing problems and prevent accidents.

Checklists are intrinsic to a preventive maintenance program. Make sure your protective circuits are actually working should a fault occur. Make sure that the battery of the genset actually can start the engine. The last thing you want to discover is a backup system that will not work just when you need it.

The Snake Pit — It's a trap. Perhaps your snake pit is an old jackpanel, the normalled connections of which just lose contact when you plug in a jack. This snare usually is found behind equipment racks, where the cables need criminal investigators to be identified. Many of these situations are installations made in haste by in-house operations personnel. Typically, the planning is done *after* the

See ZOO, page 27 ▶

Zoo

▶ Continued from page 26

system is installed and in operation 24 hours a day.

Schedule off-the-air maintenance nights and tackle only what can be done and debugged during the time frame given.

Have spare wires and connectors ready should you suspect the problem is on a bad cable.

Make it a habit to label wires *and* update all documentation as soon as possible.

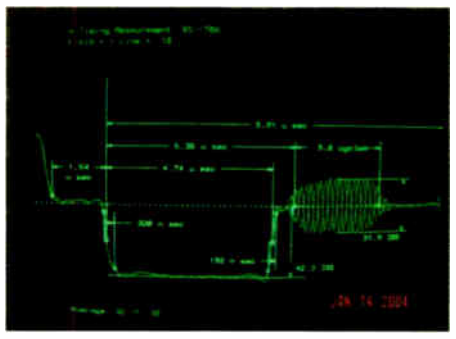


Fig. 5: Take photos in your 'zoo.' With practice, you can take clear pictures of measurements and save them on a CD-ROM.

Plan and document before implementing a project. If a task deserves to be done in spite of a tight schedule, it deserves to be done right the first time.

The Pig — This beast makes a mess on your floor. The building stinks afterwards.

Oil and glycol leaks, left unattended, can make cleanup a painful task later. Spilled glycol inside a closed building gives a distinct smell when you enter that building. The problem can be confounded if there are other chemicals inside that should be kept somewhere else.

Consider a genset, its engine inspected and oil added. Unfortunately, the dipstick cap is not replaced tight enough. The problem is discovered only when oil spills on the floor after the genset is used for many hours. This really happened, and it made a pigpen out of a generator house.

Provide for a chemical cabinet with security locks for all chemicals you use. Place it outside the building in a ventilated area. Even small containers of gasoline, such as those used for grass-cutters, must be placed outside the building and inside this cabinet.

Read and observe Material Safety Data Sheet recommendations about chemicals you purchase. Note instructions regarding storage.

Inspect leaks of any kind on a regular basis as part of site inspection or preventive maintenance. Plug leaks for good.

On the job, clean as you would at home. Don't wear muddy boots inside the transmitter building if you wouldn't use them in your living room.

The Frog — This problem jumps at all of us. There are too many things to do and too few of us; so what do we do? Jump from one project to another without going through all necessary and coordination details thoroughly.

The tyranny of urgency can dictate the day; you spend more time putting out fires than fireproofing the system. You have no choice but to keep on moving, or jumping, from one problem to another. The danger is that important items may be left unattended.

This is where checklists help. You need checklists that you'll refine through the years; you'll use them over and over. Carry a small notebook at all times so you can catch any spark of wisdom.

Don't procrastinate! Answer that e-mail right away before messages pile up.

When something needs to get done, decide what your level of involvement should be. Identify the 20 percent of tasks that will yield the 80 percent of results you want (the Pareto Principle). Better to spend your time doing preventive maintenance on the transmitter than working on what an air-con technician can do better in less time than you can.

The Parrot — Sometimes a problem keeps flashing into view and then disappearing. We hear it, we know it's there, but we can't catch it. Such problems can be elusive, but not for one who studies its whereabouts.

On one shortwave transmitter, senior technicians complained of a carbon resistor that failed mysteriously every quarter. Examining the schematic diagram, we found that it was in parallel with another not-so-obvious resistor — which a close inspection revealed to have a loose nut.

Cure the cause, not just the symptom. If it looks like a design problem, you have the right to bug the manufacturer. You paid for R&D when you procured the equipment, so they had better work with you. Don't allow yourself to pay just to become a beta tester.

Problems that look complex or perplexing often can be broken down into simple, manageable parts. Comply religiously with documentation requirements so you have the benefit of history on the problem.

Take pictures of measurements so it will be easier to look back at what is happening. Fig. 5 shows a JPEG image taken with an ordinary digital camera. This particular picture shows a difficulty in raising the color burst amplitude on an exciter's video processor module, but the lesson applies just as well to radio gear. An image can be sent by e-mail to the manufacturer to help determine action. A picture tells a lot more than you can say on the telephone.

The Popcorn Stand — Now you can relax here. You've taken a proactive attitude and kept your station zoo under control. Many of us, however, can't relax yet.

Just remember: any little improvement counts as progress. Just keep on it!

Rolin Lintag, KD5ZC, is an RF engineer for a TV network in Little Rock, Ark. Reach him at kd5zcj@arrl.net.

Down Home From Up High

The Issue of Localized Content Delivered Via Satellite Radio Stirs Debate

by Skip Pizzi

The recent addition of local content (or plans for it) by satellite radio service providers has re-ignited the wrangling over what regulation should allow or disallow in the space.

Current regulation has framed the distinction between national vs. local service along technical boundaries, in that terrestrial repeaters can only transmit content relayed from the satellite feed; there can be no uniquely generated local content carried by the repeater.

The new local traffic and weather services carried or planned by satellite radio do not violate this rule, of course. They are transmitted via satellite in the same manner as any other channel on the service, and are treated as national signals, even though they contain local information. In other words, if an XM listener in San Diego wanted to hear Philadelphia traffic information, all it would take is tuning to the appropriate channel.

Those who argue that the FCC should not allow this are therefore asking the commission to cross the line into regulating the *content* of a service, something that the agency generally is loathe to do without extremely compelling reasons (other than issues of indecency, which have seen their own upswing in interest recently; but that's another story).

New territory

The real argument is, of course, about money. Local broadcasters are worried that satellite radio now can viably sell advertising time on these localized content channels, potentially picking the pockets of local stations.

This is not the first time that the FCC has been involved in the fray between satellite and terrestrial broadcasters over local content. Regulatory activity for satellite and cable *television* operators on this subject is well known. Yet the satellite radio discussion differs in several significant respects.

First, in satellite *television*, local terrestrial TV stations may be delivered by the satellite service provider, and the subscriber may be charged an additional monthly fee for the service. This allows satellite TV to compete more favorably with cable services, which always carry local stations (as mandated by "must-carry" rules), but satellite providers' spectrum budgets have limited this service to subscribers in the top 50 to 75 markets to date. Regulations covering such "local-into-local" service require satellite TV operators to carry *all* full-power TV stations in any market they serve — the so-called "carry-one, carry-all" rule.

Another important difference is that subscribers are limited by conditional access systems to receiving only their markets' local stations. This protects the local broadcasters' access to their native viewing audience.

Most different, however, is that these services are simply repeated from local stations, and the satellite providers have no ability to sell time on these channels. Contrast this to satellite radio, where the new local services are *original*, created by the satellite operator, so any decisions on content (including possible advertising) for these channels remain the satellite provider's own.

How it's done

Naturally, this comes at some substantial cost to the satellite operator. Again in contrast to satellite TV, where most of the cost of offering local service comes simply from the *backhaul* of terrestrial TV signals to a satellite uplink, satellite radio's local services are live-assembled from data purchased from various traffic and weather reporting agencies.

The weather data is streamed as text onto the appropriate market's local info channel for display on the receiver's data screen. Meanwhile, announcers record traffic reports, reading info delivered to their PC screens by local traffic data services. XM's announcers for this service handle three markets apiece, each from a separate studio, with a PC-based automation system programmed to continually feed the most recently recorded report(s) to the appropriate channel's audio input.

As is its wont, XM will not divulge the data rates used to deliver any of its services, but simply reports that it is quite low per market served. This

See SATELLITE, page 29 ▶

The Big Picture

Photo: Gary Hayes, BBC

by Skip Pizzi

Satellite

▶ Continued from page 28

implies that bandwidth is not the limiting factor to adding future service for more markets, but rather that the cost of acquiring and assembling the services will have to be balanced for the viability of such expansion.

At present the operators seem to consider this an experiment. Depending on the return received — either from additional subscribers (or a possible future tiered-fee structure?) or from possible future local ad sales — satellite radio providers could choose to scrap these services, keep them at their initial size or expand the number of markets served.

Framing the argument

The rhetoric has heightened on both sides of this debate since satellite radio announced its localized content intentions. For example, U.S. Rep. Billy Tauzin, R-La., who recently retired as House Commerce Committee chairman, has often made note of his opposition to any local service being provided by satellite radio. While his earlier pronouncements regarded use of the terrestrial repeater network, he has recently extended his comments to include local content delivered by *any* means, decrying satellite radio's intent to compete directly with "small radio broadcasters."

The full-time localized audio and text services provided by satellite radio are a major step beyond terrestrial radio's offerings.

On the other hand, in a widely cited essay in the online magazine Slate, a former chief economist of the FCC, Thomas Hazlett, has called for the commission to drop its "absurd" rules that prohibit satellite radio's terrestrial networks from delivering local content, claiming that the need for a workaround by delivering these channels nationally is inefficient and wasteful of spectrum.

There are potential flaws with both of these arguments. First, the "small broadcasters" Tauzin cited generally no longer exist in the markets served with local content by the satellite operators, where practically all stations are part of a consolidated group. So it can be said that both satellite and terrestrial radio services are provided by multi-channel operators in these markets.

Meanwhile, regarding Hazlett's recommendation that terrestrial repeaters be used for delivering local content, it is not clear that enough repeaters exist to provide this service adequately on both XM's and Sirius's networks.

Of course, more terrestrial transmitters could be added — both services have permission on their existing STAs to operate more repeaters than they have built to date — but it might not be worth the expense to install and maintain them simply to include local content, where satellite coverage alone is already deemed sufficient.

(Hazlett's premise brings to mind the extreme position held by some that, in such hybrid sat/terr systems, the satellite is simply a loss leader required for the licensee to gain access to the spectrum, which is then primarily addressed by terrestrial extensions. The satellite serves as a cost-effective "STL" to the distributed terrestrial network, with the additional but relatively minor value of directly addressing rural zones.)

The stakes are sky-high

Finally, consider that what the satellite operators are providing is not really a directly competitive replacement for traffic and weather content offered by local terrestrial radio services. In fact, the *full-time* localized audio and text services provided by satellite radio are a major step *beyond* terrestrial radio's offerings, which are necessarily abbreviated and only occasionally inserted into other audio content. Listeners have to wait until the broadcaster deems it appropriate to transmit such data, by which time the traffic data often is outdated. Terrestrial broadcasters will not be able to offer matching service until substantial proliferation of IBOC (and "Tomorrow Radio") receivers occurs, meaning that satellite radio will maintain an advantage here for several years to come.

It's unlikely that this debate will soon subside. Rather, it could easily accelerate and become a centerpiece of the regulatory discussion on digital radio going forward. More important, it may also become a key criterion of listener choice.

Skip Pizzi is contributing editor of Radio World.

How to Submit Letters

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

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

Studio Sessions

New Features For Broadcast Delays

Page 32

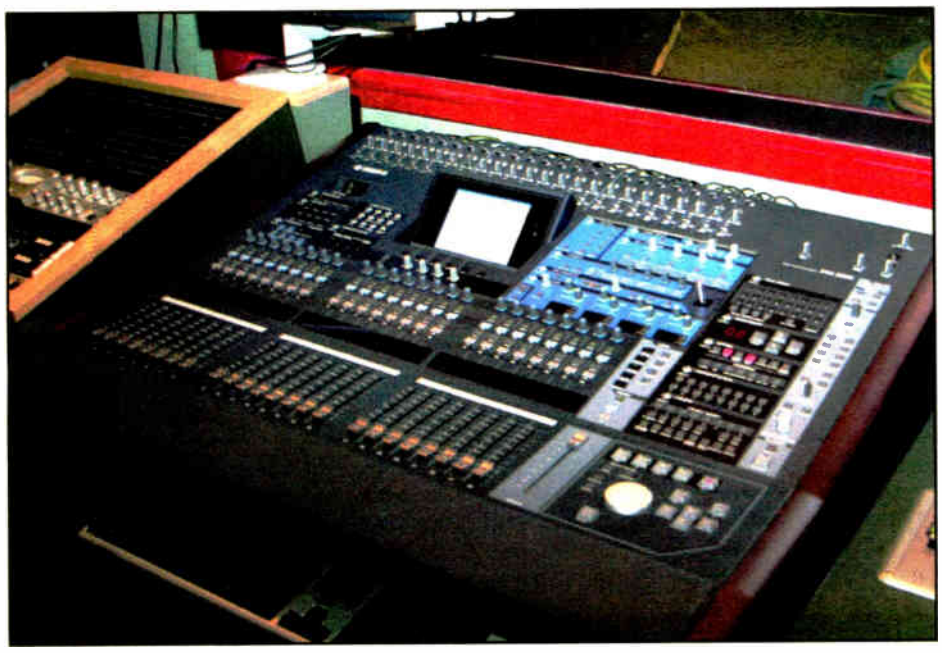
Radio World | Resource for Radio On-Air, Production and Recording | April 23, 2004

KCRW Goes Multifunctional

by Mel Lambert

Throughout the National Public Radio network, stations learn to push the envelope in terms of making the best out of limited resources.

Primarily subscription-based, NPR affiliates need to rely on an audience for which listener loyalty and commitment count for a lot. That ethic is readily articulated at KCRW(FM), an NPR affiliate owned by Santa Monica College west of Los Angeles.



A 24-fader/96-channel Yamaha PM2000 Digital Production Console sits in Performance Studio 1.

From left: KCRW Chief Engineer Steve Herbert; General Manager Ruth Seymour (seated); Vincent Van Haaff of Waterland Group; and David Greene, KCRW's Assistant Chief Engineer

For 27 years KCRW has sought to provide quality programming to an attentive audience of 450,000 weekly listeners, with a varied schedule of news, locally and nationally produced music, public affairs, political analysis and cultural programs; its self-proclaimed format is "Eclectic, Noncommercial."

Expansive reach

With its expansive reach of Southern California, and its large operational budget, KCRW is one of the largest and most influential NPR stations in the country.

Daily programming comprises approximately 50 percent music — including in-studio offerings — and 50 percent current affairs, the latter primarily NPR's "Morning Becomes Eclectic" and "All Things Considered" plus Public Radio Internal's "Marketplace," in addition to homegrown offerings that include "Which Way LA?" and "To the Point," hosted by Warren Olney.

In the station's early days, recalls General Manager Ruth Seymour, who has been with the station for 25 years, "KCRW offered a very different program mix from today."

Back in the early 1980s, the station was broadcasting a number of drama productions, some in cooperation with BBC Radio, using a pair of performance areas at either end of a basement level that houses the broadcast complex.

"But, over the years, we have moved towards a mixture of music — some of it performed live — and magazine-format programming," said Seymour. A lot of the space was not being used because it was inappropriate, Seymour stresses, "or lacked the type of equipment we need to use the space in the way we needed." As a result, it was decided two years ago to re-equip the station and renovate a number of production areas to bring them more in line with current program needs.

"Our keyword during the project was flexibility," Seymour said.

Eleven studios + VO

In its revised layout, said Chief Engineer Steve Herbert, "KCRW consists of four broadcast studios, one on-air studio, two performance studios, two interview studios, two edit suits and a voice-over booth."

A central Internet streaming area, a main matrix/rack room and sub rack room complete the technical facilities. The ability to share studio facilities among different production areas was of prime importance.

"We often need to change a studio's setup at the last minute — allocate a different interview area, for example, or provide additional editing areas at a moment's notice," Herbert said.

Having investigated the types of equipment choices being made at other NPR stations, as well as the NPR headquarters in Washington, the station decided to install Dalet Digital Media Systems data-storage servers, and to use a Klotz VADIS AudioMedia Platform to handle routing and mixing.

"The assignable VADIS control surfaces in each studio can be easily reallocated to work with any of the recording areas, which greatly enhances our operational flexibility," Herbert said.

System integration hardware

Radio Systems provided system integration hardware, under the direction of Dan Braverman, the company's president. Jonathan Burtner served as Klotz Digital's project manager.

"We elected to purchase four 16-fader, one 12-fader and two eight-fader Klotz DC II mixing consoles," said David Greene, assistant chief engineer at KCRW.

The smaller surfaces are used in dedicated edit bays, and the larger-format systems are used in on-air and production areas. A bank of 11 VADIS Model 880 and two VADIS Model 220 router frames handle signal routing and distribution.

"We were impressed with the flexibility of the VADIS system and its ability to fully route all the resources of our facility within one fully integrated system," Herbert said. "The VADIS platform fully addresses our wide and varied program and production needs."

Time shifting

In the past, to provide time-shifting of East Coast-produced programs that are rebroadcast for a West Coast audience, KCRW used a bank of some 40 remote controlled DAT machines.

"The addition of the Dalet systems dramatically streamlined the record and replay process," said Greene. "Now, we can access, view, modify and/or control any of the audio files stored in the central disk arrays from any workstation, limited only by user rights."

Data can be stored is linear-PCM, MPEG2 and MPEG3 compressed formats, in mono or stereo and at any compression rate.

According to Ken Tankel, Dalet's NE regional sales manager, "Our involvement in the project included improving the workflow of program recording done (previously) to some 40 DAT machines, and upgrading the studio systems to handle AES/EBU-format digital audio. And, to provide a high level of redundancy, any workstation can run any Dalet user application on the network."

An existing audio server was repurposed as a Dalet NetBack server, "which allows workstations to connect to a back-up database and audio files in the unlikely event of an emergency, and for maintenance," Tankel said.

And analog hardware continues to coexist alongside digital technology.

"Even though we use the Dalet for timesharing our NPR programming, and rebroadcasting in-house shows," Greene said, "a lot of music is replayed directly from vinyl, in addition to CD."

Uniquely, the majority of nonlinear audio editing at the station is performed on Macintosh-based Digidesign Pro Tools systems, the outputs from which connect to either the Dalet system for storage and broadcast, or to Klotz mixers for direct playout to air or incorporation within recorded programs.

Signal distribution around the revitalized facility is based on a conventional 100BaseT switched network that links the audio, database and Dalet netback servers to the centrally located Klotz VADIS router frames.

Radio Systems supplied its Studio Hub Plus wiring system and custom LCD selector panels that interface with the Klotz router, as well as "on-site consultation on a wring approach to interface effectively" with the Klotz hardware, Herbert said. "And I chose a Telos 2101 telephone systems from the beginning, as one of the cornerstones of this project."

See KCRW, page 32 ▶

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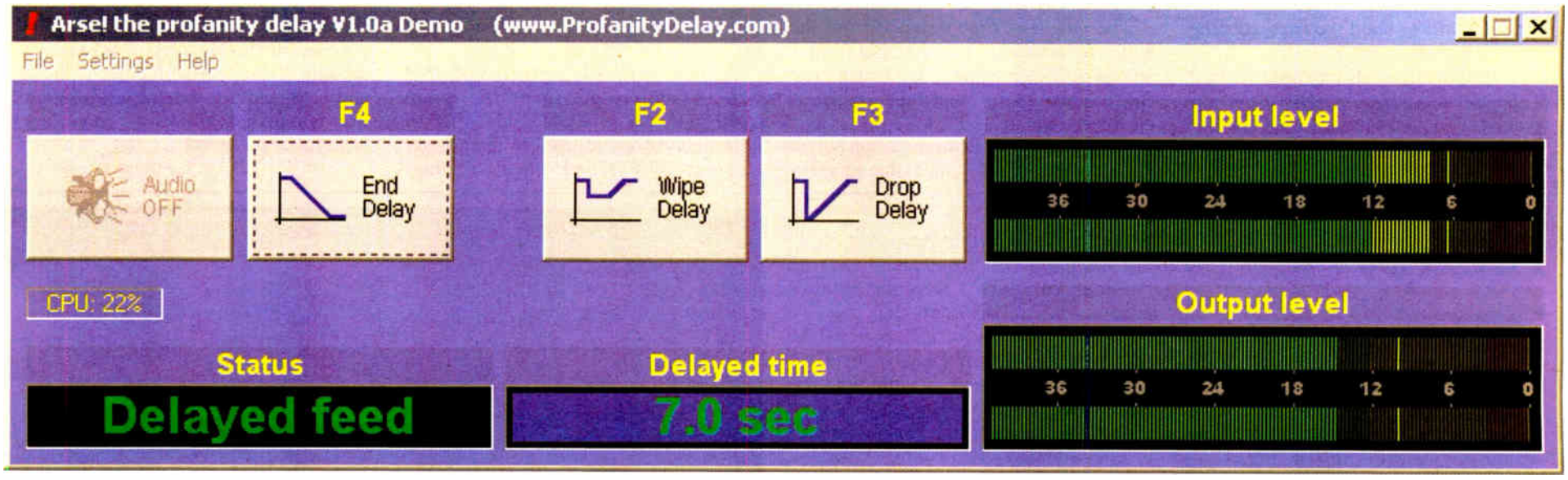

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Find the Time to Save the Fine

Current Crop of Profanity Delays Helps Stations Control Content in New Ways

by Michael LeClair

With the legislative momentum to increase fines for indecency sending shockwaves through the broadcast industry, there is a renewed interest in equipment designed to catch problems before they occur.

The broadcast profanity delay is an important tool to protect broadcasters from unwanted fines. Although delays have been available for more than two decades, a number of new features are available to make them more flexible, easier to use and more powerful.

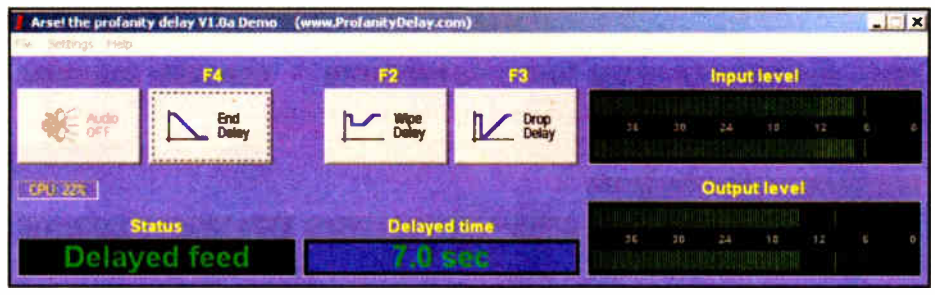
How it works

In the classic broadcast delay, audio is fed into the delay in a continuous stream as the program is produced. It does not leave the delay for a predesignated period of time, however. This allows the console operator or host to respond to a problem by dumping the offensive material before it airs.

Filler audio — a station jingle, ID or a bleep sound or other audio — can be used to cover the time necessary to build up delay before the program continues. More sophisticated units use digital signal processing (DSP) to build the required delay slowly and undetectably.

Eventide offers an example of both of the above types of broadcast profanity delays. The company's flagship BD-500 is a full-featured delay employing DSP to ramp delay up and down inaudibly. The BD-500 is now being produced with up to 40 seconds of delay time, adjustable in half-second increments; an upgrade kit is available for current owners of the BD-500 with original buffer length of 8 seconds.

Symetrix produces the model 6100, part of its AirTools lineup.



Arse! software from MDOUK is PC-based.

"This increase in delay capability is in direct response to requests from broadcasters for additional memory," said Ray Maxwell, vice president of sales and marketing for Eventide.

The length of time dumped from the buffer on activation is adjustable from 1 second up to the entire delay length. The BD-500 also offers something known as the Sneeze feature.

"This is an alternate to the dump button that deletes audio as long as the momentary switch is held down," said Maxwell. It can be used like a cough mute button or to cut away only as long as needed to cover up inappropriate content.

"Using the Sneeze feature can often result in a more elegant cutaway," said Maxwell. The BD-500 is offered at a list price of $3,395.

Eventide also makes the BD-960, an economical delay that uses fill material to enter delay. The BD-960 includes 8 seconds worth of nonvolatile RAM to store a short audio clip. While the clip plays out, the delay unit buffers program audio until the desired delay is achieved and then begins to stream out audio. The BD-960 has a list price of $1,995.

As part of its AirTools line of products, Symetrix produces the model 6100, with up to 20 seconds of available delay time adjustable in intervals of tenths of a second. The 6100 ramps up to delay using DSP and has digital or analog inputs and outputs. The 6100 can be remotely controlled via the optional RC-610 remote, and features TC-89 clock output for an external clock display to show program time in delay. List price for the AirTools 6100 is $2,299.

A different approach

Using a different design approach, the Arse! software from MDOUK harnesses the processing power of a personal computer for broadcast profanity delay.

"Using a PC-based system brings us several key advantages," said Mo Dutta, head of sales for MDOUK. "Firstly, there's a large, clear display that shows the complete status of the system at a glance. Secondly — and I guess that this is the somewhat unachievable holy grail for a profanity delay — we wanted to give the operator an added degree of confidence with something that came as close to being able to 'edit' a live radio show as is possible."

Arse! can operate with up to 30 seconds of delay and can be controlled via mouse, standard keyboard with hot keys or a USB-connected numeric keypad. Delay is built either via a station jingle or promo audio file, stored in the computer, or using the slow build feature to ramp up over a few minutes of programming.

The computer display can show input and output audio levels as well as the amount of built-up delay at any given moment. When undesirable audio occurs, the entire buffer can be dumped, or the Wipe feature can be used to get rid of a preselected shorter interval as small as 1 second. If the Wipe function is pressed and held, audio is deleted until the function is released, allowing custom length edits for better sound.

See DELAYS, page 33 ▶

KCRW

▶ Continued from page 30

The Telos system and the broadcast furniture were supplied by Harris Corp. David Schlegel of Harris provided custom furniture designs.

"The upgrade project was divided into several stages, with the last stage being competed in late November," Greene said. "But we also needed to remain on-air. I often liken the process to tearing out your kitchen while you are preparing Thanksgiving dinner. We had to schedule construction and wiring very carefully."

In terms of acoustic upgrades, KCRW's basement studios were in dire need of some tender care and attention.

As studio designer and acoustician Vincent Van Haaff, president to Waterland Group, recalled, "Back in 1993 I was invited to KCRW with a request to fix a sound-isolation problem in the radio-play studios. Apparently, KCRW management was satisfied with the work we did at that time, so when the decision was made to renovate the studios this time around, we were invited early on in the process to ensure that the acoustical and electro technical integration would flow together seamlessly."

Live-music broadcasts

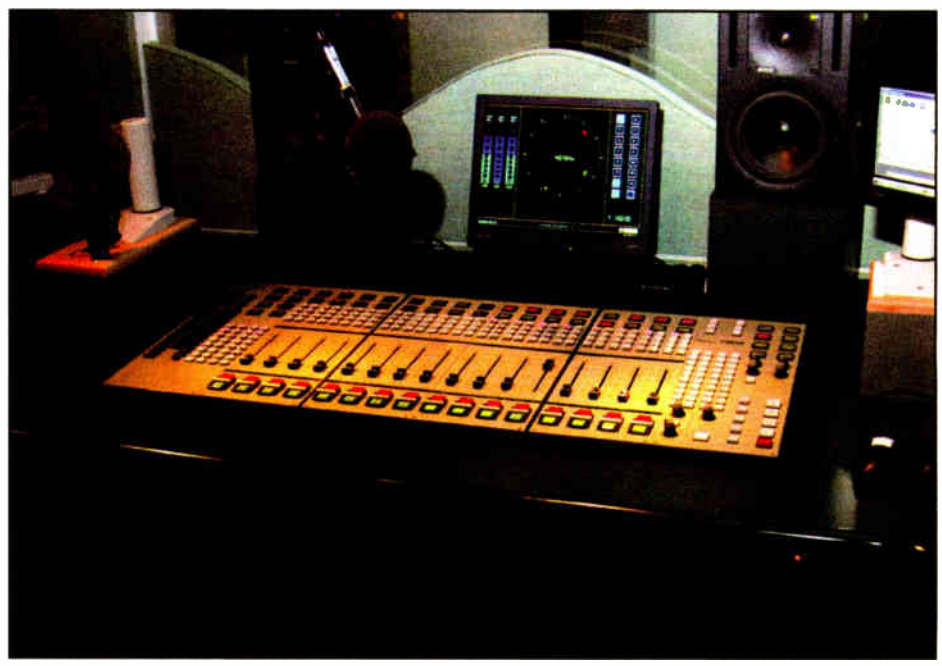
Live-music broadcasts from Performance Studio 1 were the station's greatest concern, Van Haaff said.

"A great variety of artists visit the KCRW Santa Monica location for a 45-minute live on-air show, ranging from relatively simple solo vocal/instrumentalists to five-piece bands with a full compliment of amplification. As a result, Waterland had to redesign the Performance Studio while taking into account that exacting multifunctional aspect."

Time-shifting, once handled by 40 DAT machines, is now 'dramatically streamlined.'

A Yamaha PM2000 Digital Production Console was specified for the larger Performance Studio 1, because of its operator flexibility and features for live in-studio interviews and music performances. Like other digital sources throughout the station, the 96-channel/24-fader PM2000 operates at a sample rate of 44.1 kHz, and links to a 16-channel Digidesign Pro Tools workstation with 002 I/O panel. Performance Studio 3 features a Yamaha DM1000 console.

"Drawing upon our experience in complex installations," Van Haaff said, "where broadcast and live performance need to exist side by side, and with the help of Nicole Dubrow of Six Degrees, we developed a solution.



A 16-fader Klotz DC II Digital Mixing Console is located in the rear of Performance Studio 1, for primary on-air/production duties.

"I think we achieved a balance that allows for future expansion of live-recording capabilities in the traditional analog realm, as well as offering a digital control surface interface to the Main Machine Room, a connection that comes directly from the Performance Space and Studio One, including Pro Tools recording and editing."

The 22-by-22 foot performance area features a 12-foot suspended ceiling, with custom-designed Schroeder sound diffusors on the rear wall to allow in natural light from an upper window, plus two unique sound traps.

A corner drum trap incorporates an overheard absorbent area, as well as moveable gobo baffles that can be used to isolate the kit. A smaller area can be used for vocals, again with moveable sound-isolation panels.

"Few college stations — or commercial stations, for that matter — offer the multifunctional capabilities that KCRW has chosen to install," Van Haaff said.

Mel Lambert founded Media&Marketing to provide communications and consulting services for pro-audio firms and facilities. More details can be found at www.mediaandmarketing.com.

Delays

▶ Continued from page 32

Arse! is available for $970 list, not including computer and professional-grade sound card.

Also from England, Bel Audio offers the model 5110 stereo delay. The 5110 can delay up to 7 seconds and builds up automatically during regular programming.

The new Content Check from Prophet Systems combines the functions of a time delay recorder and computer editor to form a broadcast profanity delay allowing material to be edited while still recording. Any length of delay between 15 seconds and 60 minutes can be accommodated by Content Check.

This increase in delay capability is in direct response to requests from broadcasters for additional memory.

— Ray Maxwell, Eventide

"Indecency potential has gone way beyond just one or two words," said Prophet Systems Vice President of Marketing Jackie Lockhart. "We wanted to make it sound good when it goes on the air — not only edit out offensive material, but to make it sound professional and not choppy."

Using the edit keys in Content Check, nondestructive markers are placed at the appropriate points in the program to cut out inappropriate content. Audible preview of the final edit is then available to check the final sound quality before completion. The finished cuts can be made to sound cleanly edited, similar to produced audio segments.

Content Check runs on a computer and uses a professional grade sound card. Complete systems including all necessary computer hardware are available from Prophet Systems for $15,000 list.

And OMT is calling attention to a product it offers called MDelay. It was designed in 1996 for broadcasters who wanted to carry the Howard Stern show in Canada.

"The original airing of the show, uncut, led to penalties and warnings" from the regulatory body in Canada, according to OMT's Ron Paley. "This led our MediaTouch client CHOM in Montreal, part of CHUM, to request a variable high-quality broadcast delay that would permit on-the-fly editing of the show prior to air playout. Denis Dion was the engineer and implemented the MDelay into the CHUM air system."

Paley said John Coldwell of Corus Toronto then implemented the product, and both broadcasters have used it without penalty. The digital system, based on a PC with software, offers 0 to 70 minutes of delay. Paley said it gives the operator three chances to make a change.

"If it can work in Canada," he said, where programming tends to be more strictly regulated, "it can work anywhere."

Michael LeClair is chief engineer for the WBUR Group in Boston.

Phone Jam Is for Remotes

Los Angeles-based Anomaly Co. makes the Phone Jam, a combination audio studio and phone system. It offers mixing, telco connection and frequency extension features in real time.

Among the uses cited by the company: Broadcasters and artists can send and receive audio during remotes or interviews. DJs can send a unit to an artist to do a phone-in. It also is marketed to musicians and engineers for pre-production, audio corroboration, conferencing, rehearsals, voiceover work, songwriting, teaching, auditioning and hard-disk recording.

The analog box, which retails for $399, is rack-mountable and has three 1/4-inch inputs; an XLR female connector; mic input; RCA jacks and 1/4-inch output; a standard phone jack; and the ability to use two phone lines at once. The company says users can get up to 7200 Hz audio when using two phone lines.

A 28V AC power supply is included. A multimedia headset, required to initiate a call, is included.

The system is capable of three-way calling. Sessions can be monitored by connecting a headphone, studio monitor or PA system.

Phone Jam is available through Ametron Electronic in California at (323) 462-1200 or visit www.ametron.com *or* www.phone-jam.com.

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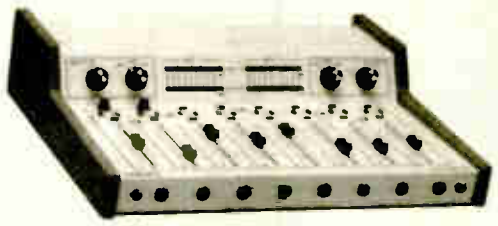

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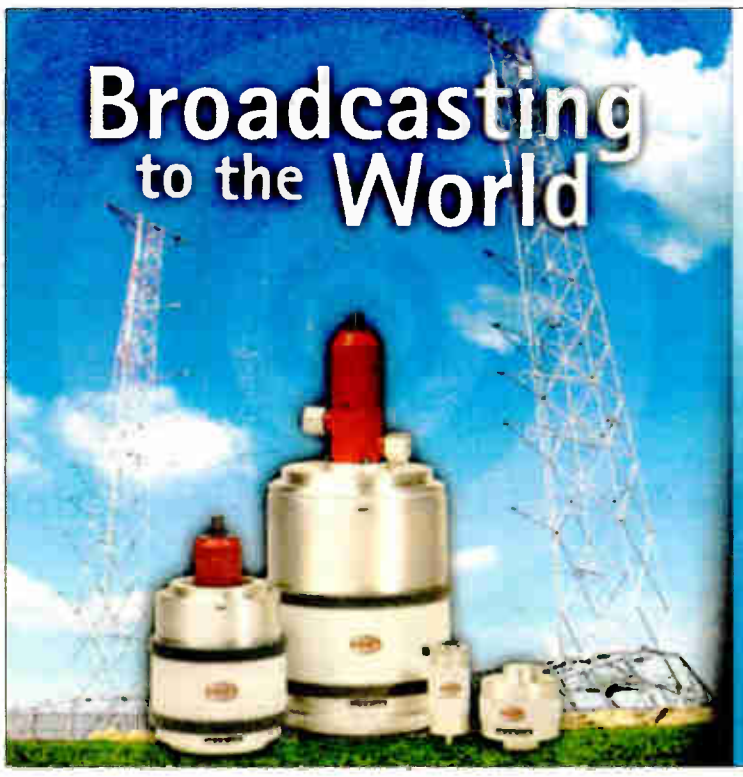

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Cool Edit Passes Its 'Audition'

by Alan R. Peterson

Okay, stop holding your breath. The rumors are true: Cool Edit Pro really is Adobe Audition now, and has been for some time.

CEP has taken root in thousands of radio stations, radio network operations and news facilities everywhere. Clear Channel stations swear by it (see sidebar). Never mind how little it costs; the thing is an amazing performer, no matter what name it is offered under. And now it is under the Adobe roof.

Adobe, the company behind the free Acrobat PDF file reader and author of Adobe Premiere Pro video editing software, knew a good thing when it saw it. It acquired the multitrack audio environment from Syntrillium Software last year to offer customers an audio editor with the same bang as Premiere and that would integrate fairly seamlessly with it as well.

As CEP had gone through several years of R&D courtesy of Syntrillium, Adobe picked up a ready-made product with a loyal user base. But this unfortunately spelled doom for other products in the Syntrillium line; it ended production on the Red Rover hardware controller box and eliminated the rudimentary Cool Edit 2000, a staple of newsroom operations.

The good news for newsies is that an upgrade from Cool Edit 2000 to the full Adobe version is only $99, less than the price of a portable MD recorder.

Current CEP users may not be in a hurry to upgrade, as a majority of the features remain the same. New users who have heard the buzz about Cool Edit will be joining a large family now using one of the most popular editors ever.

First look

Still, there are enough freshened elements found in Audition that may convince you to take the plunge, whether a grizzled vet or a CEP newbie.

For the uninitiated — and where *have* you been? — Adobe Audition is the latest incarnation of a powerful 128-track audio editor that functions as both multitrack recorder and mixing environment.

Fig. 1: The Edit View of Adobe Audition, looking quite familiar.

It includes dozens of high-quality DSP effects and can incorporate many more third-party processing plug-ins conforming to the Microsoft DirectX standard.

It can create thousands of royalty-free production music beds with the exclusive Loopology music samples and loops. Audition comes with a music content CD filled with loops from the old Syntrillium *loopology.com* Web site, plus thousands more from the pay-per-loop CDs and from unreleased collections.

On its face (literally), Audition looks much the same as CEP did in its final incarnation (see Fig. 1) and offers the same sample-accurate editing capabilities as the earlier versions, with sample rates up to 10 MHz (!) depending on your audio interface.

It is in the subtle collection of features, many beneficial to broadcast production, that makes Audition worth a long and serious look. Some migrated over from CEP, some are new, but all are handy to have in your arsenal.

It is safe to assume you know how to record and edit a waveform and have seen a multitrack environment, so let me instead focus on features of interest in Adobe Audition.

Fig. 2: Multitrack View and Mixer

Still Cool

Among the innovations in the latest release, *there finally is a mixer window* (Fig 2.).

At one time, users depended solely on rubberband curves called Envelopes to set levels, panning and Effect wet/dry mixes. You may continue doing that, but now you can click open a mixer for a more hands-on feel to the mix.

Audition can save you a ton of time when doing one of those "no breath" voice tracks (where pauses and breathing are removed). The Delete Silence function in the Edit menu detects and removes silence between words and phrases, tightening up copy without manually highlighting and cutting multiple pauses.

Speaking of saving time, do you find yourself doing a lot of Normalizing on multiple files? Hit Group Waveform Normalize and watch all open files top out at the exact percentage you assign. Users of the Batch File Convert function will understand and appreciate that.

One feature I especially liked, carried over from the days when the standard was SAWPlus from IQS, is single-keystroke shortcuts. The most important functions of that program were implemented with the keyboard more so than with a mouse click.

Audition took that philosophy and improved on it. Not only do you have a long list of stock key shortcuts to pick from (Space = Stop/Start), but you can write your own to fit your speed — like "R" launching the reverb or "ALT+D" opening the Dynamics processor.

While more of a video and audio-for-film feature, Audition carried over the Multichannel Encoder from CEP, allowing the creation of 5.1 Surround Sound audio. You will never need it for radio, but it's a gas to use if your studio allows it.

Audition also allows the insertion of WAV Properties for embedding text and information. In other words, *cart label.*

Click the Radio Industry tab under this menu heading and enter all relevant information such as client, outcue, run dates and more. If your automation system can read and convert this field to its own format, you are good to go.

Effects

The Dynamics Processing effect in CEP has been ported over to Audition and offers everything from gentle peak limiting to severe squish and gating. Voices sound great, and the ability to draw the knee and set levels graphically is enormously appealing.

As useful as this effect is, I wish Adobe

See AUDITION, page 36 ▶

Product Capsule:
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✓Sample rates to 10 MHz

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✓Graphics need some freshening up
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Price: $299

For information, visit the Adobe Systems Web site at www.adobe.com.

Clear Channel Stations Embrace Audition

Among the many users of Cool Edit and Adobe Audition are stations under the Clear Channel umbrella.

Jim Cook, national vice president of creative services for Clear Channel, said Audition is the standard in a number of facilities for basic meat-and-potatoes production, and is being examined for long-form programming as well.

"The software gives us the most bang for the buck," he said. "We do everything from song parodies to sound design and we're very satisfied with what it does."

Audition is not pushed as the absolute standard for the entire chain, he noted.

"We have power users and high-end imaging guys who are wedded to other systems, like Pro Tools," he said. "They won't give them up just because we tell them to. All we do is point out strategic purchases. We just want to make it available to them."

The earlier Cool Edit products had been used by many in the Clear Channel stations. The two-track Cool Edit 96, now discontinued, has been employed extensively in newsrooms.

Cook, who has worked on products as wide-ranging as the original AKG DSE-7000 editor, noted parallels between the earlier Syntrillium Cool Edit and Pro Tools.

"Version 2.0 emulated a lot of the feel of Pro Tools, especially block-edge dragging," he said. He also mentioned how Cool Edit was faster at doing live mixdowns on longer-form production than Pro Tools.

Besides its speed and relatively inexpensive price, Cook also likes Audition for its ability to play well with the Prophet NexGen digital audio storage system, also in use at many Clear Channel stations.

"It reads Cart Chunk data from Audition right into Prophet," he said. "The more compatible it is with other systems, the better for us."

— Alan Peterson

That @#!&% Song Is on *Again*?

by Alan R. Peterson

Okay, at last I think I finally understand what we put our parents through:

The mind-numbing repetition, the meaningless lyrical content and the knowledge that we were driving them crazy as we forced them to listen to the station *we* decided should be on the radio.

The tables were turned considerably a few weeks ago, and if my folks were still alive, they would have relished the irony of the moment.

What it boils down to for me is this: If the kind of radio I loved as a youngster were to suddenly come roaring back tomorrow, I don't think I could listen to it quite the same way again.

Paintin' Place

Perhaps I should back up a little.

It was all but mandatory for any New York lad growing up in the late '60s to be tuned in to MusicRadio WABC(AM). Garage radios were dialed in to 77, pocket transistor receivers from Lafayette were likewise glued to the same frequency, and no one knows how much of the Staten Island landfill today consists of spent 9V batteries, drained by listeners falling asleep with the radio on under the pillow.

The station had a practice of rotating the No. 1 song to the front of the pile every 45 minutes to one hour, or so it seemed. Back then, songs were still less than three minutes in length, so a lot of other music got in between spins of the top survey song.

And admittedly, the No.1 song usually was fairly catchy and fun to listen to, and mercifully did not stay on long enough to sink in. WABC had a music- and jingle-intensive format back then that blasted you into motion so far forward, you actually forgot how long ago it was(n't) that the top song got a spin.

Some tunes I could have done without. I never cared much for soft, squishy stuff like "Theme from the Valley of the Dolls," "Jean" or "Bridge Over Troubled Waters." I always thought they were a little too gooey for their own good, but that's just me.

All right ... having glued down these facts, let me now add the grout. And the paint.

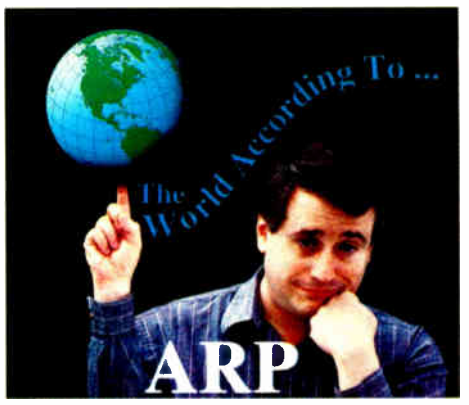
The summer I was a crazed 13-year-old, I was still reeling from the wonders of the manned moon landings, rooting for the soon-be-world-champion Mets and sweltering in classic New York heat. My parents must have sensed I was too happy with life for my own good, so they corralled my brother and I to paint my grandmother's new apartment outside of New York City in Queens, N.Y.

Naturally we resisted, but they won by threatening to sign us up for the draft that very week if we didn't. Grudgingly we caved in, but with one demand: The only way we would sling a brush was if we had control over the radio.

And that meant none of that easy listening phlegm on WTFM, "103-point-5, from Lake Success." It was WABC or Granny was in for the worst paint job she'd ever come across.

Sabba Sibby What?

If you have ever seen two lazy teenagers try to paint anything, you know it is an ordeal. We turned it into an all-week job and milked it for all it was worth. The first two days of blasting WABC throughout the apartment, my parents groused about how often the same songs would cycle back again and again,



like "Aquarius/Let the Sunshine In," "Good Morning Starshine" and "Spinning Wheel."

It was always the same comments every time. During the long tail end of "Aquarius," Mom would gripe about the lyrics.

"Can't they come up with anything else to sing?" she would grumble. "It's just the same words again and again: 'Let the sunshine, let the sunshine in, the sunshine in.'"

Dad saved his vinegar for "Spinning Wheel" by Blood Sweat & Tears. "Painted ponies, spinning wheels ... what are these guys *on* anyway? 'Let it shine within your mind'... don't you know what they're singing about?"

See @#!&%, page 39 ▶

Audition

▶ Continued from page 35

had retooled the interface from a numerical-entry window to one with virtual knobs. Typing in values and hoping something sounds right is hit-or-miss at best, and I would rather spin a dial and hear the result. There are plenty of third-party plug-in processors that do this already. Maybe in the next version ...

The same observation could be made about the Echo Chamber, which offers the ability to adjust the size of virtual "rooms" and placement of microphones through numerical data entry. A wireframe room graphic is not difficult to generate, and I would be more inclined to experiment with this effect if I could see a room and put a mic ... right ... *here*.

One of my favorite dramatic effects is an AM radio-ish sound that slowly transitions to a "real-life" full bandwidth sound; imagine an old movie where a closeup of a loudspeaker dissolves to a live announcer in the studio while he is speaking.

Formerly done in the Multitrack View by crossfading between two copies of the same audio file, this can now be handled by the Morph and Transition functions found under the FFT Filter, and applied to only one file. Drag some edit points on a graph and the filter goes from 300 Hz-3 kHz response to full fidelity over time. Nicely done.

Speaking of filters, the Parametric EQ offers enormous filtering possibilities, outstanding control and a list of useful presets that can come to your rescue anytime. But it too suffers from the same blah interface as the Echo and Dynamics do, along with the same Windows slider controls seen since Win 3.1. In my opinion, the Track EQ window in the Multitrack View (Fig. 3) better represents what this feature should look like in the basic Edit View.

Audition allows third-party DirectX plug-ins to help in the creative process. High-quality reverbs and software emulations of classic gear such as Urei compressors and tube preamplifiers are abundant and many can be found for free on the Internet.

To my disappointment, both Syntrillium and Adobe opted to leave out Steinberg Virtual Studio Technology (VST) plug-in compatibility. VST plug-ins are likewise abundant on the Web, and dozens are offered for free.

It is possible to use a *wrapper* — a small bit of code that makes a VST plug-in "look" like a DirectX plug-in — but these are not always stable and add another layer of complexity to the creative process.

Fig 3: The Track EQ window vs. the Para EQ: Which sliders do you prefer?

Old favorites

Some functions from earlier days suddenly take on new usefulness the more you work with them.

The Frequency Analysis window, for example, displays a graph of frequencies occurring at the cursor position or in the center of a highlighted block.

With it, you can finally see and dial out the exact frequency of that annoying high-frequency whistle that hitched a ride on TV audio or in a data-compressed file. If your eye is more refined than most, you might be able to observe the differences in characteristics when A/B'ing a pair of microphones for studio use.

For no good reason, I ran an old recording of the rooftop siren from my hometown fire department through the Frequency Analysis window. The graph revealed not one but two pitches in the file, spaced a musical fourth apart. Growing up hearing the siren for some 22 years, I never noticed the hidden pitch until I saw it.

The Pitch Bender is back again for those classic rundown turntable effects. Convolution lets you lay an impulse down on existing WAVs for some serious mind-twisting effects. And there are three methods for generating reverb.

Impressions

Old-line users may never cozy up to the new name. "Audition" commonly refers to a switch position on an audio console. Many users I know continue to call it "Cool Edit" out of habit. This may persist for awhile, so I hope the Adobe folks have a sense of humor about it.

There may always be a schism between the Pro Tools and CEP crowds. The former slams the "unreliable" and "crash-prone" Windows platform, while the latter boasts of how little they paid for their computers. Pro Tools also includes MIDI functions that CEP users may never bother to explore.

I have said it before: You can be brilliant with any program on any platform. It's not the hammer, it's the carpenter, so to me the whole CEP/Pro Tools argument is a moot one.

Audition runs on a minimum 400 MHz PC with Win98SE or better, but you'll need to pack a lunch and your razor while it renders a reverb transform. For best performance, load it into a 2 GHz or better machine under WinXP, with all the RAM you can muster.

If there are any areas where Adobe can improve Audition, let it be in changing the GUIs on some of the effects to more resemble hardware we are familiar with (knobs, buttons) and less like a Windows Visual Basic project (numbers, sliders).

Also, it is time to let VST join the party. Many useful VST effects deserve to be recognized and allowed compatibility with Audition without the need for buggy DX/VST "wrappers" to assist.

If I could wish for one effect to be added, it would be an easy-to-understand multiband compressor-limiter, much like what is used for mastering a recording. These sound great on voice, and while the stock dynamics processor has a band-limiting tab, it just isn't the same.

To its credit, Adobe kept the price of Audition at a reasonable $299. Even better, the upgrade from CEP 2.0 or 2.1 is free, so registered users can make the switch without dropping a nickel.

When compared to editors of an earlier era that did much less, this is a remarkable accomplishment. Put another way, did you ever imagine you could afford a 128-track production system for the price of a bicycle? And install it on a "digital recording device" you could obtain at an office supply store?

By the way, Adobe reprised last year's bouncing ball "Easter egg," concealed in the Help>About window. Expert users will know where to look; casual users will just have to hunt for it. Sorry.

Passed the audition

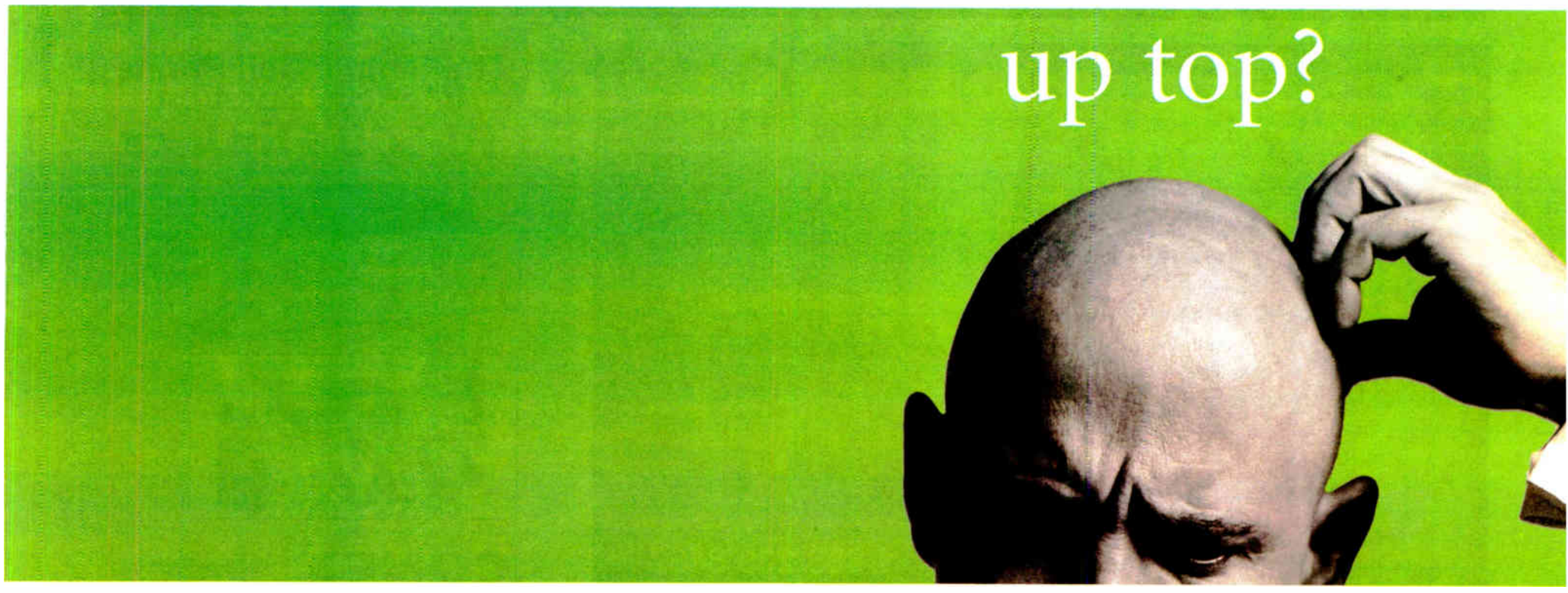
Will Audition survive as is or will it get folded into the more prominent video product Premiere, just as Sony blended Sonic Foundry's Vegas audio editor into the Vegas video version? I hope for the sake of those of us doing audio-only work, the company keeps the products separate. But it's a changing world and the lines between media types are blurring, so let's all wait and see.

If you are already using CEP, you are fine for a while. But the itch is going to get to you and you will want to upgrade before long, especially since it is free to do so.

If you are not already a user of either CEP or Audition, download the demo from the Adobe Web site (*www.adobe.com*) and give it a spin. And let me be the first to welcome you to the family.

Alan Peterson is a longtime contributor to RW and has used Cool Edit since its days as a shareware audio editor. Reach him at alanpeterson@earthlink.net.

Wish you had more



Announcing Omnia-6EX.

There's a lot of buzz about the new HD Radio codec. We've heard it and agree with the many others who like it and say it's now time to get on with radio's transition to digital.

Because HD Radio can transmit audio frequencies up to 20kHz, listeners will finally be allowed to hear the full CD spectrum – if their radio stations choose the right on-air processor. On this point, you should know something important: Some "HD" processors simply hack off everything above 15kHz... robbing listeners of the full HD Radio experience and keeping our industry in a fidelity backwater.

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

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

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

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

Omnia
A Telos Company

omniaaudio.com

Products & Services SHOWCASE

PRODUCT EVALUATION

Sound Forge Upgraded Under Sony

by Read G. Burgan

In May 2003, Sony Pictures Digital acquired the desktop software products of Sonic Foundry of Madison, Wis. The company's Sound Forge software is a premiere Windows-based digital audio editing software used by many radio and independent audio production studios.

What does this acquisition bode for the future of Sound Forge? Sound Forge 7.0 provides the first opportunity to evaluate how it may fare under the Sony umbrella.

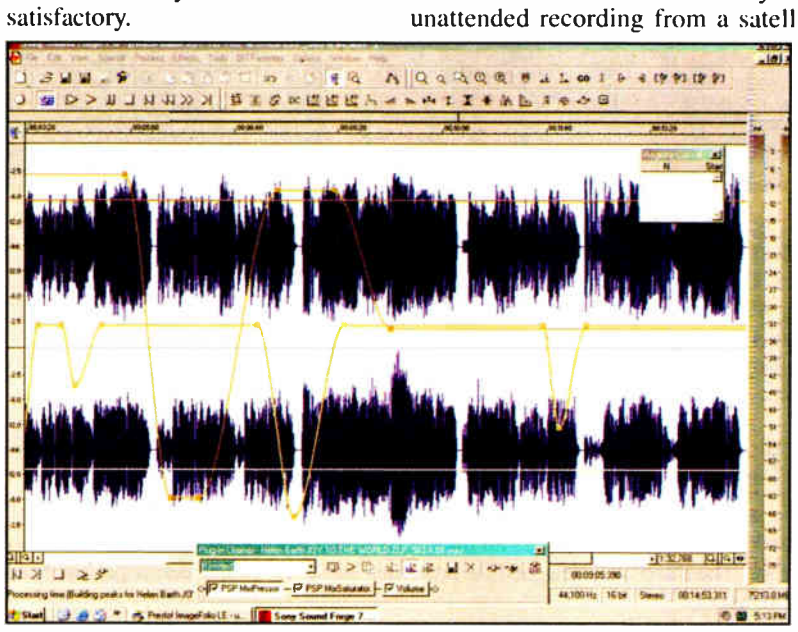
Time to upgrade Windows

First, if you are still using Windows 98, forget 7.0; it requires at least Windows 2000. Being ever optimistic, I tried installing it under Windows 98 anyway. It would not even begin the install.

If you are running Windows 98 or earlier, this may be a good time to upgrade. Keep in mind that Windows XP is hardware-specific and a lot of older hardware may not work.

You can download a program from Microsoft that will evaluate your computer hardware and software to determine compatibility issues at *www.microsoft.com/windowsxp/pro/howtobuy/upgrading/advisor.asp*. The program is not 100 percent perfect, however. It identified my video card as being compatible when in fact it was not.

Plan on several days to upgrade an existing computer. I upgraded two Pentium-3 computers and it took about two weeks before they were both completely satisfactory.



Starting from scratch often is easier. I built a new Pentium-4 computer and did a clean install of Windows XP, and the entire process (building and installing) took only about four hours. Go figure.

Sound Forge has added automated audio recording that allows you to record by setting a timer or by setting a minimum threshold level that will start the recording process.

This is a must-have feature if you want unattended recording from a satellite or other source. Even transferring an old LP or tape to computer can be unattended as SF can be set to start and stop recording when the level rises or falls in relation to a set threshold.

SF 7.0 also allows you to save project files. This is a welcome feature that will let you save the entire edit history of an ongoing project. In the past when you saved a file and closed a project, the edit history was lost.

If you are like me, there have been times when you reopened a project and wished you could have gone back a few steps without having to start all over. The "save project" feature allows you to do that. The only drawback is that a project with a long edit history can consume a lot hard-drive space.

You can archive the edit history to a CD. This can be a real timesaver if you have to reedit a project weeks or even months after your original work sessions.

Similarly, SF 7.0 has added an "undo past save" feature. In the past, once you saved a file, the edit history was lost even if you continued to work on the file. With the "undo past save" feature, you can save a file and continue to work on it and still have access to the previous edit history until you close the file.

The difference between this and the project file feature is that when you close the file, the edit history is lost and you do not continue to consume a lot of hard-drive space.

Effect automation

The one feature that makes SF 7.0 a real winner is "effect automation using envelopes." This is something that has been needed for a long time, and if you do any amount of serious audio editing, you won't want to be without it.

Effect automation allows you to create adjustable envelopes for supported plug-ins using the plug-in chainer. Let me give you an example.

Old-style electrical transcriptions and even many vinyl LPs often were cut with a decrease in the high-frequency content as the cutter progressed towards the center of the disc, causing a discernible difference in the beginning and ending sound of a recording.

Using the adjustable envelope feature, you can load a plug-in like Waves Q-1 Paragraphic Equalizer into the plug-in chainer. When you check the "gain" box, a graphical line extends across the entire length of the sound file representing the gain. By dragging the line higher towards the end of the sound file, you gradually can increase the high-frequency response of the sound file according to the frequency selected in the equalizer setting.

See SF 7.0 page 40 ▶

Product Capsule:
Sound Forge 7.0
Digital Audio Editing Software

Thumbs Up

✓Threshold- and time-based recording options
✓Projects can be saved with all previous edits accessible
✓Effect automation using envelopes through plug-in chainer

Thumbs Down

✓Requires Windows 2000 or Windows XP

Price: Packaged: $449.96; Downloaded: $399.96; Upgrade: $149.95; full functional 30 demo is available for free download

Contact: Sony Pictures Inc. Media Software and Services; http://media-software.sonypictures.com or (800) 577-6642

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Neither cared for that "Sabba Sibby Sabba, Nooby Abba Dabba" verse from "Good Morning Starshine," and I'm not too sure I did either.

My brother and I couldn't tell and didn't care. We'd bang on the paint cans with stirring sticks and sing lyrics as near as we could figure from Grandma's junky old AM radio.

Oddly, by the end of the week, the repetition paid off. Mom began to like the vocal harmonies of the 5th Dimension and started to notice other songs from the Broadway musical "Hair" that were gaining speed elsewhere.

And dear old Dad started to convince himself that maybe — just *maybe* — big bands might be finally on their way back, seeing how much horn arranging was written into "Spinning Wheel." Mom ended up buying the 45 of "Aquarius," which I still have, and Dad started exploring the brass arrangements in the music of Chicago as well.

But they never did cozy up to WABC. To them, the music was still too loud and the repetition was way too extreme. My brother and I chalked it up to them being too close-minded and swore we'd never be that way.

Yeah, right ...

Which brings me to the events of a few weeks ago, when it came time to close down the Washington campus of the Connecticut School of Broadcasting briefly for scheduled maintenance and the addition of new equipment. Staff members fully half my age took control over the tuner played in the school, and blasted the hits from a CHR station within earshot.

I couldn't believe I wanted to climb up inside the false ceiling and seal it shut. Me, Mister Never-Be-That-Way ... Mister Radio Himself, for the first time saying, "What? That @#!&% song is on again?"

The repetition actually drove me bats. The return to the top of the stack has been relaxed a little to 75 minutes instead of the more frequent turnaround of 45 minutes from the old days. Still agonizing to listen to. I was "treated" to Britney Spears' "Toxic" a half-dozen times in a single shift. The string stabs were edgy and annoying.

"Hey Ya" by that guy from Outkast may have won a music award, but that doofy little five-note synthesizer lick was the only part of the song that I carried away with me at the end of the day.

I wanted so badly to enjoy what I was hearing, but I found myself in the same position my folks did way back when, where they knew they had to get a job done and endured someone else's musical choices.

I stood there wishing that the kind of radio I once enjoyed would suddenly and unexpectedly come blaring from the ceiling speakers and show these ... these ... *amateurs* what real music radio should sound like.

But what I didn't expect was my realization that not a lot was vastly different. Oh sure, it was a generic vanilla show with a host who could probably be anywhere doing the hosting duties, jingles were replaced with flamethrowers and the stopsets were unbearably long, but what remained? The hits just kept on coming every few minutes, the jock was enthusiastic every time the mic was open and there really was a feel-good attitude to the show I was hearing, even if the music wasn't mine.

Had "my kind" of radio suddenly come back on, I do not think it would be as special now. It would be more quaint than killer.

I'd be hearing short tunes, an endless string of spots for Clearasil, Parks' Sausages and Rockaway's Playland, jocks that were entirely too over-the-top and the occasional "instant replay" where the very same song that just ended would start playing all over again from the top. Today, we would call that an automation glitch.

And if I was lucky enough now to hear one of those songs I loved as a young 'un, its probably because it was sampled for use in a contemporary mix.

I don't get it. That was such great radio. Was it great only for its time?

Broad mind, little chairs

I don't know the psychological reason behind it. Maybe it's the same as when you go with your child to the elementary school Open House night and sit in one of those tiny little chairs. They are the same chairs you sat in years ago, and they fit just fine. You don't ever remember outgrowing them, but you did.

Maybe it was just because my folks were captive to our music and our station without so much as a vote to change it for just an hour or two. I suppose I felt the same about being stuck with Britney and Outkast for all those hours. I wanted things my way, but would I have been able to sit through "my way" radio for longer than a few hours?

Who knows? After another week, maybe I too would have been indoctrinated enough to start liking those songs, just like my folks did.

In any case, a point my parents never intended to make hit home right between the eyes. Beauty remains in the eye of the beholder, but every generation will always have the one before it yelling through the apartment, "What? That @#!&% song is on again?"

And I don't care how much your kids object. When it's their turn to paint Grandma's pad, *you* take control of the radio. They will be slinging their iPods anyway.

Next time out, it's the annual post-NAB return of Shecky Peterson.

PRODUCT GUIDE

Evan Is Simply Stuffy

Approximately 1,000 youngsters submitted audition videos in a contest for a role in a Simply Stuffy nasal decongestant commercial.

The contest was promoted on the Premiere Radio Network and at shopping mall outreach events. The winner was 5-year-old Evan D. Evan, whose parents won $40,000 toward the purchase of a new automobile, tickets to a Broadway show, an overnight stay in a New York hotel and a session at radio commercial production house McHale Barone's Irving's Place Studios, where he recorded the spot.

Pictured at the studio are (rear from left): Rachel Max, Alchemy/NY director of art buying; Sharon McNulty, VP management supervisor; Alexis Pop, account supervisor; Svenja Timme, SVP/creative supervisor (art); Larry Zolob, Consumer and Specialty Pharmaceuticals brand manager; Mark Harder, McHale Barone mixer; Tom Pastore, Alchemy SVP/creative supervisor (copy); Jeff Lodin, music arranger and Joe Barone, principal of McHale Barone.

In the front row is the winning family, mom Wendy D., contest winner Evan D. and dad Ted D.

Henry Offers StudioDrive

Henry Engineering is introducing the StudioDrive stereo audio mixer at NAB2004. StudioDrive fits in the drive bay area of a PC.

The control, mixing and monitoring functions that it adds to a soundcard creates an integrated studio that the company says is suitable for PC-based radio automation, newsrooms and production studios. The mixer was designed for broadcast and audio production applications and features six inputs (one mic and five line) and on-air and soundcard outputs.

StudioDrive consists of the main control unit, which is installed in the PC's drive bay, and the Audio Interface unit, which contains the power supply and I/O connections. The Audio Interface can be attached to the back of the computer case or mounted to a tabletop or wall. A flat cable routed through the back of the computer connects the units. An optional Desk Mounting Kit permits desk mounting and use with a laptop computer or in cases where it is not possible to mount the main control unit in the PC.

Other features include a telephone coupler, mix-minus output and provision for remote mic control. The monitor system provides automatic muting when the mic is on, as well as control of on-air warning lights.

For more information from Henry Engineering, call the company in California at (626) 355-3656, or go to www.henryeng.com.

SF 7.0

▶ Continued from page 39

Or if you want to touch up the level of a sound file in a few spots, you can add the Sony Volume plug-in to the plug-in chainer. By checking the appropriate box, the volume level will be represented by a line extending from the beginning to the end of the sound file.

Anywhere that you need to raise or lower the volume you can simply double-click on the line to add a point, then drag the line from that point to the appropriate level. Add another point and the line can be returned to the original level.

Once you have used the automated envelope feature, you will be looking for more ways to use it. This feature changes dramatically the way that you work with sound files and provides a new and better way to work.

Although not all plug-ins support the automated feature, increasing numbers of third-party plug-ins do. I recommend those by PSP and Waves Ltd.

There are other new features in SF 7.0 as well. For a rundown on the product features and minimum system requirements, go to *http://mediasoftware.sonypictures.com/*.

Worth the upgrade

I have upgraded three computers from SF 6.0 to SF 7.0, and I would not go back. While no single new feature by itself may provide enough incentive to upgrade, there are sufficiently solid new features that improve my ability to digitally edit and increase my efficiency enough to make the upgrade a happy choice.

Read Burgan is a free-lance writer and a former public radio station manager who can be reached at (906) 296-0652 or through e-mail at rgb@charter-mi.net.

BROADCAST Equipment Exchange

"Broadcast Equipment Exchange" accepts no responsibility for the condition of the equipment listed or for the specifics of transactions made between buyers and sellers.

ACOUSTICS

Want to Sell

ANTENNAS/ TOWERS/CABLES

Want to Sell

1-8 bay high power Calbewave FM antenna, CFM-HP8, recently replaced in service at 98.3, complete and in excellent condition, factory refurbished, 10 years, $2500. Rick Keefer, KICA, 1000 Sycamore St, Clovis NM 88101. 505-762-6200.

ERI SHPX 9KW rototiller single bay 9KW tuned to upper Educ or lower Comm in excellent condition, $600 +shpg. WW Fulgham, KBRA FM, 850 Brandon Ave, Jackson MS 39209. fultec@ksco.com.

CD PLAYERS

Want to Sell

Pioneer CAC-V180M, 18 disc CD player. Will interface with automation systems, $495. F.O.B. Millersburg, PA. Call Jim Hepler for more information at 717-692-2193.

COMPLETE FACILITIES

Want to Sell

CONSOLES

Want to Sell

ATI Vanguard BC8D5L, 8 pot stereo mixer with linear faders, brand new, still in factory carton, never used, mint condition, with factory installed options, vacuum fluorescent display, input expander, for total 20 inputs, remote start-stop switchers, $4750 +shpg. Ken Hayes, Rodken Enterprises, 140 Park Pl, Pittsfield UT 05762. 802-746-8672.

Want to Buy

Hi-power FM antenna on 95.1 Mhz or one that can be re-tuned. Call Jeff Jones, KLFR, 208-476-5702.

AUTOMATION EQUIPMENT

Want to Sell

Complete Scott Studios System, 3SS, 5PBs, net catcher. Tons of storage, all cables & extra boards, 3 monitors, 4 keyboards, buy it all for $2500. FOB Millersburg PA. Call 717-692-2193, ask for Jim Helper for information.

BE Audio Vault AV100 system includes 3 workstations, production/ backup computer and server. Includes 5-AV100 cards, 3 "daughter" cards and 3 memory upgrades. Buy all or separately. Engineer Bob, WMSA, Massena NY. 315-769-3333.

Scully 270 1/4" R-R play (4). New pinch rollers required, heads good, $125 each or all for $400 +shpg. WW Fulgham, KBRA FM, 850 Brandon Ave, Jackson MS 39209. fultec@ksco.com.

Want to Buy

SMC MSP 6 or 12 channel automation systems. Rick Keefer, KICA, 1000 Sycamore St, Clovis NM 88101. 505-762-6200.

LIMITERS/ AUDIO PROCESSING

Want to Sell

Inovonics Model 222 "NRSC" (AM) audio processor with instruction/maintained/operating manual, $1500. Don De Rosa, WAMF, 174 Lakeshore Rd, Fulton NY 13069. 315-593-1300.

CBS Labs AM Volumemax limiter, $200. Rick Keefer, KICA, 1000 Sycamore St, Clovis NM 88101. 505-762-6200.

Orban Optimod ACC-025 composite isolation transformer, $100. Rick Keefer, KICA, 1000 Sycamore St, Clovis NM 88101. 505-762-6200.

Orban Optimod Composite clipper card, $200. Rick Keefer, KICA, 1000 Sycamore St, Clovis NM 88101. 505-762-6200.

Want to Buy

Teletronix LA-2A's, UREI LA-3A's & LA-4's, Fairchild 660's & 670's, any Pultec EQ's & any other old tube compressor/limiters, call after 3PM CST, 972-271-7625.

Used AM audio processor in good working order. Call after 6PM EST, 401-942-8341.

MICROPHONES

Want to Buy

RCA 77-DX's & 44-BX's, any other RCA ribbon mics, on-air lights, call after 3PM CST, 972-271-7625.

MISCELLANEOUS

Want to Sell

Proteck 20 MHZ Spec. analyzer (A-3502). Make a decent offer. Call Michael Raley (704) 523-5555 or e-mail Mraley@rrb.org.

MONITORS

Want to Sell

Belar Electronics AMM-1 frequency & modulation monitor w/instruction book, $1200. Don De Rosa, WAMF, 174 Lakeshore Rd, Fulton NY 13069. 315-593-1300.

RECORDERS

Want to Sell

Otari MX-5050 B2, 1/4" 2 track mastering deck, good condition, refurbished, $995 +S&H. Gary Brefini, GPMJ Broadcast, 12 Bailey St., Foxboro MA 02035. 508-543-0158 before 6PM EST or via email: gpmjbcast@aol.com.

Revox B-77 stereo R-R tape recorder, $800. Don De Rosa, WAMF, 174 Lakeshore Rd, Fulton NY 13069. 315-593-1300.

REMOTE & MICROWAVE

Want to Sell

SATELLITE EQUIPMENT

Want to Sell

MPEG-2 Satellite Receivers, LNBs, C & Ku Band Equipment. www.daveswebshop.com, 479-997-2230.

Scientific Atlanta digital Sedat receiver AD4595, also Wegener analog, both excellent condition, call Tim Chisholm, Big Wolf Communications, 770-967-7790, 7AM-6PM.

Wegner DN 86 Digital Audio Reciever 3944.4 MHZ - $ 100.00 "as is" plus shipping and handling - Call Michael Raley @ (704) 523-5555 for more information or e-mail Mraley@rrb.org for a picture.

SERVICES

STATIONS

Want to Sell

1000 Watt Full Time AM in Northeast Mississippi. Will sell with financing. 662-423-9919.

HEALTH PROBLEMS FORCING SALE OF 5KW, located on Tennessee and Virginia border. Will sacrifice. Call Jennings at 423-968-5221 or 276-466-2893.

Want to Buy

AM/FM CP translators in the RI, CT, MA, FL areas. No station to small. Will consider partnership. Call after 6PM EST. 401-942-8341.

RW Online

STUDIOS

Want to Sell

ATI Audio Distribution Amplifier 2016-1. We have about 10 of these as a result of studio renovations. They cost over $1,100.00 new but will let these go for $175.00 each plus S&H. Contact Michael Raley at (704) 523-5555 for more information or e-mail Mraley@rrb.org for a picture.

Audio Arts 8400 Distribution Amplifier. We have about 15 of these as a result of studio renovation. They cost over $1,100.00 new but will sell "as is" for $175.00 each plus S&H. Contact Michael Raley at (704) 523-5555 or e-mail Mraley@rrb.org for a picture.

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

STUDIOS (WTS) Cont.

Enberg BA - 6 Announciator. Have several of them in great condition with no more than eight years of use in them. Original cost was $359.00 each but we will sell them for $ 175 .00 each "as is" plus s/h. Call Mike R at (704) 523-5555 or e-mail Mraley@rrb.org for more information.

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

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

Two Denon DNM 1050R Professional Mini-disc Rec/PB Deck. Both units manufactured in 2001 and were used on our test bench in our downlink room. Has low impedence and headphone jack. We are asking $5 00 .00 for each unit plus shipping and handling. I can e-mail two pictures and the "Main Features" portion of the manual. Please contact Mike Raley or Ron Muffley at (704) 523-5555 for more information or e-mail Mraley@rrb.org for pictures.

Two RTS 416 Distribution Amplifiers. Has slight problem pushing +4. Cost $1,173.00 new but will take $325.00 for each unit plus S&H. Call Michael Raley at (704) 523-5555 or e-mail Mraley@rrb.org for a picture.

TAX DEDUCTIBLE EQUIPMENT

A non-profit 501©(3) Christian Ministry, seeks tax deductible donations of working professional grade live/post radio production equipment of studio automation systems, modulation monitors, DAT, CD players, mikes, turntables, mixing boards, and other radio production equipment. Also, need transmitters, translators, transmission lines, and antennas to be used in our Youth Radio Ministry Training Program. All donations will receive a tax deductible receipt and God's blessings for their donations. Minister Dr. R. Hodges, 916-721-3285 or info@lwcr.org.

TRANSMITTERS

Want to Sell

(5) Five KW FM's; (5) 10 KW AM's; CSI T-25-F 25 KW (GG) FM; (5) 5KW AM Harris MW-5-B. Continental Comm., 314-664-4497, ContComm@sbcglobal.net.

McMartin BF-5K, 5kW FM. Factory rebuilt in perfect, like new condition, includes new tubes, tested & tuned on your frequency. Guaranteed, fully adjustable from 0 to 5.5 kW. Goodrich Enterprises Inc, 402-493-1886.

CONSULTANTS

DISTRIBUTOR DIRECTORY

The following distributors serving the broadcast industry would be glad to help you with any of your requirements.

TRANSMITTERS Cont.

Gates 3H3 3KW FM, newer tube and rectifiers, no exciter, BO. Kurt Tuckerman, Radio Marti, 4201 NW 77th Ave, Miami FL 33166. 305-437-7055.

Collins 830 electro engineering works, 3PH power transformer, 5KW with low volt taps, $600 +shpg. WW Fulgham, KBRA FM, 850 Brandon Ave, Jackson MS 39209. fultec@ksco.com.

Continental 315R1 AM 5 kilowatt transmitter. Used as a daytimer for 18 years. Well maintained with many spares. Tuned to 1260 kilohertz, 500 watt cutback, $12,000 & you pick up. Ken Loggins, 615-446-0752 for more information.

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

Want to Buy

RCA BTA-250M, 250 watt small transmitter. Bill Robinson, 198 Skyland Dr, Meridian MS 39301. 601-693-1441 (work), 601-433-6185 (home).

RCA BTA1S 1000/500 watt broadcast band transmitter. New matched pair of 400-C power tubes in transmitter, with spares. AM crystal oscillator at 1300 in xmtr, with manual. Power tubes in service 11-22-03, xmtr out of service 6-15-03, $3000. Don De Rosa, WAMF, 174 Lakeshore Rd, Fulton NY 13069. 315-593-1300.

Collins 820D, 1 KW AM. Working fine when removed from service. On 1300 KHz. Jim Keightley at 509-493-3403 or keightley_31@hotmail.com.

TUBES

Want to Sell

Want to Buy

4CX15,000J or YC-130, duds suitable for rebuilding. Must be those types only. Chris Hood, 5 Harrison St, Crafton PA 15205. 412-921-2911.

EMPLOYMENT

POSITIONS WANTED

WSBC Broadcasting is looking for a Manager of Engineering. We will soon own five AM stations and one FM station in the Chicago area. We need an experienced person, familiar with AM directional patterns and multi-tower arrays. In addition, the person will be involved in all engineering and technology aspects for this growing company. Resume, job and salary history to: Harvey Wells, WSBC Broadcasting, 1645 West Fullerton Ave, Chicago IL 60614. WSBC Broadcasting is an Equal Opportunity Employer.

American Broadcasting School graduate. Hardworking & creative copy writer. Motivated to work. Interested in Oklahoma or Michigan. Dale, 405-485-8275.

Broadcasting School graduate, willing to relocate, can go anywhere, can do anything, digital to news, the right man for the job, call David, 405-408-9691.

Can produce analog and digital. On-Air comes naturally. My email address is qw3@sbcglobal.net. They call me Quiggly, but my real name is Quinton Wilson.

Do you need a fresh, innovative approach to your sales strategy? Advertising Design Specialist seeks position in sales or production. Call Gary at 918-358-5649.

Energetic & fully moldable graduate of American Broadcasting School looking for chance to prove myself on-air or in the production room. Chris, 405-386-5606.

Energetic ABS graduate seeking a FT or PT job in radi or sports. Willing to relocate. Mike 405-229-9406.

Energetic sportscaster, with knowledge in sports and broadcasting, will travel to make your rating rise, contact David at 918-288-7924 or 918-606-0262.

Hardworking ABS graduate, seeks position in production. Skills include writing, voicing, and producing creative commercials. Terry, 918-493-7334.

Recent ABS grad looking to work hard and have fun. Very dependable and ready to turn the mic on at your station. P-B-P/color experience. Rick, 405-670-5699.

ABS grad looking to work in radio. Can do on-air, board ops, production. Fluent in Cool Edit. Willing to travel. John Bird, byrdman289@hotmail.com.

ABS rookie looking for a chance to excel. Ready to relocate for production, news, and air. Prepared to start today. JT, 620-326-2982.

Michael Beard, American Broadcasting School Arlington, TX makes music with FruityLoops and Cool Edit. 1 year experience DJ. Great commercials. 817-419-7146.

Stevie Lynn is ready for the world. Up-beat team player wanting to make a difference at your station. Grab me quick!, 405-691-6173 or BabeeBoo22@aol.com.

Young, upbeat, hardworking and professional ABS graduate bursting with enthusiasm and eager to begin. James Lingruen, 817-419-7146 or jamesdinthemix@sbcglobal.net

ACTION-GRAM

EQUIPMENT LISTINGS

Radio World's Broadcast Equipment Exchange provides a FREE listing service for radio stations *only*. All other end users will be charged. This FREE service does not apply to Employment Help Wanted ads or Stations For Sale ads. These are published on a paid basis only. Send your listings to us by filling out the form below. Please be aware that it takes one month for listings to appear. The listings run for two consecutive issues and must be resubmitted in order to run again. Thank you.

Please print and include all information:

Contact Name ______________________

Title ______________________

Company/Station ______________________

Address ______________________

City/State ______________________

Zip Code ______________ — ______________

Telephone ______________________

Brokers, dealers, manufacturers and other organizations who are not legitimate end users can participate in the Broadcast Equipment Exchange on a **paid** basis. Line ad listings & display advertising are available on a per word or per inch basis.

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***Closing for listings is every other Friday for the next month's issue. All listings are run for 2 issues unless pressed for space or otherwise notified by listee.**

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ADVERTISER INDEX

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Radio World, April 23, 2004

The Broadcast Indecency Playground

The Public May Forfeit Its Right to Free Speech In Favor of Government-Imposed Indecency Standards

by Braden Cox

Sticks and stones may break my bones but words will never hurt me — we've all heard that phrase before. It's often said by children who are picked on in the schoolyard. But adults can derive some wisdom from this seemingly simple expression, and apply it to the current brouhaha over broadcast radio and television content.

Bully pulpit

Just like that tattletale in school who always ran to the teacher, certain interest groups are pushing Congress to "clean up" the airwaves. More than just increasing the fines on broadcast licensees, the pending bills propose to extend liability to announcers and entertainers personally. The House bill pulls the plug on a licensee after three indecency violations — a "three strikes" mandate much like California's criminal law regime. The thrust of the pending legislation is to further centralize who decides "good" from "bad" content, and makes government — not consumers — the ultimate arbiter of programming content.

When it comes to censoring broadcast "indecency," government regulation is a rudimentary filter. Laws preventing certain speech are black type on white paper, but the context in which words appear are utterly gray. Language that is crude in one context is clinical in another. Politicians are only good at making black-and-white decisions. When it comes to "obscenity" or "indecency," even the U.S. Supreme Court avoids specific definition and instead proclaims, "I know it when I see it."

Ironically, George Carlin's famous monologue on the "seven dirty words" was a satire on censorship. Some people consider him to be lewd and crude while others consider Carlin to be a comedic genius and master of manipulating the English language. The same could be said of Howard Stern and his show today.

Deciding whether Stern's broadcast is indecent shouldn't be a political debate, but it is. Until we get away from the belief that spectrum is a scarce natural resource owned by the public, broadcast standards will be dictated by the political process.

The FCC is moving toward a property-based spectrum allocation process — as proposed in its 2002 Spectrum Policy Task Force report — and this should be applied to the broadcast world. After all, private bookstores are very good at satisfying diverse tastes, keeping the more titillating magazines away from the windowed storefront on a crowded sidewalk. Broadcast ownership should be no different.

Autonomy before censorship

The natural reaction of many people today is to ignore private means of persuasion and influence in favor of the idea that "there ought to be a law." But what would a strengthened broadcast censorship law achieve?

Congress should weigh costs and benefits before it passes any law. In this case, what measurable benefit can come from the regulation of speech, arguably the most precious of our constitutional rights? Will crime go down? Will children retain their innocence a little bit longer? To be sure, there are plenty of less intrusive mechanisms that exist in society today short of government censorship.

As we have seen in the response to recent indecency scandals, customers are perfectly able to be their own regulators by registering their displeasure with programmers and advertisers. Parents have a powerful weapon of their own; it's called the off button. Truly offensive content, as opposed to occasional crudeness or political incorrectness, will be met with vanishing audiences and no advertisers.

Americans should worry about the federal government having the power to determine what they may to listen to and watch. Particularly disturbing are proposals to expand FCC censorship powers beyond traditional broadcast networks into the arena of cable and satellite content. It's this rabid desire of regulators to ignore the First Amendment that Americans should regard as truly offensive — not controversial programming that can be readily turned off.

In the future, perhaps technologies will be built into digital video recorders that would allow a consumer to set up a screening system. Enabling individual control of content in a free market is welcomed because no law or set of laws can increase morality. As Rep. Ron Paul recently stated on the House floor, "If a moral society could be created by law, we would have had one a long time ago. The religious fundamentalists in control of other countries would have led the way. Instead, authoritarian violence reigns in those countries."

Braden Cox feels our First Amendment rights are 'under attack.'

Voltaire is attributed with saying, "I may disagree with what you have to say, but I shall defend to the death your right to say it." So go grab your sticks and stones. Our free speech rights are under attack and it's time to take a principled stand.

Braden Cox is technology counsel for the Competitive Enterprise Institute in Washington.

Broadcasting's New School

I read your recent article about a young person being interested in radio at such a young age ("Brian DeNicola: A Broadcaster Is Born," Feb. 1), and wanted to spotlight another young person making his mark on the radio industry as we speak.

His name is Zack East, a 20-year-old student at Ferris State University in Big Rapids, Mich. He also is an employee at the Lakeside Inn in Lakeside, Mich., where he works as an innkeeper. He started there in his junior year of high school, when he made his first impact on audiences.

Zack served as an athletics announcer for various sports at River Valley High School in Three Oaks, Mich., and was regarded as a talented person with an exceptionally bright future. After graduating from River Valley in 2002, he was accepted to Ferris State University — the only state school in Michigan that does not have a radio station.

At Ferris, he learned of a small student radio organization broadcasting off the campus cable television network. Since 2002 he has been a member, and this year became the station manager. He completely automated the station with computers, has a full staff of DJs and is preparing to take his proposal to the board for a low-power FM station, which is expected to pass with flying colors.

College student Zack East works weekends at Michigan's WIRX(FM) and is proposing an LPFM station at his school, Ferris University.

In carrying out his duties at the Lakeside Inn, he has met many broadcast stars, including Rick Kogan of WGN(AM) Radio Chicago. Zack has since been a guest on Rick's WGN show two times, and even co-hosted a show with Kogan for three hours during the busy shopping season in December.

His credentials don't stop there. Zack also works weekends, driving from Big Rapids to Benton Harbor to work for the radio stations of Michigan's Great Southwest, at "Rock 107" WIRX(FM). He has been extremely successful at the station and is slated for a possible promotion during the summer.

Aaron Shafer
South Bend, Ind.

Magic Transformer

Regarding "The Mic on the Bike (Feb. 11)":

"Solar cells power two .38 amp-hour lead-gel batteries that drive the audio equipment via a transformer..."

I've been waiting for a transformer like that for most of my life.

Bill Clough
Corpus Christi, Texas

RW replies: The original story specs the batteries at 38 amp-hour, a rather large gel cell; and 0.38 ah would be a tiny battery by comparison and would not last long.

But the writer's tongue-in-cheek observation is that you can't connect a transformer to a battery and expect it to do anything. Batteries put out DC, not AC.

Transformers can only transform (step up or step down) AC voltage. In this application, the batteries probably power an integrated DC-to-DC converter that provides appropriate DC voltages to power the amplifiers. Such a converter employs an inverter that converts DC to AC and then rectifies and filters it back to DC.

A single transformer that can convert DC to DC would indeed be a magic transformer.

Correction

Tom McGinley was incorrectly identified in the March 10 *Buyer's Guide* as DOE/MIS for Infinity Broadcasting. He is DOE/MIS for Infinity Seattle.

◆ READER'S FORUM ◆

The LPAM Debate

While this country has a need for local, community-oriented radio, LPAM is not the way to get it. Because the AM band is subject to skywave propagation at night, LPAM would create a sea of interference. For a preview, tune to a local channel at night, such as 1340or 1450 kHz.

The natural home for small, community radio stations is the FM band. Room could be made for these stations by eliminating the translators that currently clutter the band — starting with the noncommercial translators that are fed by satellite or T1 lines.

There *already* exists a perfect solution for LPAM advocates, with no changes to technical rules and only one minor change to the operational rules: Travelers' Information Service/Highway Advisory Radio (TIS/HAR). Governed under FCC Part 90.242, they allow for a 10-watt AM service on any AM frequency with a minimal amount of engineering and equipment costs required

Technically, the TIS rules allow for a service that has about a 5-mile service diameter to cars, perhaps 2 or 3 miles for in-house listening. There are provisions for more in rural areas that allow it, so it's in line with what LPFM/LPAM proponents want.

While this country has a need for local, community-oriented radio, LPAM is not the way to get it.

— Philip E. Galasso

The FM translator service was never intended to allow fat-cat foundations and religious broadcasters to create nationwide networks. With today's demand for FM frequencies, translators are a luxury we can no longer afford, and they've long outlived their usefulness. They should be taken off the air as their licenses expire, with every application filed during the recent translator-filing window automatically denied.

Because corporate radio insists on giving us homogenized, voice-tracked programming without a shred of localism, we need an alternative. Corporate radio was asleep at the wheel when hazmat tank cars derailed in Fargo, N.D., killing several. We need a community radio service that can operate commercially, allowing small businesses to advertise inexpensively. And we need to return to the merit system for allocating construction permits, as only the super-rich and large corporations can afford to bid in frequency auctions.

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

The debate over LPAM is one of the most perplexing I've seen in a while.

To forestall the AM vs. FM argument, the lower audio quality of AM has never proven to be a deterrent to listeners when the programming is something they want. If community broadcasters aren't getting listeners, it's not because of low wattage. Their programming isn't appealing enough to people in their area. The "more watts = more listeners" argument really doesn't come into play until you reach the full Class A to Class B FM size of station.

Now to the operational side, where the rules are ideally suited to a local community service. The only problem is that TIS/HAR programming restrictions are strict, and require the service to be traffic information and programming directly related. Just lift the programming restriction. Let TIS broadcast any programming it wants — perhaps with the restriction of 8 hours' local programming daily and the underwriting restrictions found on noncommercial FM. Anyone who follows NPR affiliate stations knows that you can do fine fiscally with content restrictions.

But what about the localism requirements, and preventing this from being yet another "satellator" outlet? Simple. TIS stations also are restricted by Part 90.20, which says that only governmental entities, districts (except school districts) and town authorities can hold TIS licenses. Just lift the school district restriction, but keep the rest. That requires any applicant to work directly with their local government officials or schools in order to obtain the license.

In my experience, most local governments are happy to work with a community organization to start a radio station as long as the applicant shows they're willing and capable to do all the grunt work. All the authority/district representative has to do is sign the dotted line. More often than not they don't need or want anything to do with the actual operation of it. And when they do, it's only in the smallest ways.

The reason is that elected officials view community radio stations as having a positive impact on the community. Whether or not they do is debatable, but it's rare that a negative impact occurs — and for an elected official, that's a nice thing to point to during a re-election campaign.

In the end, you have a good method for ensuring a service stays local and serves the local are a— with little or no down side to the actual station operation. You might even score some extra funding tossed your way.

It's simple, it's easy and aside from some minor, non-technical changes, the rules are *already* on the books for an ideal LPAM broadcast service. What more could you want?

Aaron "Bishop" Read
FriedBagels Consulting
Boston

Responsibility Is Job No. 1

Indecency seems to be *the* hot-button issue of the day in our industry.

The FCC handled the issue back in the 1970s — or so we thought — when the Pacifica case was decided in the Supreme Court. This decision told broadcasters, at least to some degree, where "the line" was; responsible broadcasters stayed well clear of that line.

In subsequent years, "shock jocks" and others pushed the edge of the envelope, blurring that line. In most cases, they got away with it, and this in effect moved the line even more.

From time to time, however, some have crossed into a zone that has offended a large portion of the populace and produced a hue and cry that even the FCC could not ignore. In January, this happened before a national television audience, one that included children as well as adults, during the Super Bowl halftime show. The nation gasped, more than 200,000 complained and knees began jerking from Congress all the way down to the PD's office.

Now, a move some view as draconian is well underway to take indecency forfeitures from inconvenient to punitive, putting even station licenses at stake with proposals for a "three strikes and you're out" provision. This moves such forfeitures out of the category of "the cost of doing business" and into a whole new classification, significantly affecting revenues and jeopardizing the futures of individual stations.

Congressional proposals aside, the FCC has stepped up its enforcement efforts in the area of indecency. The likelihood of a station or group receiving a Letter of Inquiry in response to an indecency complaint is much higher than it has been in the past, and the likelihood of such an investigation resulting in a forfeiture seems much higher than under the old paradigm.

In response, broadcasters large and small are taking steps to keep indecency, profanity and other objectionable material off the air.

Some of this is being done at the executive level by means of corporate "responsible broadcasting" initiatives that clearly define what will not be tolerated on the air. This takes care of the material directly under the licensee's control. The rest — phone calls, guests and live audio from remote locations — is being dealt with through technology, typically obscenity delays that give the broadcaster a few seconds to decide if what has just been said is indecent, profane or objectionable and, if the situation warrants, delete it. Both are good, responsible steps for managers to take.

Indecency is, to some degree, a moving target, and taking positive steps to give it a wide berth is a good thing. It is the only safe — and responsible — course of action for those who hold broadcast licenses.

For those who have worked diligently for years to keep the public airways clean, our hat is off to you. And we welcome those who have recently vowed to join their ranks. Responsible broadcasting should be Job No. 1 for all of us.

— RW

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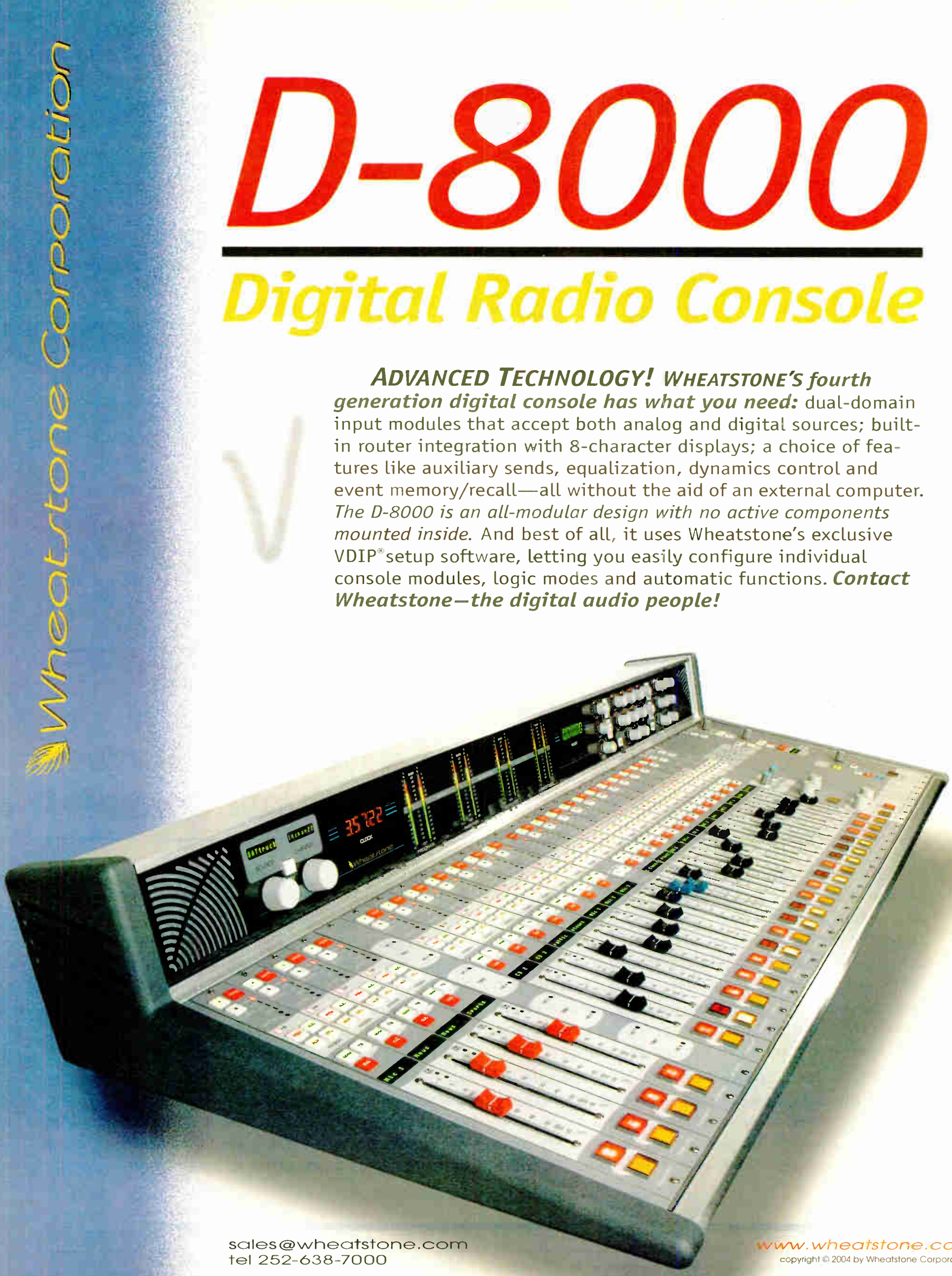

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