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**Are You Decent?**

Barry Umansky helps you navigate the shoals of indecency in *Broadcast Law Review*.

Page 24

**Country's Ex-Pats**

The format tries to lure back its defectors.

Page 23



# Radio World

The Newspaper for Radio Managers and Engineers

May 23, 2001

**INSIDE**

**ENGINEERING**

▼ Frequency coordination for the 2002 Games in Salt Lake City will be an Olympian proposition.



Page 10

**INTERNET RADIO**

▼ We ask experts for tips to protect your station from computer viruses.

Page 35



▼ Webcasters to watch.

Page 36

**STUDIO SESSIONS**

▼ Carl Lindemann reviews the HNB Porta-Disc field recorder.

Page 43



▼ Wisconsin's WTKM — "We're The Kettle Moraine" — plays superstars of ... polka!

Page 43

**HEY AMIGO!**

▼ CRL and Radio World give away an Amigo FM processor.

Page 4



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**NAB 2001**  
 The Convergence Marketplace  
**PHOTO GALLERIES**

**inside**

Top: The strip; Bruce Morrow (center) with David Kennedy and Eddie Fritts; the Radio Floor.  
 Bottom: Bud Aiello and Milford Smith; Sam Donaldson and Michael Powell; a tower light.

Photos 11, 12 and 24 © NAB; 23 by George Poulos, other photos by Paul J. McLane

**NEWS ANALYSIS**

## Engineers Decry FCC Database

*CDBS Users Describe Raft of Trouble; FCC Says It Has Been Trying To Fix Ongoing Problems*

by Naina Narayana

**WASHINGTON** Engineers and attorneys who use the FCC broadcast database say the system has major flaws, despite efforts by the agency to improve it.

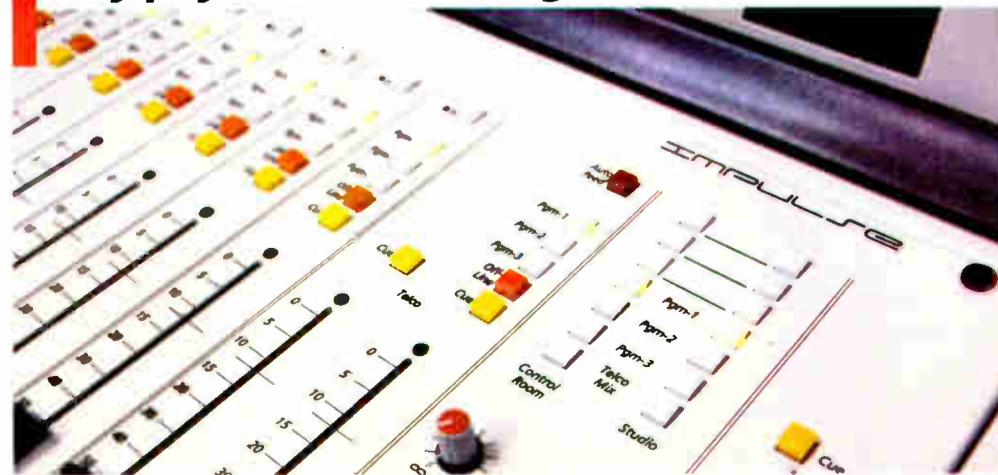
Users of the Consolidated Database System cite numerous inconsistencies and problems including what they describe as lack of quality control, mislabeled or missing data, slow or inadequate technical assistance and problems submitting online applications.

One prominent consulting engineer called it the poorest implementation of a database system that he'd ever seen.

Stations are required to use the engineering database to file 12 Mass

See DATABASE, page 6 ▶

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# ◆ NEWSWATCH ◆

## Harris Picks Up Hirschmann

**MELBOURNE, Fla.** Sensing a billion-dollar market, Harris Corp. plans to expand its global digital broadcast efforts by acquiring a European firm.

Harris has signed an agreement to acquire the assets of Hirschmann Multimedia Communications Networks, which is the broadcast business of Hirschmann Austria, a member of Aditron AG, the electronics sector of Rheinmetall in Germany. Hirschmann MCN makes European standard DVB-T digital television and DAB radio trans-

mitters, digital cable systems and low-power analog TV transmitters. The deal is expected to close by early June.

Hirschmann MCN is based in Austria and will become part of the Harris Broadcast Communications Division. Hirschmann MCN had sales last year of \$26 million and has approximately 130 employees.

"When combined with our ITIS development operations in Rennes, France, and manufacturing operations in Cambridge, England, Harris is well positioned to supply the European standards-based broadcast equipment for digital TV and radio, worldwide," stated Harris Chairman and Chief Executive Officer

Phillip Farmer.

Farmer said digital radio and TV transmitter markets are expected to exceed \$1 billion in the next decade.

Harris plans to continue Hirschmann's broadcast business as Harris Broadcast Communications Europe, operating with established management and employees.

## FCC Tenures in News

**WASHINGTON** FCC Chairman Michael Powell won another endorsement from President George W. Bush in April.

A statement released by the White House said the president intends to nominate Powell for a second five-year term on the commission. Powell's current term expires June 30, 2002. If confirmed by the Senate, Powell's tenure as chairman would extend through mid-2007.

Meanwhile, Commissioner Susan Ness said she would leave her post by June 1. By that time, she will have served seven years at the FCC, working with three chairmen: Reed Hundt, Bill Kennard and Powell. Ness stated, "I believe that an orderly transition is best accomplished by announcing when my time with the commission will end."

Commissioner Harold Furchtgott-Roth has also said he intends to leave the agency this year, as does fellow commissioner Gloria Tristani.

The White House in April sent three nominations to the Senate to fill the vacancy left by Kennard and the expected vacancies for seats now held by Ness and Furchtgott-Roth. Nominated are Republicans Kathleen Abernathy and Kevin Martin and Democrat Michael Copps.

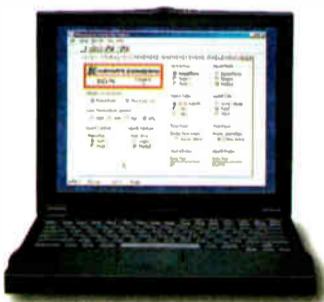
Tristani has not specified when she intends to leave the agency.

# AUDIOARTS DIGITAL D-70



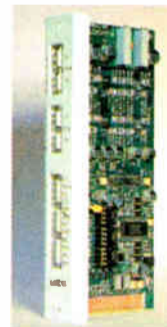
The D-70 digital console from AUDIOARTS not only utilizes the latest in digital technology and chip sets, it can be ordered with a serial interface that lets it integrate with most popular automation systems and station routers; it even has WHEATSTONE's exclusive VDIP® software setup system.

Plug-in modules let you have any combination of mic, analog or digital line inputs, and four stereo busses give you plenty of flexibility (each has both digital and analog outputs). And with sample rate conversion on all the digital inputs plus selectable console clock rates of 32, 44.1 or 48KHz (and an optional external house sync) the D-70 can fit right in with all your facility's present equipment.



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## Index

<b>NAB PHOTO GALLERIES</b>	5, 15, 30, 45
<b>FEATURES</b>	
<b>Transition to Digital: How to Prep Now for IBOC Later</b> by Bob Clinton	8
<b>Frequency Coordination in Salt Lake City</b> by Ted Nahil	10
<b>Border Blasters Left Lasting Impression</b> by Bill Ryan	12
<b>Workbench: Nicknacks for Your Toolkit</b> by John Bisset	19
<b>GM JOURNAL</b>	
<b>Can Country Keep Its Expatriates?</b> by Ken R.	23
<b>Broadcast Law Review: A Decent Guide to Indecency Rules</b> by Barry D. Umansky	24
<b>INTERNET RADIO</b>	
<b>Stay off the Virus Sick List</b> by Scott Fybush	35
<b>Web Watch: AFTRA, Baseball and Net Radio</b> by Carl Lindemann	35
<b>Despite Downturn, Web Still Hot</b> by Scott Fybush	36
<b>STUDIO SESSIONS</b>	
<b>Station Profile: All Great Polka Hits All the Time</b> by Ken R.	43
<b>Product Evaluation: HNB Follows the Way of the MiniDisc</b> by Carl Lindemann	43
<b>World According to ARP: AI to Earth: Get a Life. Please.</b> by Alan R. Peterson	47
<b>OPINION</b>	54

# Minus Infinity, NAB Looks Forward

by Leslie Stimson

**LAS VEGAS** A new administration. The dot-com crash. The stalemated DTV transition. The loss of CBS/Infinity from the NAB membership roster.

In remarks at NAB2001, President and CEO Eddie Fritts said the broadcasting industry is not only up against new technology competitors, but is experiencing its most difficult advertising period in 10 years.

While not naming CBS or Infinity, Fritts referred to "the split between the affiliates and the networks" and referred to tension between the two groups over television's 35 percent national ownership cap.

Fritts publicly thanked ABC, the remaining large network member, for staying with the association. Fox and NBC had left the association earlier, because they want the cap raised or eliminated, while NAB and affiliates support the cap.

Infinity is the top-grossing commercial radio group, according to industry experts, and its withdrawal was noted by attendees and exhibitors.

Some CBS/Infinity employees told RW that in the past, the company did not cover their convention tabs anyway. But this year, as a result of the pullout, these attendees could not wear the group name on their badges or take part in session panels.

An NAB spokesman was unable to say how many fewer people registered because of the CBS decision, but said he thought it was under 100.

## Radio numbers

Radio has felt the economic pinch. But despite the tough ad market, Radio Advertising Bureau President Gary Fries said, "Local radio has shown more stability in the first quarter of this year than any other media."

Shortly after the show, the RAB said local radio ad sales for March dipped 6 percent, while national revenues were off 23 percent compared to the same month a year ago.

Like radio ad sales, show attendance was off a bit after years of escalation. Registration was down slightly from last spring's approximately 115,300. Those registered through the first day of this show numbered 112,776, with nearly 30,000 of those international attendees.

Some exhibitors in the radio hall described the foot traffic as good for the first two days of the show, but said it then tapered off. One source thought traffic from South America was higher compared to last year.

Meanwhile, Tim Schwieger, president of Broadcast Supply Worldwide and chairman of NAB's Exhibitor Advisory Committee, said international traffic was "fantastic," but said some exhibitors told him radio attendance was "noticeably down."

NAB spokesman Dennis Wharton did not yet have a breakdown for this year's show at press time; but last year, he said, the number of attendees who checked radio broadcasting as their primary business was 8,400.

He called this year's attendance a "terrific turnout," especially given the economic situation.

"The exhibitors we talked to said that

despite the slight drop, business was real good, orders were signed," Wharton said.

The 35 percent TV audience cap was a recurring theme. At the Congressional Breakfast, Rep. Cliff Stearns, R-Fla., said, "We raised the cap with radio and it wasn't necessarily the end of the world."

## Indoor plumbing

FCC Chairman Michael Powell, inter-

use are set.

XM received a power increase for its satellites before the show. A source close to the company said the increase would be used to enhance audio quality, not increase the number of channels offered nor measurably reduce the amount of repeaters needed.

Analysts disagreed over the viability of satellite radio's business model.



The FCC's Bruce Romano, BIA's Mark Fratrik and iBiquity's Al Shuldiner talk about the future of radio.

viewed by ABC-TV's Sam Donaldson, brought the house down when he summed up the importance of TV by saying, "More Americans have TVs than do indoor plumbing." There is a misconception, Powell said, that he believes free, over-the-air TV faces extinction.

When reviewing radio ownership deals, he said, the FCC has no effective way to measure diversity and that the presence of several owners in a market "doesn't necessarily mean from the consumer's perspective there's more choice."

Of the new class of low-power FM stations, Powell said, "We've been required by Congress to conduct exhaustive tests, real-world, not just lab tests."

Bruce Romano, associate chief in the FCC's Office of Engineering and Technology, told a session that the commission may put out for bid the tests for potential LPFM interference. Before any such facilities can be built, they need to be authorized, he said. It's not clear if the commission would publicize the location of the test sites.

The FCC is sorting through about 1,600 applications from the first three LPFM filing windows. The commission has not said how long granting CPs will take. The first 25 CPs were issued just prior to the show.

Romano said the FCC is focused on processing applications in cases where the station frequency is unopposed.

In several sessions, the problem of radio pirates in Florida was pointed out to FCC officials, who said their enforcement efforts have not wavered.

"The interference is just driving you up a wall," said one station owner.

The companies preparing to begin satellite-delivered pay-radio services, Sirius Satellite Radio and XM Satellite Radio, are deploying terrestrial repeaters they hope will ensure a clean signal in urban areas. Romano said these firms and wireless companies are sharing the spectrum the translators will use. Talks about the power levels of the repeaters continue. The FCC hopes all sides resolve outstanding issues on this topic before coming to the agency as the rules governing Sirius and XM's translator

## Reaction to IBOC Fees

Attendee reaction ranged from resignation to shock at the news that iBiquity Digital Corp. plans to charge broadcasters license fees for software to make IBOC-compatible equipment perform — both a first-time charge and a fee for later upgrades (RW, May 9, page 1).

One non-com CE said, "I'm not surprised. Venture capitalists want a fast return on their investment."

One engineer whose group has invested in iBiquity said, "We'll have to see how this shakes out." Another head of a radio group that's also invested in iBiquity reportedly said to this engineer, "We owe no one ... for trying to make money on this."

"This is a 180-degree turn," said the CE of a group that's not an iBiquity investor. "We've been at meetings where they've said there'd be no licensing fees." He said it was a conflict of interest for radio groups invested in iBiquity to make revenue from the fees.

"Do they like it? No. But they recognize we need to do it," said one iBiquity source, who said the company told the major radio groups about the fee structure before announcing it.

— Leslie Stimson

The Internet gained much attention at the show. During the events in Las Vegas, the U.S. Copyright Office reaffirmed an earlier position that retransmissions of broadcast signals over the Internet are subject to copyright regulations and royalties.



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FROM THE EDITOR

# NAB: How Many Is Enough?

by Paul J. McLane

Check out our *Photo Galleries* from NAB2001 throughout this issue for a flavor of last month's big event. Next issue, we'll tell you about all the new products and share the "Cool Stuff" Award winners with you. For a sneak peak, visit [www.rwonline.com](http://www.rwonline.com).

A favorite game among conventioners and suppliers is to guess the attendance.

NAB said about 113,000 people had registered as of the first day of the show. Final numbers aren't issued until well after the event, after the organizers can "de-dupe" the names on their list; the attendance figure could come down a bit, or go up. But apparently this year's attendance was off a tad from last year's 115,000 or so. Radio/audio exhibitors were up from 185 to 202 at the LVCC.

Some people are cynical about the statistics. For instance, one supplier wrote this on BNet's RadioTech listserv:

"My guess as to the breakdown is: 50,000 Sony employees, 49,000 other vendors, 1,000 press, 12,000 E-Topia attendees, 700 serious broadcasters and 149 RT subscribers."

Other participants wondered whether the withdrawal of CBS/Infinity had affected the total, but NAB said the impact was minimal. I might add that CBS hasn't had a great record of supporting its employees' desires to attend this show anyway — at least of paying for them.

And that's the overall count. Most of those people were interested in TV, new media and other industries. How many of them were *radio* people? NAB spokesman Dennis Wharton couldn't tell me the figure for 2001 yet; but last year, he said, 8,400 people checked off radio broadcasting as their primary business.

"That could mean, of course, that they were owners, GMs, engineers, sales managers, producers, consultants, etc.," he said.

I think the NAB should issue an annual public audit of its attendance, broken down by job title. That information would help radio managers gauge how useful the show would be for their employees. It would be of great benefit to those who support the show by exhibiting, but who must struggle with the significant — and ever-rising — cost of booth space and drayage.

(I happen to believe the NAB show is very useful for radio folks; but there is always debate on the relative merits among those who pay the bills to attend or exhibit. I'm also sensitive to questions of booth costs. As a marketing manager, I once paid out more in labor costs to move a booth from the NAB loading dock to the convention floor 1,000 feet away, than I had paid the trucker to ship the same booth 2,500 miles.)

NAB does indeed audit attendance some-

times, and did so last year; but Wharton says the information is for internal purposes, to track trends, and is not made public. I urge NAB to reconsider that policy.

The only consistent, fair way to measure attendance at any convention is to count each body once: to separate statistically the paying visitors from the non-paid attendees, and the



Associate Publisher John Casey (center) and I presented NAB Engineering Award winner Arno Meyer of Belar with a framed copy of a recent profile article.

exhibitors from attendees; and to have an independent third party audit the attendance figures and make those statistics public.

The experience of this show seems to depend on where you spent your time. Many exhibitors in the radio portion of the north hall said traffic seemed lighter. A lot of the cabbies

said the same thing; and I know I didn't have to wait long in the places where I usually have to stand in line for food and transportation.

On the other hand, the Sands was packed, and many TV exhibitors reported four busy days. And we had good turnout for my radio engineering roundtable session on Sunday morning — not the busiest of days, usually. So where you stand on this topic pretty much depends on where you stood.

One radio supplier told me confidentially that he thinks the radio floor should be open for two days only. I'm not sure that's a practical, much less healthy, idea; but it shows that the needs of radio are different than those of the TV and new media folks.

Final thoughts about the show next issue.

PS — Exhibitors tend to say the same things year after year. I've visited thousands of booths at dozens of conventions in the past 15 years or so, and here are sentences I've heard in response to my question, "How has the show been for your company?":

- "We've had *great* traffic. But I hear that our competitors didn't."
- "It was great yesterday, but it has slowed down a bit today."
- "I've got a bunch of orders right here in my briefcase."
- "I hear the Sands is packed."
- "Why *do* we have show hours on Thursday, anyway?"
- "Next year, we're getting a thicker carpet."

And the all-time winner:

- "Attendance was down, but the quality of the attendees was high." 🌍



Talk about your engineering power panel! Graciously taking part in my roundtable discussion were Al Kenyon of Clear Channel, Frank McCoy of American Media Services, David Baden of Radio Free Asia, Margaret Bryant of ABC Radio Networks and Tony Masiello of XM Satellite Radio. We'll share the best tidbits from this session in an upcoming issue.

A big Mad-town tip of the hat to Gordon Govier, news director of WNWC-AM-FM in Madison, Wis., the winner of an Amigo FM audio processor from CRL.

(Did you know that Madison is the only North American city built on an isthmus? And that it has the most restaurants per capita of any U.S. city?)

The Amigo FM offers an array of features usually available only on more expensive units, including a digital stereo encoder. The Amigo FM is a "set-and-forget" system that monitors audio levels, increases a signal's perceived stereo image, and assures a loud, clear, consistent sound. Features include an input AGC/compressor, stereo sound field enhancement, a low-frequency bass-boost equalizer and a tri-band limiter.



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You could hear AM and FM IBOC signals over the air in the iBiquity Digital booth.

Photo by John Casey



Figures are silhouetted at the fountains of Caesar's Palace.



The huge new LVCC South Hall will be part of the show next year (as will the Sands). Exhibitors and officials of the Las Vegas Convention/Visitors Authority joined NAB President Eddie Fritts out front.



Rob Glaser of RealNetworks said fears about Internet business models are overstated.

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Photo by Paul McLane

Attendee Dave Biondi inspects the LUFO petrol lamp, which uses heat to generate power for its AM/FM and satellite receiving capabilities. It's aimed at third-world countries and outdoor recreation users.

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# Database

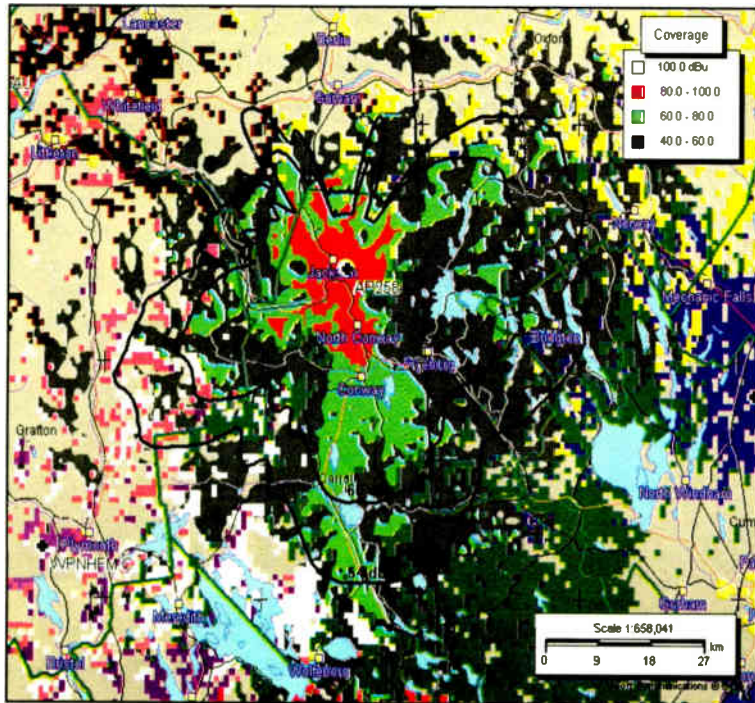
► Continued from page 1

Media Bureau applications electronically and verify that proposed changes — such

used. Since CDBS was introduced in January 2000, Bradshaw said, several improvements have been made.

Bradshaw and his staff are examining how to improve response time for users doing queries or filing applications electronically.

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Longley-Rice Coverage and Incoming Interference to a Proposed Station at Jackson, N.H.

as upgrades, site changes and power increases — do not conflict with new station proposals from another facility. The CDBS was created in 1999 when the Mass Media Bureau combined three separate databases.

## Baby steps

FCC officials say they constantly are working to improve the system.

“The system is not perfect,” said Jim Bradshaw, assistant division chief for the FCC audio services division. “I know it has problems.”

To speed things along, the division is analyzing the system and ways in which its computer resources are being

In March, the division implemented a version of CDBS for the FCC Web site in a flat-file format, the one used for the earlier three databases. Bradshaw said the division created this version for users who still have software compatible with that format, in which users write routines to extract specific information.

The new CDBS system, Bradshaw said, is a relational format that accommodates different data types and allows more-efficient data retrieval and storage.

Other improvements include a link that informs users whether the system is down due to an upgrade, system

error or maintenance, and an online fee form allowing users to pay for application fees using a credit card.

Since October 2000, the FCC has mandated electronic filing of numerous applications — FCC Forms 301, 302-FM, 314, 315, 316, 318 and 347 — for AM and FM radio as well as television stations, creating increased traffic on the CDBS. The commission will not accept paper versions unless stations submit a waiver request.

While many users, including engineering consultants and attorneys, told RW that the CDBS would be useful in the long term, they are infuriated by problems in obtaining data and filing applications.

## Major flaws?

Though the CDBS is more reliable than it was six months ago, users said, some still dislike the way it works.

information.

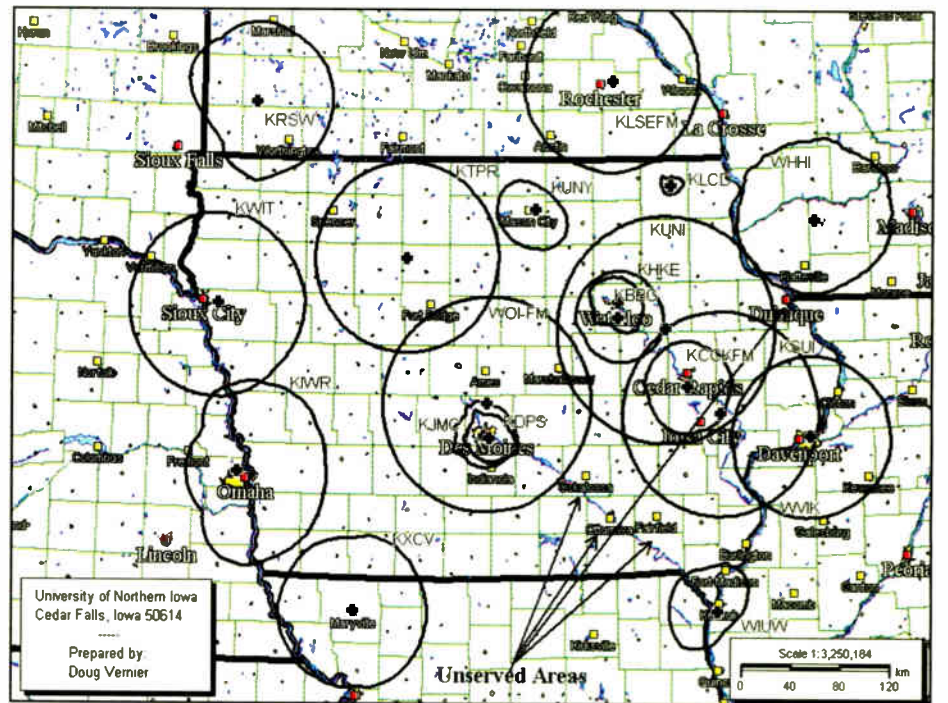
Berger acknowledged that bad data exists within CDBS and said one way to help eliminate errors is for the public to use the electronic filing system.

## Validation

Users can avoid entering more inaccuracies into CDBS because their forms must undergo two types of validation, in which the system checks whether all fields have been filled out correctly.

But in some areas of electronic filing, such as sub-forms within a sale application in which multiple answers to questions exist, a user can save incomplete or incorrect data without validating it, Berger said.

“It is a consequence of the way the system was initially developed,” he said. “It allows the occasional application in the door with bad data.”



Shown are the FCC (F-50-50) signal contours of all NPR and CPB qualified public radio stations in the state of Iowa.

“It has been the poorest implementation of a database system that I’ve ever seen,” said Jack Mullaney, president of Mullaney Engineering. “The FCC implemented CDBS knowing it had major flaws. It borders on gross criminal negligence.”

Mullaney, who uses the database for engineering studies and filing applications, is far from impressed with the way data was transferred from the old system to CDBS.

He said the information contained in CDBS about several stations is wrong. “You run the risk that you never know who you’re supposed to be protecting because information in the CDBS is incorrect.”

Part of the problem, Mullaney said, is that the outside contractor the FCC hired to do the job — Averstar Group, owned by Titan Systems Corp. — was not sufficiently familiar with the data.

But Averstar Program Director Warren Berger said the real issue is that many engineers had to rewrite their analysis programs when the CDBS was created in the relational database format.

Still, Berger said, the Mass Media Bureau made the decision to go with a relational database so users could save time and employ standard database commands when analyzing the

Though requiring validations in these sub-forms would eliminate the problem, to fix the problem entirely in this way would require a lot of work and time, Berger said. Averstar is working on more pressing enhancements, he said.

He believes the user also has the responsibility of making sure that applications are error-free as well.

## Report errors

Bradshaw, too, said incorrect records exist. He encourages users to report any errors and said appropriate changes are made within days.

But Mullaney said he has found hundreds of errors in records and said it would be difficult to e-mail the division about the errors because of the overwhelming number.

“There are still many bad records in the database that have yet to have been identified,” said Doug Vernier, president of V-Soft Communications, which creates broadcast propagation software.

Some users have also found that a station is sometimes dropped from the database because it has been mislabeled an archived record instead of a current document.

In some instances, they said, new  
See DATABASE, page 7 ►

## Dependable AM Measurements

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## Electronic Filing Troubles Some Users

While some engineers criticize the data-sharing ability of the CDBS, electronic filing of the FCC's Mass Media Bureau's forms has received mixed reviews since users were required to file electronically last October.

"Making electronic filings with the FCC has become a full-time job and requires detailed and sophisticated knowledge, and in many respects, use of CDBS is impenetrable to the public in general," said Charles Naftalin, a partner at Holland and Knight LLP.

Naftalin said that, in his experience, the FCC has provided little technical support to users who call the CDBS help line.

"If a user calls a member of the Mass Media Bureau directly with questions, most senior members do not know how to use the CDBS online application system," he said. "They understand the commission's mass media rules and procedures fully, but not CDBS."

Jim Bradshaw, assistant division chief for the FCC Audio Services Division, said the division has three people handling calls. He believes many of the calls are part of the natural learning curve associated with using a new system. Users call the help line because they are not sure about doing certain functions, he said; they are not always reporting problems.

Also, much of the information needed by users is contained in the online user's guide, said Bradshaw. He recommends users print it and keep it by their computers for reference while submitting applications.

Other users, such as Jack Mullaney, president of Mullaney Engineering, have had few problems with the filing capability.

"In comparison with other databases like the Universal Licensing System, (CDBS) is 100-percent better so far," said Carl Gluck, vice president of technical research at Salem Communications Corp., which operates approximately 70 stations. "I'm impressed with the CDBS system."

Gluck said the company, which has filed five applications so far using CDBS, was accustomed to the paperless format; it had been using the PDF format internally for a year. He likes the way multiple users can view forms online when filing multiple-party applications and the ability to see whether applications have exhibits attached.

Gluck understands why some users have complaints.

"When change occurs, it's hard to get used to," he said. "But once we get used to CDBS, it'll be better and quicker."

— Naina Narayana

# Database

► Continued from page 6  
entries have been entered incorrectly or lack necessary information such as the two-letter state abbreviation, creating a problem for those searching records by state.

In April, Bradshaw said the division created a diagnostic program to flag some of these "bad" records, allowing the division's staff to research each record and fix it. In the coming months, the division plans to expand the program to search for several types of errors.

In terms of fixing all the records, according to Bradshaw, there is no easy way to solve these problems.

"It's virtually impossible to run a program that corrects bad records," he said. "They need to be researched individually."

Besides the diagnostic program, Bradshaw suggests that users report errors so the division can fix the records.

### Old vs. new

To help eliminate problems the inaccurate records can cause when doing engineering studies for their clients, both Mullaney and Vernier have kept copies of the old FCC database on their companies' respective Web sites to use as comparative records for the applications and facilities on file before December 1999, when the databases were combined.

"We suggested to all of our software

clients to run two studies, one with the old database and another with the new CDBS database and look for discrepancies," Vernier said. "This has avoided a complete mess."

But Bradshaw warns users to proceed carefully because the data from the old database is now more than a year old.

"We have had people point to omissions or faults with the new database in comparison to the old database," said Bradshaw. "Often times, they're not right because the station information changed."

The online user's guide for the CDBS can be found on the Web at [http://svariantfoss.fcc.gov:8080/prod/cdbs/forms/prod/cdbs\\_ug.htm](http://svariantfoss.fcc.gov:8080/prod/cdbs/forms/prod/cdbs_ug.htm)

The phone number for the CDBS Help desk is (202) 418-2MMB (2662).

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## NEWS ANALYSIS

# How to Prep Now for IBOC Later

Bob Clinton

If the hopes and expectations of iBiquity Digital Corp. come to pass, engineers will be scrambling this time next year to prepare their facilities for the in-band, on-channel digital broadcasting revolution.

Before we get to that point, a little planning is in order.

Information for this article came primarily from presentation materials provided by Jeff Detweiler of iBiquity, at a meeting of the Washington, chapter of the Society of Broadcast Engineers.

Additional information came from experience gained by participating in DAB tests at WHFS(FM) in Annapolis, Md., and related discussions with several transmitter manufacturers, including Nautel, QEI and Harris. Pat Malley, iBiquity's primary installer for the DAB test sites, gave useful insights as well.

## Many factors

Station engineers looking to prepare their facilities for DAB should keep these factors in mind:

- 44.1 KHz sample rate should be the plant standard;
- Air control rooms need to be able to monitor "pre-delay" audio;
- UPS/power protection is required for CPU equipment in the air chain;
- The air chain audio processor must be moved to the transmitter;
- The STL may require an upgrade to pass AES signal;
- Separate processing for digital and analog audio is required;
- The existing transmitter needs about 10 percent more output to compensate for combiner insertion loss (0.46 dB);
- The transmitter site will consume more power;
- The second transmitter may require more floor space;
- Cooling and air handling loads are increased significantly;
- Most AMs will have to upgrade STL to stereo or AES;
- AMs will have to upgrade TX to solid state; AMs will have to be flat to  $\pm 5$  kHz bandwidth.

Digital broadcasting will introduce some unexpected changes for some radio stations.

At the studio, the biggest will be the nearly 4.5-second delay between program origination and audio coming out of the receiver. At present, the design has 4.5 second DSP delay and 4.5 seconds of diversity delay. The diversity delay will remain at 4.5 seconds; however DSP delay may be reduced in commercial implementation. The standard analog portion of the radio signal also is delayed; it will be time-aligned to coincide with the digital audio.

in the sample rate standard. With DAT tapes at 48 kHz and CDs at 44.1, and standards in the digital audio processing ranging from 32 to 48 kHz, the best you can do is reduce the number of sample rate changes before transmission.

The same goes for data reduction schemes. Everyone will probably tire of the familiar "cascading algorithms" issue.

The transmitter site raises further issues. There are two ways to prepare

**The cost for a station to implement IBOC could range anywhere from \$27,000 to \$235,000, depending on the station's circumstances.**

This means changes in air control rooms, where most stations monitor directly off air. This will also require a second audio processing chain just for the headphone feed for the DJs. No self-respecting DJ enjoys listening to himself or herself in unprocessed glory off the Program Bus. At the transmitter, the STL will feed an AES signal into the 4.5-second delay, which will feed AES 44.1 kHz into your analog audio processing. (Some early digital audio processors will require an upgrade to handle 44.1 kHz; analog processors will require an A/D conversion.)

The DAB signal will have its own processor to optimize it for the data-reduced signal. This represents a change for most, because many STL links have the processing at the studio, and the processed composite signal is sent off to the transmitter. Now, the STL will send stereo AES into the processing.

DAB will be a 44.1 kHz sample rate signal. Besides pre-delay monitoring, the prime digital studio consideration is

an FM site for DAB: low-level or high-level combining. Before you discount the low-level method, read on.

Consider a site that requires less than 10 kW. For various reasons, 10 kW rigs are currently the upper limit for solid-state transmitters (although higher-power models are in the works).

A 10 kW transmitter linearized for IBOC will be able to deliver between 7,500 and 8,500 watts of the analog RF signal, plus the digital signal. In the case of a site with an analog TPO of 7,500 watts, the actual digital signal requirement is only about 75 watts (20 dB down from carrier).

## High/low

By comparison, in a high-level separate amplification approach, the same transmitter site would require the original transmitter, a combiner, plus a linearized solid-state transmitter capable of 3,000 watts peak. These are worst-case digital power figures.

The high-level combiner requires some attention. It is a small device,



only about three feet long, and a little bigger around than a 3-1/8-inch line section, with two extra ports. The design consideration was to optimize the combiner such that the impact to existing plants will be minimized. By unbalancing the combiner, the final design loses only 10 percent from the analog signal, but 90 percent from the digital signal. This will allow many stations to insert the combiner without having to upgrade or purchase new for their legacy facility.

## Load considerations

With the introduction of the DAB transmitter and combiner, there also comes a dummy load to handle reject power. Reject power from the combiner is a sum of the 10 percent lost from the analog signal, plus 90 percent of the digital signal.

In our example of 7,500 watts output, 750 watts will come from the analog transmitter, and 675 watts (average) will come from the digital transmitter. We derive the 675 by taking 750 watts and subtracting 75 watts forward power.

The reject load will have to handle 1,425 watts full time.

Naturally, we must deal with all the extra heat. We now have twice the heat load compared to a standard transmitter site. While a computer room-quality cooling system is not necessary, consideration should be given to the transfer of heat out of the transmitter building.

See IBOC, page 20 ▶

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World Radio History

# Frequency Coordination in Salt Lake City

**Ted Nahil**

Mario Hieb is the RF coordinator for the Salt Lake Organizing Committee, and he has a big job ahead of him. He's coordinating all the frequency use in the Salt Lake City area for the 2002 Winter Olympics.

On a good day in Anytown, USA, frequency coordination is a daunting task. Hieb's job is to ensure that when the anticipated 10,000 broadcasters from around the world descend on the Utah city to cover the Winter Games, every RF need is met without broadcasters interfering with each other.

## Local protection

The first consideration in the coordination is to protect local broadcast licensees. This group includes broadcasters, but also public safety, ham and private microwave license holders.

The SLOC is working with the host-broadcaster, International Sports Broadcasting, formulating a plan that protects the local licensees and provides for the needs of the world's broadcasters as they cover events from the venues around the Salt Lake City area.

The host-broadcaster has been in Salt Lake City for three years and will handle all the broadcast-related activities during the Olympics. In addition, it will provide generic video, background audio and commentary feeds to broadcasters from around

the world, generally tailored by country.

In the past, the host-broadcaster was part of the Olympic Broadcasting Organization. The 2002 games will mark the first time that the OBO has contracted this function as an outside service. ISB also has the contract for the 2004 games in Athens, Greece.

has its own rights-broadcaster. NBC is the rights-broadcaster for the United States.

Other broadcasters who wish to cover events take pool feeds from the OBO. These non-rights broadcasters have limited access to credentials and events during the games.

Hieb's staff consists of himself and a

the Utah Broadcasters Association.

Libin, formerly with NBC, has worked previous Olympics and was frequency coordinator for the 2000 Republican and Democratic National Conventions.

## Steps to take

The Salt Lake Organizing Committee has issued guidelines for broadcasters who will require frequency coordination. The first step is to register at the Web site [www.slocfrequency.com](http://www.slocfrequency.com). Certification for equipment will begin on January 25, 2002; any RF device will be checked for frequency, effective radiated power and harmonic suppression.

All equipment entering any venue must be certified. SLOC is encouraging broadcasters to register equipment that will be used outside of a venue as well.

"We're seeing more wireless technology than ever before, yet our pool of available spectrum is shrinking," Hieb said. "This is the first Olympics where the Internet has been used for all aspects of frequency coordination. Most of my communication to clients is now with e-mail."

Hieb encourages broadcasters to take advantage of the 132,000 miles of fiber optic cable, installed by Qwest Communications. That high-speed SONET network will move video, audio and data from broadcasting centers, called Tribunes, at the venues to the centrally located International Broadcast Center at the Salt

See OLYMPICS, page 16 ►



Mario Hieb and Lou Libin, From Left

Rights-broadcasters work directly with the host-broadcaster. A rights-broadcaster has paid a fee for the rights to broadcast Olympic events. Generally, each country

consultant, Lou Libin, president of Broadcomm Inc. The FCC is involved in the coordination effort, which is supported by the Society of Broadcast Engineers and

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World Radio History

## ROOTS OF RADIO

# Border Blasters Left Lasting Impression

Bill Ryan

*I'm talkin' 'bout that outlaw X  
It's cuttin' though the air...  
I heard it, I heard it, I heard it on the X*

— "Heard It on the X," by Gibbons Hill and Beard, and recorded by ZZ Top. Hamstein Music Co./BMI

Anyone who spent much time with a radio in the 1940s and '50s may have run across one or more of the Mexican stations that begged listeners to send money for items ranging from cures for impotence to religious relics.

These were the "border-blasters" stations like XELO, XERF and XERB. Most were located just across the Rio Grande from Texas towns. Others were near the Arizona and California borders, while some were in interior Mexico. Many were developed by renegade Americans who wanted to escape the broadcasting regulations of the U.S. government.

The stations, licensed by the Mexican government, operated on clear channels, which meant that no other station in the U.S., Mexico or Canada could broadcast on that frequency. Many of the "X" stations were on the lower frequencies like 780 kilocycles (pre-kilohertz) or 860 kc.

"They built the stations just across the border, in Mexican territory, and worked out special licensing arrangements with the broadcasting authorities in Mexico City, whom they found to be much more agreeable than the stuffed shirts at the Federal Radio Commission," wrote Gene Fowler and Bill Crawford in "Border Radio," a 1987 book published by Texas Monthly Press.

"The sky wave, or ozone skip effect, enabled the signals of these super-power stations to travel incredible distances. Thus, over the years, border radio developed an international reputation, and the sounds of the big X stations became familiar to listeners in Ulysses, Kansas, as well as Uppsala, Sweden."

## Half a million watts

Although the most powerful American AM stations were limited to 50,000 watts, the border stations could run at twice that power, or even up to 500,000 watts.

One can only imagine the folklore that originated with nearby citizens picking up a station 24 hours a day in tooth fillings and bedsprings and the kitchen stove.

A major user of the "X" stations was Dr. J.R. Brinkley, a physician who ran afoul of the law in his native Kansas by promoting his special cure for impotence.

Dr. Brinkley's XERA broadcasts pleaded with men whose vitality was lagging to travel to Del Rio, where he or one of his assistants would implant the sexual glands of a goat into the sufferer's body.

Brinkley found huge success by boasting that his goat-gland operation "made men who were living like geldings into active stallions."

Another big advertiser was Dallas insurance baron Carr Collins. His Crazy Water Crystals helped build the economy of Mineral Wells, Texas, through intense advertising on XEAW. The "Make You Feel Better" crystals were actually a powerful laxative.

Harry M. Hoxsey pushed a cure for cancer that he said has been developed by his great grandfather. He begged cancer victims to visit one of his clinics for surefire relief.

There was a plethora of religion on the stations, with constant pleas from preachers to send money for special favors from God. They offered trinkets ranging from prayer shawls to the famous figure of Jesus that glowed in the dark. This could be obtained by mailing a check or money order to a post office box in Clint, Texas, the drop for XELO.

There were fortunetellers who claimed they could see into your future and would do so on the air in return for your mailing a dollar.

On the entertainment side, the hugely successful stations were a refuge for country singers and bands.

Cowboy sing Slim Whitman cheerfully acknowledged that he became famous on the Mexican stations. Others who benefited include Patsy Montana, the Carter Family, Hank Snow and Ernest Tubb. There was no need for the speakers and performers to travel to Mexico to be heard. Recording studios in Dallas and other cities prospered by cutting half-hour disks for anyone who had bought time on the "X" stations. The result was thousands of money-bearing letters each week.

The border blasters, according to Fowler and Crawford, "were among the first to experiment with the programming creation that was to save radio in the television age: the disc jockey. The smooth voices introduced Webb Pierce, Lefty Frizell, Johnny Cash and dozens of other country performers to national audiences in the '50s and early '60s."

## Mexican Wolf

Wolfman Jack developed his shtick in the early 1960s while working as a rock 'n' roll DJ at 250,000 watt XERF. His howl and banter led to greater fame when he was hired by Hollywood and later New York stations.

Fowler and Crawford list the major stations as XED and XEAW in Reynosa, across the Rio Grande from McAllen, Texas; XENT and XEXO in Nueva Laredo, adjacent to Laredo, Texas; XEPN and XELO in Piedras Negras, across from Eagle Pass, Texas; XER, XERA and XERF in Ciudad Acuna, a bridge hop from Del Rio, Texas.

XELO was also located at Ciudad Juarez, within sight of El Paso. Others were at Nogales, in the Mexican state of Sonora, within spitting distance of Nogales, Ariz., and at Rosarita Beach, near Tijuana and San Diego, Calif.

Although built by Americans, the studio

equipment and the huge transmitters tended to be maintained by Mexican engineers.

Fowler and Crawford say, "The super-powered border stations were broadcasting laboratories where some of the most talented engineers in North America ... experimented with high-powered, long-range broadcasts."

For example, the late Jim Weldon, an engineer who designed many of the super-power transmitters, became an expert in the field of radio wave propagation and characteristics. He helped found Continental Electronics Inc. in Dallas and designed the original Voice of America transmitters. Weldon was called on to raise the power of XER. His transmitter additions upped it from 50 kw to 250 kw in 1935 and up to 500 kw in 1938, according to Continental's Connie Hartin.

American broadcasters and the FCC had complained for years that the Mexican stations, all on AM frequencies between 550 and 1600 kc, were drowning out U.S. stations. Agreements between the countries on frequency allocations were approved and signed as early as 1941, but the broadcasts from south of the border continued.

"A new agreement was signed in 1957 and ratified in 1961, with one U.S. negotiator warning the Senate Committee on Foreign Relations that without such an agreement, 'chaotic interference would be bound to result as a radio wave does not respect international boundaries.'" Fowler and Crawford report.

"President Richard Nixon supported the ratification of a further agreement in 1969, assuring the wary Senate that the agreement was 'generally satisfactory to broadcasting interests in the U.S.'"

## Crippling blow

Eventually, in 1986, a North American Regional Broadcasting Agreement dramatically altered the clear-channel allocations and "dealt a crippling blow to the power of the other country's clear-channel frequencies for low-powered stations in the evening. That meant that the signals of the border stations would be drowned out in many communities by local broadcasts, effectively putting an end to the era of high-powered, far-ranging radio."

Despite screams of fury from the station owners and the advertisers, the U.S. and Mexican governments held firm. The stations were forced to drop to 50,000 watts or below, meaning their messages could no longer be heard over such a vast area. Many, like the Tijuana stations, switched to new formats or to Spanish and gained new audiences.

"The broadcasters who moved to the border frontier helped to define the American broadcasting industry by proving the effectiveness of broadcasting advertising. While network officials decried the hucksterism on border radio and took public actions to promote broadcast standards, they realized what the border radio operators knew all along — that nothing makes money like a hard sell." Fowler and Crawford said in summing it up.

But those of us who remember the border blasters see them as pure audio nostalgia, reflecting the programs and the commercial pitches of that golden time. And we wish now we had ordered on of those glowing statues of Jesus.

Bill Ryan is a retired journalist who spent 17 years with United Press International. He also was a college teacher and administrator. He cites radio history as "one of his great loves." Reach him at [wryan1807@aol.com](mailto:wryan1807@aol.com)

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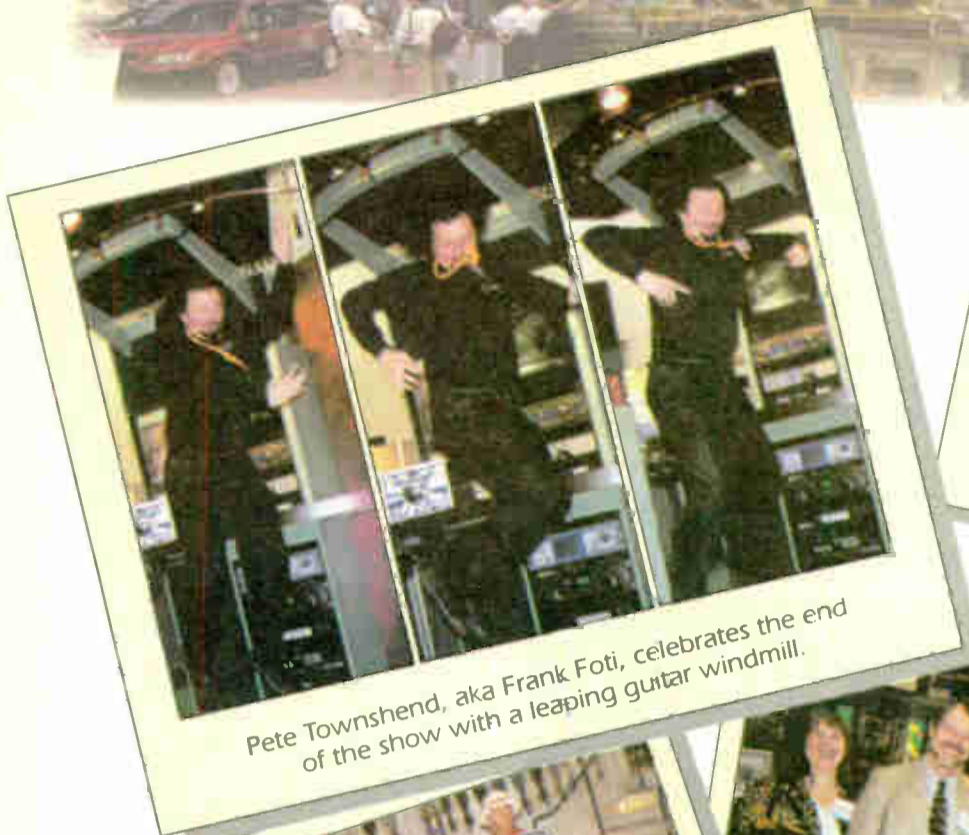
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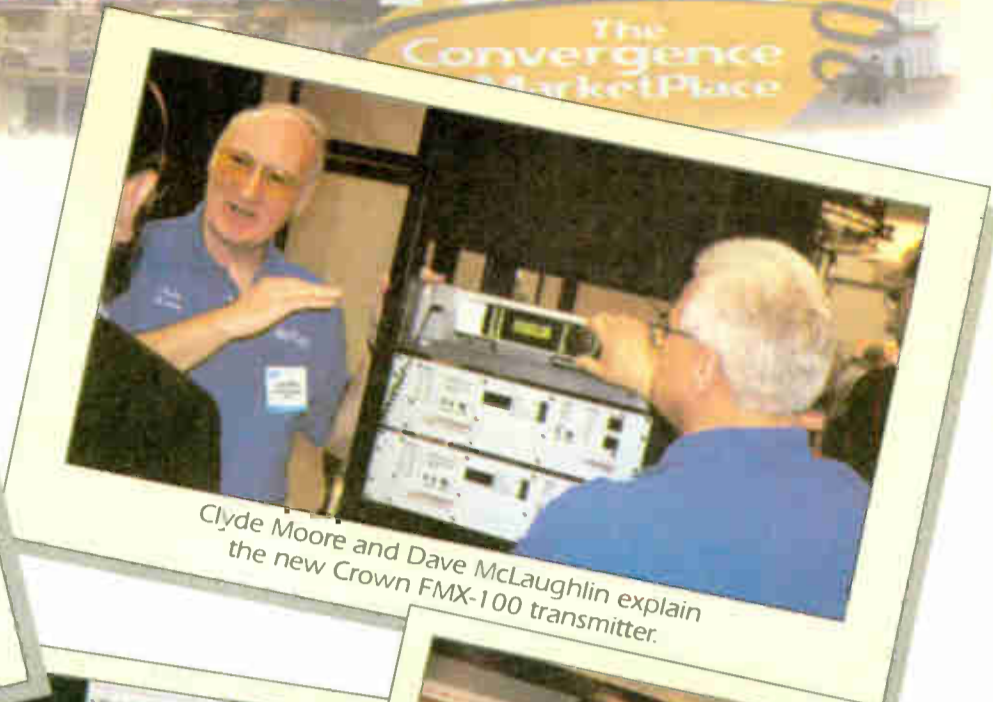
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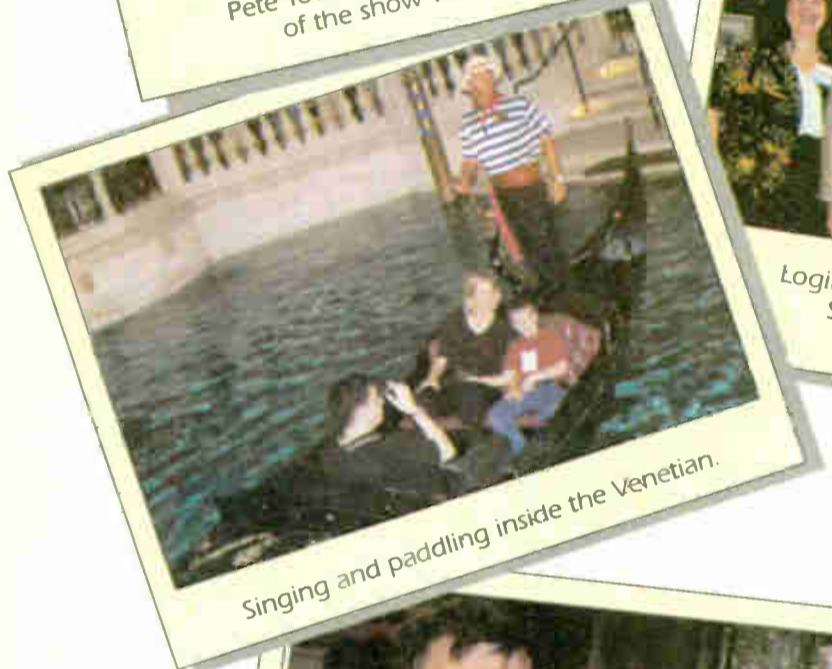
The Convergence Marketplace



Pete Townshend, aka Frank Foti, celebrates the end of the show with a leaping guitar windmill.



Clyde Moore and Dave McLaughlin explain the new Crown FMX-100 transmitter.



Singing and paddling inside the Venetian.



Logitek's Elaine Jones, Tag Borland, Steve Brightwell (rear) and Paul Anderson



Dan Rau has joined ERI and takes its new I-Box Series IBOC combiner for a spin.



If we had a 'Cool Booth' Award, Teracom Components would be in the running for its components in bubbly water tanks, as seen with honcho Larry J. Boone.

All photos on this page by Paul McLane

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# Olympics

► Continued from page 10  
Palace in Salt Lake City.

"Use ISDN, T1 or fiber wherever possible, and get your order in now," Hieb said. "Work with your network and Salt Lake network affiliate and form pools where possible."

The FCC has authorized SLOC as the sole frequency coordination arm for the Olympics. In addition, Part 74.24 of the FCC Rules and Regulations will be suspended during the event. Part 74.24 authorizes unlicensed use of Part 74 spectrum for up to 720 hours.

"You can't just show up with an RPU and start broadcasting," said

Hieb. The FCC plans to perform thorough frequency sweeps during the Olympics, looking for violators of the coordination rules, he said.

Coordination efforts will encompass equipment ranging from wireless mics to RF cameras to IFB (interruptible foldback) and PL (private line) transmitters to 32 MHz microwave links for HDTV. SLOC is urging broadcasters to know what equipment they plan to use and apply for the



TM

## SALT LAKE 2002



spectrum now.

One advantage to the Salt Lake City area is that many of the venues are hidden behind mountains. "This is allowing us to plan considerable frequency re-use throughout the events," said Hieb.

In addition to planning for their frequency use, broadcasters should make lodging arrangements now. Rooms are already at a

premium.

Hieb is hoping that broadcasters will exhibit an "attitude of cooperation."

"Frequency coordination is more work, but it protects you, too," he said.

SLOC is planning every detail, preparing operational plans and project timelines to ensure that broadcasters will be able to do their jobs. In addition, for the duration of the games, there will be a 24-hour help desk available to assist broadcasters.

Submission deadlines for rights-holding broadcasters have already passed. Applications for non-rights-holding broadcasters should be submitted by July 1. Certification of equipment will begin on Jan. 25, 2002.

**This is the first Olympics where the Internet has been used for all aspects of frequency coordination.**

— Mario Hieb

The 2002 Winter Games begin on Feb. 8, 2002, and run through Feb. 24. The Eighth Paralympic Winter Games will run March 7-22, 2002. They provide athletes with disabilities the opportunity to compete at an international level.

For further information, visit the SLOC Web site [www.slocfrequency.com](http://www.slocfrequency.com) to register for frequency use, or [www.saltlake2002.com](http://www.saltlake2002.com) for general information on the Olympics, event schedules and venue locations. Reach Mario Hieb via e-mail to [Mario.hieb@saltlake2002.com](mailto:Mario.hieb@saltlake2002.com)

Ted Nahil, CSRE and MCSE, is an experienced radio engineer and RW contributor. He works for Harris Intraplex. 🌐

### Olympian Numbers

These are the first Olympic Games to distribute real-time television coverage of all competitions. Some other statistics of note:

- 3 billion television viewers expected worldwide
- \$443 million in revenue from domestic broadcast rights
- 3,500 athletes and officials from 80 countries
- 10,000 broadcast and print media workers
- 14,200 desktop phones
- 10,000 cellular and PCS phones
- 7,000 two-way radios
- 550 computer servers
- 4,500 workstations and laptop computers
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- 1,150 printers
- 20 million pages of printed reports anticipated
- \$900 – The cost of a ticket to the Opening Ceremonies

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# Workbench

Radio World, May 23, 2001

## Nicknacks for Your Toolkit

John Bisset

Every once in a while, peruse those non-broadcast catalogs and you'll come up with a "find."

Ed Bukont of TESSCO shares just such a product from the Markertek Video Supply catalog.

The Niles RFS-1 is a voltage-activated A-B switch. The RFS-1 accommodates two RF inputs and provides a single RF output. Using a small RF relay, the default mode passes input "A" to the output.



Fig. 1: An Inexpensive Monitor Switch

Initially designed to switch between cable TV and a video game, the switch finds its way into the studio to free up monitor space. You can route two video sources into the switch, and save on the space for a second monitor.

Ed let me open up the RFA-1 and I was impressed. See Figure 1, and you will be, too. A high-quality PC board holds the components, and the design offers greater than 60 dB of isolation from 50 to 550 MHz. In/Out connections are made using an "f" connector. The relay uses 12 VDC for switching, and a control output connector is provided so multiple RFA-1s can be daisy-chained.

Contact the company at (800) 522-2025 or [www.markertek.com](http://www.markertek.com)

★ ★ ★

Compact test equipment is handy, and Figure 2 shows Neutrik's solution.

The Minirator MR-1 and Milyzer ML-1 should find a place in everyone's tool kit. Brian Edwards, engineering manager for New World Radio in Washington, has added them to his tool bag.

The Minirator generates a variety of tones: sine, square, even pink noise. The Milyzer (shown) measures the standard audio performance specs such as distortion and noise, but also displays audio spectrum, so the system can be used for acoustical work.

The MR-1 and ML-1 are available from your favorite broadcast supplier.

★ ★ ★

Everyone does microphone cables differently, but some of the differences have more than just an engineer's pref-

erence in mind.

Jeff Twilley's Delmarva Broadcasting studio rebuild project is now complete. Jeff chose to break up the mike wiring, so that his O.C. White stands are wired with a pigtail. The pigtailed XLR plugs

into the jacks mounted on the side of the turret.

Figure 3 shows the finished work. Note that Jeff uses a larger diameter shrink tubing, secured with a wire tie, to prevent abrasion of the wires by equipment being slid into the rack.

By standardizing this method in all studios, if a microphone dies, the

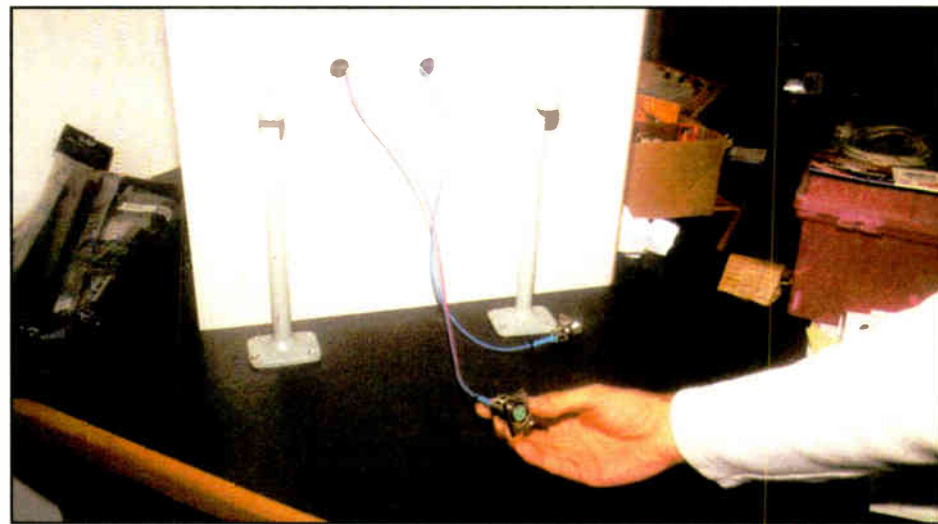


Fig. 3: Mic connectors can be mounted in a turret.



Fig. 2: Neutrik makes handy audio generators and analyzers.

stand/mic/cable assembly is quickly moved from one studio to another. It's plug and play! If you've ever had a jock cross-thread a mic onto a stand — trying to make the switch in your absence — you'll understand the importance of this simplicity.

★ ★ ★

John Stortz is the DOE for Moody's Central Florida broadcasting stations. He had been having some problems with his CCA transmitter's plate breaker tripping off. It was becoming frustrating, because it required someone to drive to the tower site and flip the breaker.

Finally, John decided to test the breaker and check its current-carrying

See WORKBENCH, page 20 ▶

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# IBOC

► Continued from page 8

Solid-state FM transmitters are susceptible to heat rise considerations. Most of the new equipment is CPU-based, and excessive heat buildup will only shorten the life of your investment. Check equipment manufacturer's specifications for recommendations.

Power considerations include providing for an extra 500 watts of DAB equipment at 120 VAC, any extra cooling required, and the transmitter. Single-phase and three-phase transmitters are available. Check for breaker panel space and get breaker sizing based on manufacturer's recommendations. A typical three-phase 10 kW solid-state transmitter will require a breaker in the 60 to 70 Amp range. Do not ignore main breaker capacity and service entrance capacity.

Some transmitter sites already have uninterruptible power supplies because of the newer STL equipment, and digital exciters and processors. They may need to be upgraded or supplemented to handle more equipment.

The rack of digital equipment will consume less than 500 watts unless you get a solid-state transmitter that requires a linear amplifier in front of it. The drive even from a low-level combined RF signal is under 1 watt. The digital RF signal is on the order of 1 milliwatt.

If you have a backup generator, check to see if it can handle both transmitters at the same time. If not, you will have the choice of upgrading the generator, or running without one transmitter in case of power outages.

## Space considerations

The typical transmitter dimensions range from 24 to 32 inches wide, and anywhere from 24 to 50 inches deep, depending on manufacturer. Some transmitters require an external band-pass filter, which typically can be hung or left on the floor. An extra equipment rack may be needed for the DAB exciter, audio processing, remote control and UPS.

There is also the reject load. Figure on about one cubic yard (3 x 3 x 3 feet) to account for needed free space around the load. These can be hung from the rafters as well. A single-phase transmitter may require more floor space (extra

cabinetry). And don't forget room to swing transmitter doors.

Wiring considerations include interlocks from coax switches, combiner and reject/dummy loads. The additional remote control channels can be bare bones (three control, four metering, three status), up to extravagant.

Thankfully, the typical FM antenna handles the digital signal as well as the analog signal, so the antenna is not going to be a concern. FM conversion costs range from \$48,000 to \$235,000 for digital equipment purchases and other upgrades. If you already have a solid-state transmitter, check with the manufacturer to see if an upgrade kit will be available. Naturally, these are ballpark numbers, and each site will have to be surveyed for current capacity and needs.

The AM transmitter story is some-

what less dramatic. Many AM stations already have solid-state transmitters; and with the possible exception of very early PDM models, many solid-state transmitters can be upgraded with a relatively low-cost modification. The four-phase and higher designs will handle the DAB signal best. AM costs ranged from \$27,000 to \$185,000 depending largely on how much work has already been done to the site for such things as AM stereo, broadbanding and pattern optimization. The STL will have to be upgraded for most stations, again with the goal being to get an unprocessed stereo AES signal into the transmitter site.

This is an exciting time in the history of broadcasting. A generation of equipment is coming which will give rise to many late-night stories over the workbench that start out something

like, "I remember when transmitters ran non-linear, and had little 'fire-bottles' all through them ..."

For the past 10 years, we have witnessed the development of several variations on the digital broadcasting theme. It was a sad but necessary step to watch various parts of the world take the digital plunge, only to realize that some facet of the system was not yet ready for the masses.

IBOC has always held out the promise, and now appears to be ready for implementation. It is stirring excitement even in Canada and Europe, with its promise of low cost receivers and a relatively "soft" conversion.

Bob Clinton is chief engineer of WARW(FM), Rockville, Md.

RW welcomes opinions from readers and manufacturers about the implementation of IBOC. 🌐

## Workbench

► Continued from page 19

trip points. The breaker is a 175A, three-phase.

At the transmitter building, John's got an old high-voltage power transformer, which was in a 20 kW transmitter — before one of the secondaries shorted. When he had the time, John had been cutting the windings off for scrap. His assistant, Don Jeerings, advised him to keep the primaries and the iron core. The suggestion proved invaluable in testing the errant plate breaker.

They wound a car jumper cable three times around one of the primaries to make a high-current/low-voltage transformer. The secondary car jumper cable was then connected to each side of one of the circuit breaker sections at a time. To adjust the current, the 120VAC was supplied through a 50A Variac. This made a variable, high-current power supply, that would supply well over 300A, the maximum John's clamp-on ammeter would read.

Testing the breaker, the engineers found that the center breaker section would not hold as well as the outer two. The outer breaker sections would hold 200A for about 25 seconds. The center section would not even hold 180A for 10 seconds.

The breaker was replaced, and the problem has not recurred. When you price new breakers, you will see that this extra investigative work was worth the time.

★ ★ ★

Figure 4 shows what you can expect when your GM rents out the transmitter site, without consulting you!

In this case, there were no provisions for the tenant to supply a rack, or use good engineering practice in running wire and coax. That's part of the coax run, coiled up by the ladder!

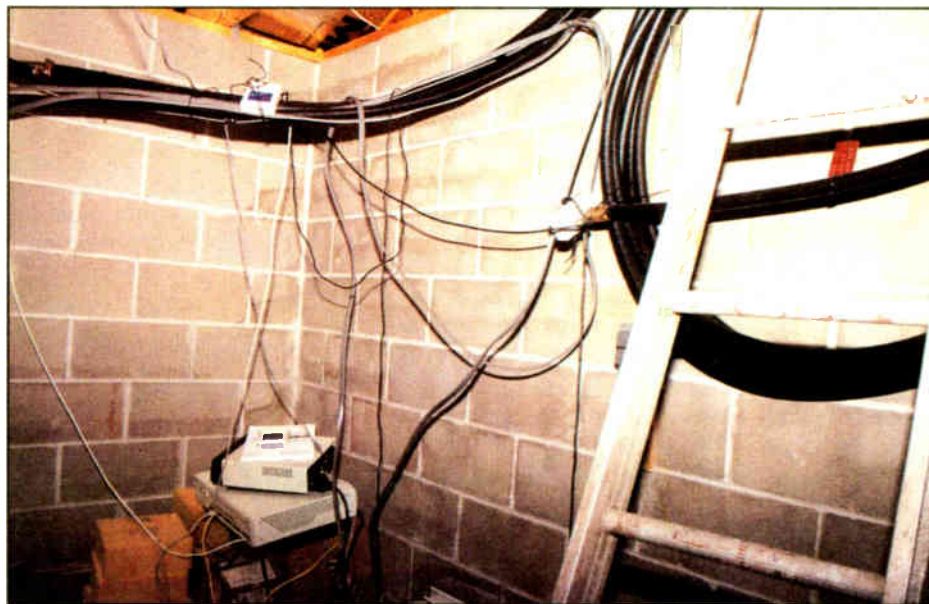


Fig. 4: This rat's nest of wiring is courtesy of the tenant.

Don't know what will happen when the tube box is needed! Of course, all the manager saw was that \$500 a month payment. If your manager is seeking tower rental revenue, that's great. If you, as his engineer, are managing the site, make sure you get a commission for

your efforts.

Review the proposed lease, and remember: if it's not in writing, there is no guarantee it will be done. This includes providing an equipment rack and not performing a haywire cabling job!

John Bisset has worked as a chief engineer and contract engineer for more than 30 years. He is a district sales

manager for Harris Corp. Reach him at (703) 323-8011.

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



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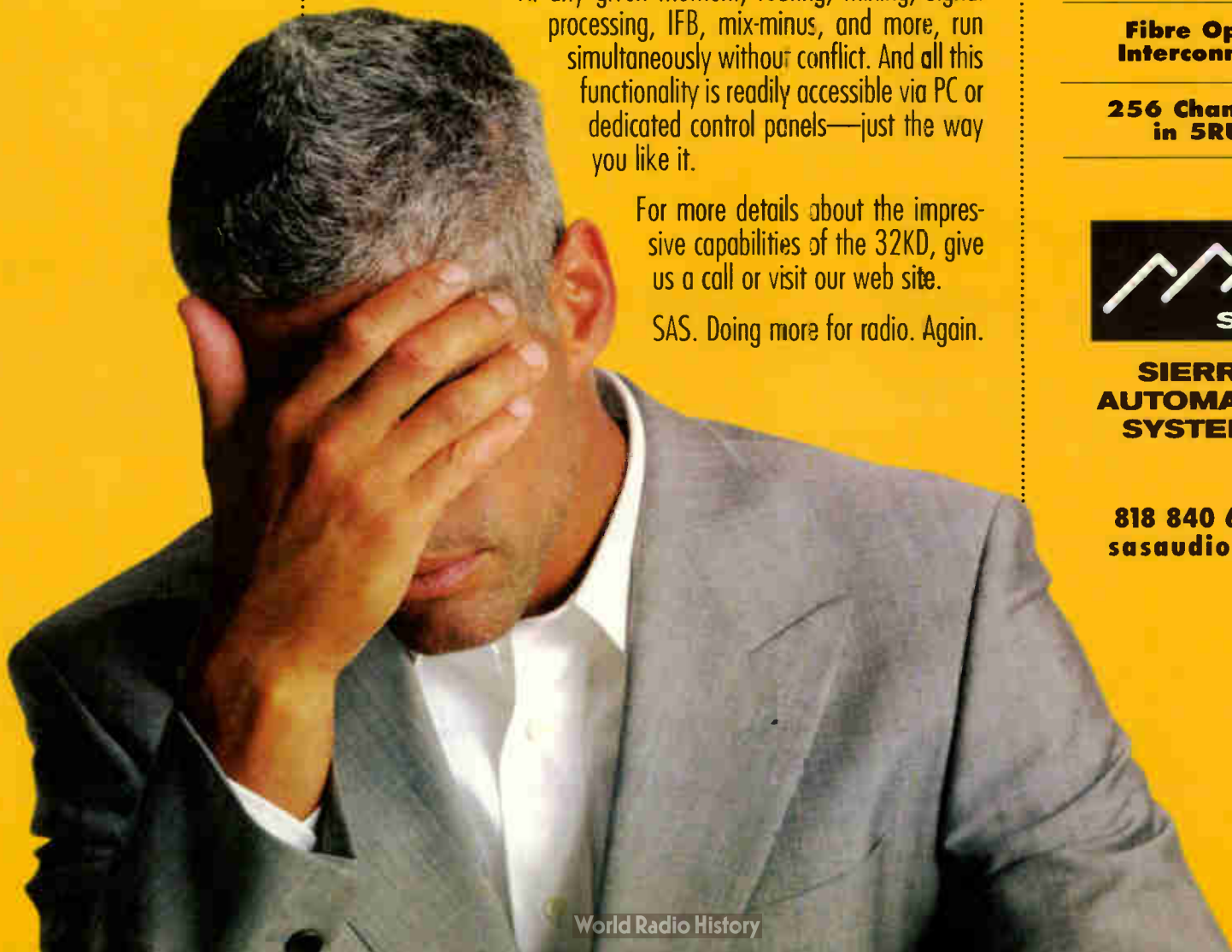
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# CLEARLY NOT FOR EVERYONE

Your Grandmother is certainly a very nice lady, but a Porsche is probably not her ride.

It's the same with processing: Some people should stick with the conservative stuff. Give them something too fast and they just won't know what to do with it.

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# Can Country Keep Its Expatriates?

Ken R.

Teenage songwriter Jessica Andrews recently scored a top-five country hit with "Who I Am," a song about her search for identity. In a larger sense, the country format is going through the same process.

Recently Ed Shane, chief executive officer of Shane Media, presented his "National Country Study" at the Country Radio Seminar 2001.

Even though there are more country stations than any other format in the United States, according to the BIA Financial Network, all is not well in Nashville, Tenn.

"One surprising fact we learned was that the format lost about half of its most loyal listeners over the last five years," said Shane. "They haven't necessarily moved away entirely, but they've added other elements to the mix."

Shane Media has coined the term "expatriates" to describe these fallen fans who are now sampling more classic rock and mainstream adult-oriented rock music.

"They're still visiting the store, but they just aren't buying as much," said Shane.

### Why the defections?

It's no secret that in an effort to broaden the appeal of its artists, the country music industry has gone for less twang and more pop.

"The biggest problem with the format is that it's now possible to turn on a country station and listen for 15 to 30 minutes and not hear anything clearly country," said Steve Warren, president of Warren Country Consultants. The company is based in San Marcos, Texas.

"There's nothing wrong with crossovers, but they may be unsatisfy-

ing to the main country fans."

Warren said that once Warner Bros. has a huge phenomenon like Faith Hill, whose music is also played on adult contemporary formats, all the other labels want to copy that model.

"Country has always been an ethnic format that hits home with the blue collar, white, working-class folks," said Warren. "The music needs a little rawness, a lack of sophistication and an edge for people to embrace it fully."



The Dixie Chicks pose backstage with 'American Country Countdown' Host Bob Kingsley at the end of the Chicks' 'Fly' Tour in December 2000.

L. J. Smith is director of consulting for Seattle-based Broadcast Programming. He has a different take on the twang/pop controversy.

"Country music can't be too 'country' or too 'pop,' because country has been the only format that produces its own variety," said Smith. "When 'pop' listeners want variety, they have to go to the adult contemporary station, the rhythmic station, the contemporary hit

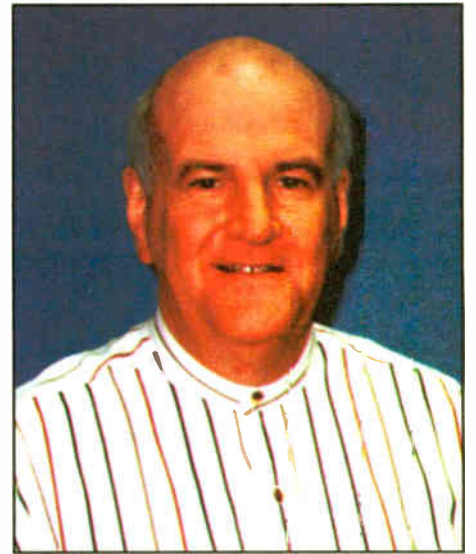
radio station and more."

Smith believes that if the country format loses its variety, it will become a niche format with no standing in mainstream America.

### Nothing new

"This argument is the same one I had with program directors 20 years ago and the same argument I'll be having in another 20 years," said Smith.

In the churning world of radio air



Ed Shane

programmers are waiting for these kids to grow up and fill out a diary, they'll have a long wait."

Manders believes that although more country music is recorded in places as diverse as Los Angeles and Austin, Texas, Nashville is still the heart of the format.

"I don't think you'll see the traditional stars leaving Music City," said Manders. "But the older artists are smart enough to include some of the non-Nashville acts in their live shows."

### '80s popular

The National Country Study cited several other reasons listeners are leaving the format.

"Many claimed that radio is just not as much fun as it used to be, or that the music doesn't play well in the workplace," said Shane. The survey also shows that a majority of "expatriates" might be attracted back to country radio if more music from the late '80s were played.

Smith believes that the on-air presentation is important to keeping the

See COUNTRY, page 26 ▶

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## BROADCAST LAW REVIEW

# A Decent Guide to Indecency Rules

**Barry D. Umansky**

Just days into Chairman Michael Powell's administration at the Federal Communications Commission, the agency released a Policy Statement to "provide guidance" to broadcasters on compliance with the FCC's rules and policies interpreting the broadcast indecency statute.

The document explains the congressional law on broadcast indecency, describes the judicial hurdles the commission has experienced in establishing its regulatory system for indecent speech, lays out the FCC's enforcement processes and also offers examples of the situations where the FCC has — and has not — imposed forfeitures or other sanctions where it was asked to rule on matters of alleged indecent speech over the broadcast airwaves.

## Interpretation

While some might view the issuance of the Policy Statement as an indication that the commission might be poised to become more strict in its interpretation and enforcement of the indecency law, that isn't necessarily the case.

In fact, one commissioner, Gloria

Tristani, who has been critical of the commission for what she believes is lax enforcement of the indecency law, actually dissented to the issuance of the policy statement.

Among other things, she believes that the Policy Statement may give broadcasters the impression that there are "false safe harbors" for indecent speech and that the document might actually serve as a "how-to" guide for broadcasters who may want to push the envelope on indecent programming.

## Tristani believes the statement might actually serve as a 'how-to' guide for broadcasters who want to push the envelope on indecent programming.

So, what's at stake here for broadcasters? Well, a lot. The federal law gives the FCC the power to warn broadcasters, to fine stations and even to revoke station licenses for violation

of the obscenity/indecency laws.

Obviously, knowledge of and compliance with the law and FCC regulations is critical for stations. The bad news is that there is no easy-to-locate "bright line" between speech that is and isn't indecent in the broadcast arena.

## Definition

Former Supreme Court Justice Potter Stewart once said he couldn't define obscenity but that "I know it when I see it." To a degree, the same

interest?

If the answer is yes, we ask whether the material depicts or describes, in a patently offensive way, sexual conduct. If yes again, the final question is whether the material, taken as a whole, lacks serious literary, artistic, political or scientific value.

Only when all three questions are answered in the affirmative do we have obscene speech.

Unlike "obscenity," which always is banned, speech that is only "indecent" is "protected" under the U.S. Constitution. Such speech may not be banned in its entirety. But it may be "regulated," such as by imposing the condition that it be "channeled" to late night hours.

So, as discussed below, there are hours in the broadcast day when a station may air indecent speech and not fear FCC sanction.

## Significant sanctions

However, even where indecent programming is aired in time periods where the station is immune to fines or other FCC troubles, the station may face another significant sanction — the loss of audience — should the broadcaster's programming choices offend an audience with so many other listening options.

The FCC's definition of indecent speech, as well as the acceptable parameters for FCC enforcement, have been the subjects of several major court appeals.

The current and rather clinical FCC definition of indecency is "language or material that, in context, depicts or describes, in terms patently offensive as measured by contemporary community standards for the broadcast medium, sexual or excretory activities or organs."

The court decisions also focused on how the agency's government interest in regulating indecency resulted in "narrowly tailored" restrictions on constitutionally protected though indecent

See UMANSKY, page 31 ▶

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# Country

► Continued from page 23  
listeners happy and loyal to a country music station.

"In markets where there are two country stations, there's very little you can do to differentiate between them musically," said Smith. "There's not enough fragmentation or 'niching' at this point."

### Something's missing

Shane agreed by saying that many stations play the right songs, but the non-music elements are just not compelling enough to keep the listeners.

RMG Records is a new label that boasts artists such as Don Williams,



'Country Coast-to-Coast,' ABC Radio Networks 24-hour, top-40 country format, recently congratulated affiliate WAL5(FM) of Peru, Ill., at the Country Radio Broadcasters' Country Radio Seminar in Nashville, Tenn. WAL5 won the First Place Promotion Award for small-market stations. From left are WAL5' 'Cowboy,' 'Country Coast-to-Coast' host Mark Edwards and WAL5' Rich Bowden.

whose career goes back to the late 1960s.

"People need to pay attention to the smaller labels," said Cheryl Dellamedaglia, assistant to label President George Collier.

"They're the ones putting out the more-traditional music with good solid lyrics that aren't so bubblegum."

Dellamedaglia said many stations automatically play new records by whoever is popular at the moment without really listening to the songs themselves.

"There are a lot of great artists out there, so stations should check them out," said Dellamedaglia.

Warren echoes those sentiments and advises programmers that there is "some fine music that may really get a response coming out of the smaller labels. And if you get response, stay with the record in spite of lack of chart action."



Big John Howell

Warren also suggested that music directors be more daring.

"Use the surveys, but use your guts, too," said Warren. "Otherwise, if you don't love the music, why are you in the business?"

### Secrets of country's top dog

WUSN(FM) in Chicago is the top-billing country station in the United States. The Infinity property billed in excess of \$34 million last year, according to BIAfn. Stephen D. Ennen, WUSN's general manager,

**The music needs a little rawness, a lack of sophistication and an edge for people to embrace it fully.**

— Steve Warren

claims that its success is due to the fact that "US-99" plays "Today's Country" and a blend of past hits.

"We have an hourly feature called 'Latest and Greatest' where we contrast a new artist like Keith Urban and mix it with something from the last 10

See COUNTRY, page 27 ►

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# Country

► Continued from page 26  
 to 15 years." said Ennen. "We also air a nationally syndicated live-request program on Saturday evenings called 'Country Gold' which Westwood One syndicates. Big John Howell, our morning man, is host."

When it comes to the twang-vs.-pop controversy, Ennen believes the music speaks for itself.

"The roots of country are not in the sound, but they're all about the song-

writer who has a story to tell of real human experience and emotions," said Ennen. "That's what makes it relatable to the listener."

Does Ennen believe that Nashville is still the epicenter of those songs?

"Nashville is a community of music makers, and I think Nashville today has some of the best contemporary artists recording and performing music in any format."

### Limited playlists

Many programmers agree that there is much worthwhile music available to the format, but for some reason it nev-

er gets on the air. Why don't the non-superstar artists get much exposure?

"There's only a few big record labels and they can push crap up the charts if they want to," said Warren. "These songs may not be selling or getting requests, but they're played because the major labels are pushing them."

Warren cited recent albums by such traditional artists as Merle Haggard and Waylon Jennings that are not getting big promotional efforts.

"These singers are doing some of their best work and appeal to the older demographics," said Warren. "But

younger people are hearing them and enjoying them for the first time."

Warren said that the promotion reps from the labels are under tremendous pressure to get platinum hits, "and some of these guys are very frustrated because of the songs they are forced to promote."

### It's in the mix

"Many stations have fallen for the 'we have to have pop' concept," said Shane. "But if you're only playing Faith Hill and artists like that, you end up with an adult contemporary station."

See COUNTRY, page 32 ►

## EXPATRIATES

What do they Cume?

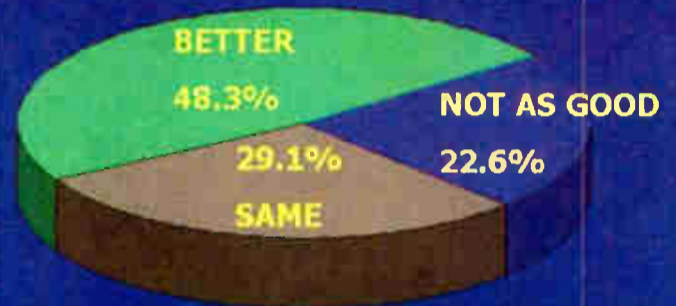
Country	40.5%
AOR/Classic Rock	39.5
AC/Soft AC	29.1
CHR	18.8
Oldies	13.9
Public Radio	10.0



Source: Shane Media

## P1s

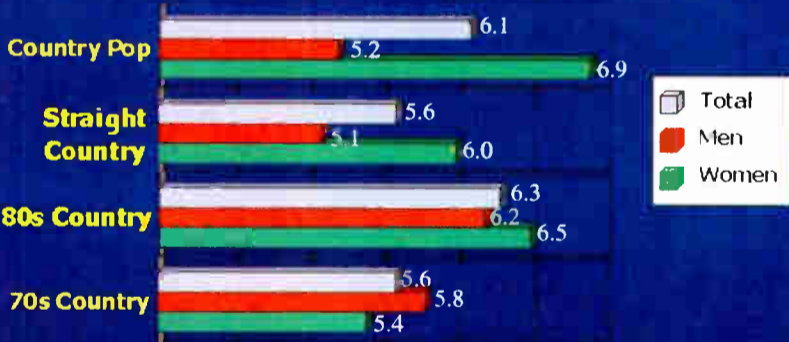
How's Country music today?



Source: Shane Media

## EXPATRIATES

Rate the Music (1 - 9 scale)



Source: Shane Media

## P1s

Country Fans Speak: Why do you feel the music's better?

Key words:

Not twangy, not old-fashioned	26.6%
Like the new singers	10.9
Up beat (positive)	10.2
Good songs, better music	8.6
Variety	8.6

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# Umansky

► Continued from page 24  
speech.

They key issue here was the time the broadcast occurred.

After several alternatives were posed for judicial review, the court ultimately approved (and the FCC implemented) a 10 p.m.-to-6 a.m. "safe harbor" for commercial and non-commercial stations. So any speech occurring during that window of time will not be the subject of FCC enforcement.

But even if the allegedly indecent speech occurs outside the 8-hour safe-harbor period, that does not necessarily mean that the broadcast will be the subject of harsh or even any FCC enforcement.

The context of the broadcast and the use of the allegedly indecent speech might well insulate the station from an FCC sanction. For example, highly explicit language during news coverage of a breaking news event or a program dealing with sex education at a public school likely would not be deemed indecent.

## The FCC examines several factors in determining whether to fine a station.

The commission examines several factors in determining whether to fine a station for the use of indecent speech outside the safe-harbor time period.

Among other things, the FCC looks to the explicit or graphic nature of the description or depiction of sexual or excretory organs or activities, whether the broadcast "dwells on" or "repeats at length" these descriptions or depictions and whether the material appears to pander/titillate or simply be used for "shock value."

The FCC's Policy Statement gives about three dozen examples of how it has determined whether to warn or fine a station for use of what the complainant felt was indecent speech.

While some of the offending language came from network radio sources, many stations — even in small and medium markets — were fined or faced other sanctions for the actions and language of their own air staff.

So don't think this is just a network radio or large market issue. All stations should be wary of an FCC enforcement response to the airing of indecent speech.

Someone once asked if there is a sound made when a tree falls in the forest and there's no one there to hear it. The same might be said of FCC enforcement against indecent speech if no one complains.

In virtually all situations, the commission's enforcement actions are taken in response to documented com-

plaints from the public. The FCC doesn't have an independent system of monitoring broadcasts for indecent matter.

On the other hand, I've always felt that at least Washington-area stations should have concern over the prospect of an FCC Enforcement Bureau official hearing an indecent broadcast during morning drive on the way into work!

In the many and highly publicized FCC enforcement actions against stations carrying Howard Stern's program, it was an active and antagonistic listener whose complaints to the FCC resulted in the commission's enforcement response.

Surely we've heard similar language on other radio programs. But, absent complaints, it is highly unlikely that

an already understaffed FCC will expend limited resources to see whether a station's programming was indecent and merits a sanction.

### Often dismissed

In many cases, the FCC receives and dismisses complaints from the public without the broadcaster ever knowing that a complaint had been made. That scenario typically occurs when the complaint was not supported with relevant documentary evidence — including a tape or transcript of the broadcast material, an indication of when the broadcast was made and the identification of the station to which the listener had tuned.

Clearly, the FCC's policies and methods of enforcing the indecency statute have changed significantly in

the years following the U.S. Supreme Court's 1978 determination (in a case involving the seven "filthy words" used in the George Carlin monologue of the same name) that the government could regulate indecent broadcasts.

While I've given you general (and decent) guidance on this complex subject, it's important that you seek specific guidance from your communications counsel on specific matters where the airing of potentially indecent speech may be involved.

Barry D. Umansky, the former deputy general counsel of the National Association of Broadcasters, is with the communications practice group at Vorys, Sater, Seymour and Pease LLP in Washington.

Reach him at (202) 467-8822 or via e-mail at [bdumansky@vsspc.com](mailto:bdumansky@vsspc.com)

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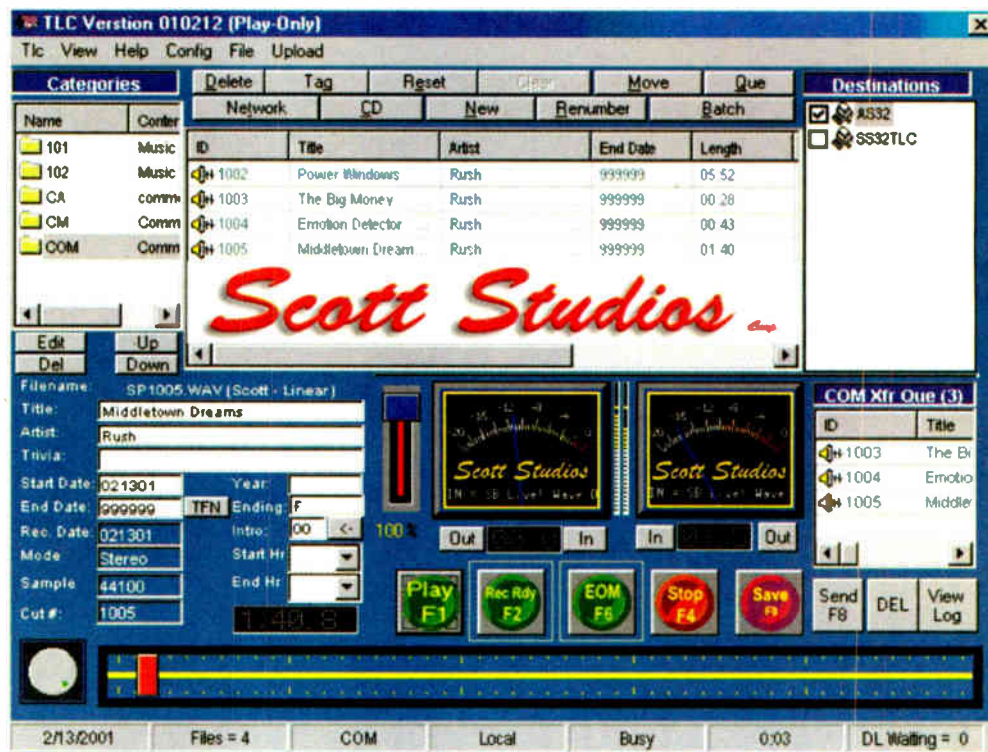
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TLC also imports and exports BWF (Broadcast Wave Format) audio as well as the upcoming AES Cart



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TLC is available either with a Scott 1.4 GHz. Pentium 4 1RU slim rack mount computer, or as software only for use on your PC.

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Stations interested in a free trial of TLC 4 APT can download a test version from [scottstudios.com](http://scottstudios.com) or

[tlc4apt.com](http://tlc4apt.com). The free trial lasts 10 days or allows 20 APT-X exports for quality evaluation.

TLC 4 APT handles APT-X, MPEG and uncompressed import and export as well as MP3 import. TLC 4 APT is only \$1,500 per copy including 90 days of toll-free phone support. This small investment pays for itself in a few months by ripping show CDs to reduce weekend board operator payroll. On-site installation and training is optionally available. Pay by check, Visa, MasterCard or American Express. Order by

phone, mail or Internet.

For copy or sales office computers that want to audition spots but do not need to rip CDs or import spots, a Play-Only TLC 4 APT is only \$500 per copy.

For stations wanting to expand APT-X systems to triple-overlap or add Scott's Voice Tracker, a few APT audio cards are still available.

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# Country

► Continued from page 27

If you mix in a little more roots, it changes the texture and holds people longer because they don't hear the sameness."

Shane believes programmers must balance their music based upon their individual markets.

## Regional

"In the New England area, more '70s rock might work best," said Shane, from his office in Houston. "There's a whole new Texas sound happening down here and it's getting a lot of play in the southwest. You can't just take everything Nashville

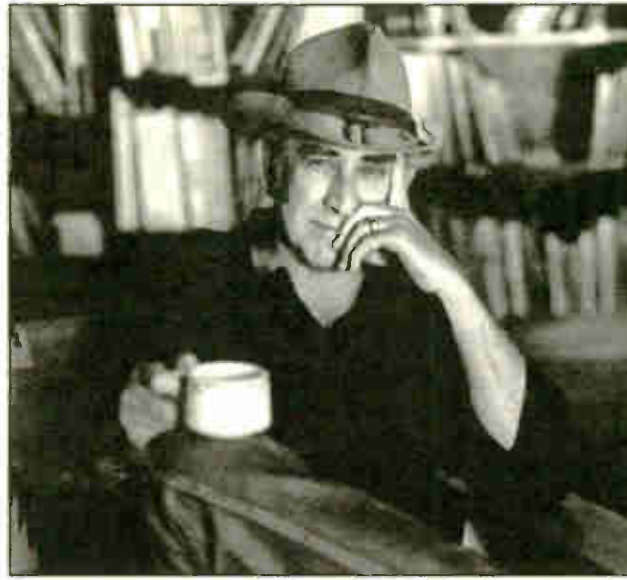
sends out."

But Shane cautions stations against trying to grab too many of the non-country listeners in an effort to boost ratings.

"You run the risk of tuning out the PIs and losing everything."

Shane's National Country Study revealed a few other nuggets of knowledge.

"The good news is that even people who are former strong country listeners haven't given up entirely," said Shane. "Sixty-five percent still listen. These



Singer/Songwriter Don Williams

people are retrievable through an intimate knowledge of each market's audience preferences."

Fifty-eight percent of country's PI listeners are female. Female fans are not recent converts. The Shane study noted that about 74 percent of women say the format has been their favorite for 10 years or more. Only about 18.5 percent are heavily involved in church or religious activities.

Of the non-country listeners who responded, almost half had heard a country station within the last year and 89 percent were able to identify a country station in their market.

## Survey says ...

The phone survey was conducted in January and February using a sample of more than 1,000 people in the age group 25 to 54. These were not just country listeners, but a cross section of all radio listeners that broke down to about 200 current PI listeners, 400 expatriates and 400 non-country listeners.

As of March 15, there were 2,246 commercial country stations in the United States — 34 fewer than in 1999, according to BIAfn.



Traditional country stars visit the ABC Radio 'Real Country' booth at the Country Radio Seminar. From left, Mark Chesnutt and Tracy Byrd talk with Real Country's Richard Lee about their collaboration on the duet 'That's a Real Good Way to Get on My Bad Side.'

The next most popular format is adult contemporary, which had 1,290 practitioners in March. That number is slightly higher than two years ago.

However, in spite of these small fluctuations, the country format is still the big kahuna by a wide margin.

Ennen believes radio is the vehicle to deliver the music, "but if it's not convenient to purchase when the emotion of the music is fresh, the opportunity is lost."

"CDs are a convenience purchase, not a destination purchase for females between 25 and 44 years of age," said Ennen. "You need to sell the product where they shop most in one week, which is the grocery store."

The last word on the "twang/pop" controversy comes from Bill Manders. "The format is going whichever direction will make the most money."

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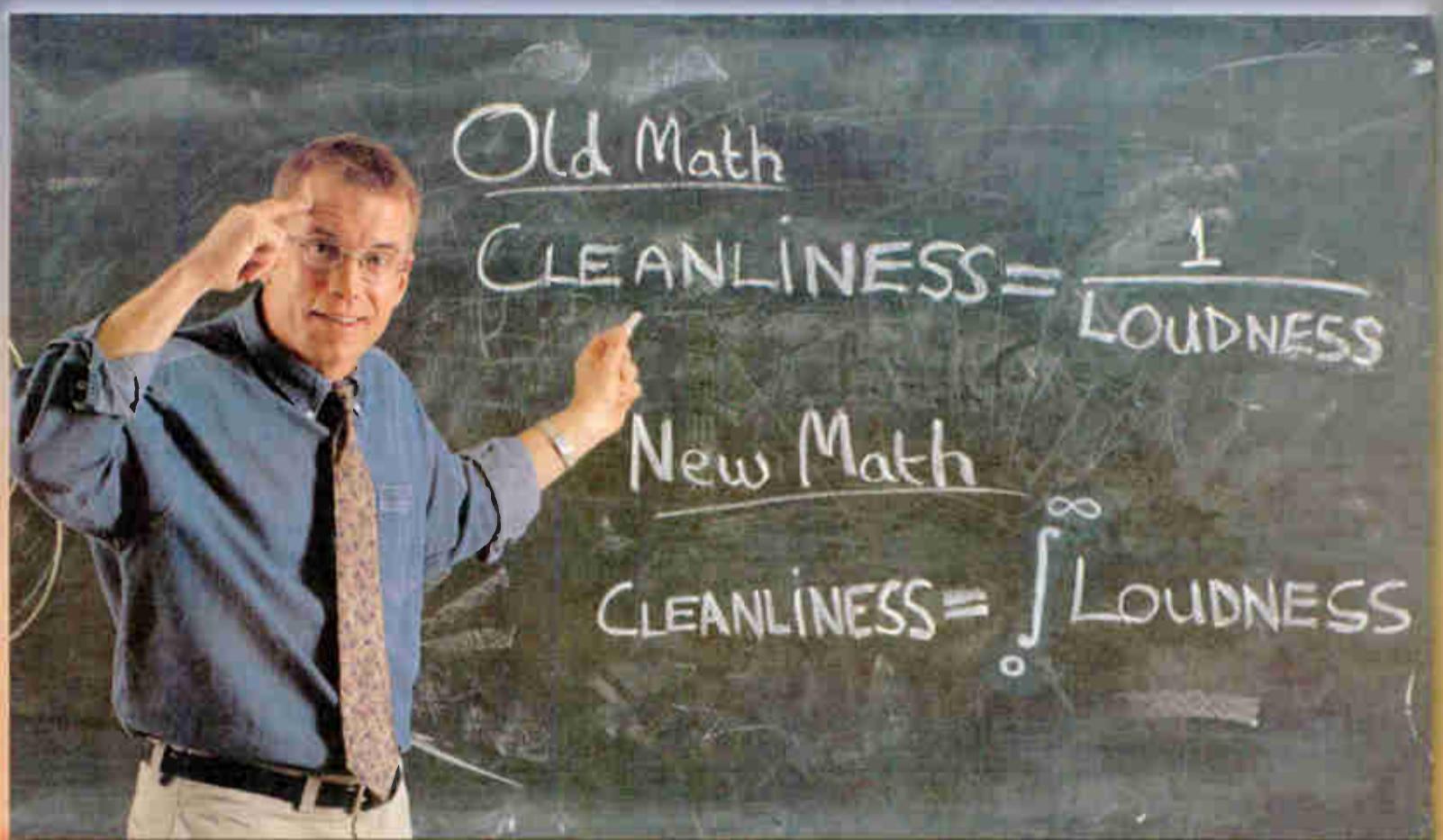

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# Internet Radio

Rolling  
Beethoven

Page  
36



Radio World

How to Succeed in the Dot-Com World

May 23, 2001

## Stay off The Virus Sick List

Scott Fybush

It has become a regular feature of life in the Internet world: Every few months, a fevered warning to beware the latest flavor of virus making its way around the Net.

Whether it's the Love Bug or Snow White or Anna Kournikova, a major virus scare can keep computer users and support staff busy for days installing updated anti-viral software and fixing the damage.



Kelvin Arcelay

As dependent as radio has become on computers, though, the word from around the business is simple: When it comes to viruses, a little prevention goes a long way.

"The only way to 100-percent protect your system is to not expose your system to a virus in the first place," said Ted Nygren, chief technical officer at RCS Inc. "In the extreme, that means disabling all

See VIRUS, page 38 ▶

WEB WATCH

## AFTRA, Baseball and Net Radio

Carl Lindemann

*Web Watch is a roundup of all things radio and the Web. Send your news, views and high-resolution pictures to Internet Radio Editor Laura Dely via e-mail to ld@imaspub.com.*

Will Internet audio be dominated by streams or downloads? This is the question that the radio industry asked in the light of the frenzy created by the American Federation of Television & Radio Artists.

In early April, AFTRA began to enforce a provision in its contract that was negotiated last fall, requiring broadcasters to pay triple rates whenever AFTRA talent are heard in radio commercials streamed online.



Kevin Mayer

Given this climate, Clear Channel Internet Group simply pulled the plug on its terrestrial signals' Webcasts. This triggered a domino effect across the industry, as Citadel, Cumulus, Entercom, Greater Media, Journal Broadcasting

and Saga Communications shut down their streaming broadcasts by the time the NAB convention rolled around.

It seems that the Webcasting world was asleep at the switch last summer when AFTRA successfully negotiated an increase in talent fees. The deal specifically targeted over-the-air spots that were also Webcast.

The crunch arrived as it came time to start collecting on those fees. Now, the ad agencies don't see the value in ponying-up the extra bucks for the Webcasts. The solution? No more Webcasts!

For Webcasting broadcasters, it's more than just another slice of a cut loaf.

"We are working hard to resolve outstanding issues with all concerned parties. It is our intention to put the streams back up when it makes legal and financial sense," said Kevin Mayer, chairman and chief executive officer of CCIG, last month.

Mayer also indicated that ad-insertion technology might be the fix here. In addition to targeting advertising to specific demographic groups, it can be used to mask AFTRA ads.

"We are also in the process of selecting and deploying technology that automatically inserts and removes commercial messages and making other changes that will ensure the financial and legal viability of the product," Mayer said.

### Digi downloads

As streams flounder, other opportunities for music online flourish. The Napster phenomenon has made downloading a habit for a generation of music listeners. And it wasn't just because the songs were "free" (well, pirated).

Free and legal music streams are common and haven't created anything like the Napster mania. It may be that downloads are simply the preferred application for consumers.



We will find out soon. After holding out about as long as it could, the music industry seems to be finally getting down to the business of online distribution. With Napster in its death throes, the major labels finally seem to be serious about giving consumers what they want how they want it.

In April, RealNetworks announced a joint venture with AOL Time Warner, Bertelsmann AG and EMI to create a common platform for online music subscription services.

### Label consortium

"MusicNet" is essentially the business-to-business infrastructure to connect music companies to consumers through online outlets. Licensees will be able to build a private brand business on top of this technology.

During the conference call following the announcement, Rob Glaser, chairman and CEO of RealNetworks and the interim head of MusicNet, said this would open the opportunity for most any outfit to begin a music subscription service.

"We look forward to working with the entire industry to make music subscription services a reality," he said. The first

See WEBWATCH, page 40 ▶

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# Despite Downturn, Web Still Hot

**Scott Fybus**

On the airwaves, there's no species more endangered than the commercial classical-music station. In the last few months alone, listeners in Chicago, Denver and Albuquerque, N.M., all lost long-time classical signals or heard them downgraded to lesser facilities.

On the Web, though, specialty formats like classical, jazz and album-oriented rock/classic rock are not only surviving, they're thriving.

"A lot of the (classical terrestrial) stations are changing format because they're not keeping up with the times," said Stewart Crossen, one of the founders of classical Webcaster Beethoven.com. "Instead of trying to entice younger listeners, they keep going in that old-fashioned stodgy way."

## Fresh classical

There's nothing stodgy about the sound of Beethoven.com. From its Hartford, Conn., studio, the station treats the sounds of Bach, Vivaldi and Ludwig himself just like the latest hits from Destiny's Child or Madonna, interspersing the music with upbeat jock patter and contests.



Stewart Crossen

"We take a lot of requests from our listeners, we're very responsive," Crossen said. "We play a lot of favorite music."

The result? In January, Beethoven.com topped Arbitron's monthly Top 75 list of participating Webcasters for the second consecutive month. Edging out WABC(AM), the New York-based news/talk station that is home to titan Rush Limbaugh, Beethoven.com registered nearly twice as many aggregate tuning hours (ATH) as the second-place WABC.

One reason analysts cite for classical music's popularity on the Web has to do with where Webcast listeners are when they log on. Web ratings service MeasureCast found 67 percent of all streaming audio listening during an average weekday takes place during East Coast business hours, suggesting that Beethoven.com's classical sounds, Seattle's KING(FM) and others are finding a welcome audience as background music in the office.

## A channel for every niche

Bill Rose, vice president and general manager of Arbitron Webcast Services, said the interest of listeners in niche formats shows they are looking for something different from traditional broadcasters' offerings. He points to one of the first Webcasters, album-oriented rock/classic rock-country hybrid KPIG(FM) in Freedom, Calif., as a prime example.

"You can't find content like KPIG (on the air) anywhere, but you can find it on the Internet," Rose said.

In January, KPIG ranked 13th in Arbitron's top 75, drawing 133,600 listening hours during the month.

Sort the ratings by online networks and one name has been at the top of Arbitron's numbers since Arbitron began providing online network ratings last October: NetRadio.

The Minnesota-based Webcaster, which bills itself as "the next generation in radio," streams more than 100 Web-only channels of music. NetRadio

Chief Executive Officer Eric Paulson said visitors to his site are looking for deeper playlists of their favorite music.

"One of the problems with terrestrial radio is that they have a very limited program list," Paulson said.

## Big selection

Where a typical rock station might keep 50 to 75 songs in heavy rotation, Paulson said the typical NetRadio channel is rotating more than 600. And with no limitation on the number of channels that can be offered on the Web, Paulson said NetRadio can target the tiniest of niche audiences.

"Most jazz stations will run acid jazz, if they run it at all, on a Friday night," he said. "You can come to NetRadio and listen to a channel of acid jazz all the time."

Or, if that's not your taste, you can also check out full channels of big band, "café jazz," classic jazz vocals, all-horns, jazz-rock — you get the picture.

By catering so closely to listeners' desires, Paulson said NetRadio has achieved one of the holy grails of the Internet economy: finding a way to keep surfers "stuck" to its site.

The typical NetRadio user spends 1.5 hours with the service during each session, Paulson said — nearly an eternity on the Web.

In all, NetRadio logs 4 million to 5 million listening hours each month — impressive, but not enough, Paulson said, to get the attention of the big advertisers that services like his need to be financially successful.

"We need to be at 8 to 12 million listening hours a month," he said.

Paulson said advertising agencies are just waking up to the potential for streaming media advertising.

"Year 2000 advertising budgets were designed at the middle to the end of 1999, when streaming wasn't on anybody's mind," he said.



Bill Rose

While he believes advertisers are becoming more aware of the value of streaming ads, he admits that the overall economic downturn is making things harder for services like his. From a peak staff level of nearly 70, NetRadio has cut back to about 40 employees.

"NetRadio, like every other Webcaster, is asking, 'Do we have enough cash to be the last man standing?'," he said.

## Need cash

That's just what analysts are examining as they assess the health of the Webcasters still left alive. Larry Gerbrandt, chief operating officer and senior analyst at Paul Kagan Associates, said cash flow is the key to success right now for streaming media. With the heady IPO days of 1999 and early 2000 long gone, Webcasters still have to pay the bills to stay on the Web while seeking new sources of ad revenue.

The monthly ratings surveys continue to spotlight new stations. Recent newcomers at the top have included Corus Media's CFNY(FM), "Edge 102," Toronto, one of Canada's most successful terrestrial stations; Enigma Digital's KNAC.com, recently absorbed by Clear Channel Interactive Group; and Web-only, "listener-formatted" music streamers such as MEDIAmazing and Live365.com.

But Gerbrandt said the ratings ultimately are less important to Webcasters' success than their ability to generate revenue. The key to that, he believes, lies in ad replacement and insertion technology.

"Ad insertion is one of the more interesting areas on the Web," he said. "Advertisers already know radio commercials work, so you're not reinventing the medium," in contrast with less-proven technologies such as pop-up ads.

## Coping with the slump

At the recent NAB2001 convention, several suppliers touted their ad-insertion and content-substitution products. The technology gained new prominence in the wake of the decision by Clear Channel and some other groups to pull their online programming, at least in part because of higher costs associated with union-produced talent.

The new technology allows stations to "mask out" chosen spots.

Yet the dot-com market remains a difficult one for all players.

See **WEBCASTERS**, page 39 ▶



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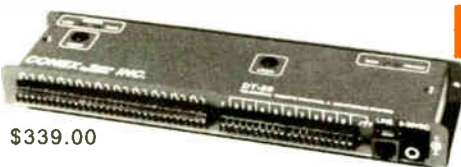
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# Virus

► Continued from page 35

floppy disks and partitioning the automation system on the network in such a way that Internet access is disabled."

## Multiple platforms

In the real world, though, software like products by RCS must run on networks that also support e-mail, audio file transfers, electronic invoicing systems and other applications that must communicate with the rest of the Internet.



That, in turn, makes anti-virus software the first line of defense for any network that's connected to the outside world.

At Entercom's four-station cluster in Boston, Manager of Information Systems Sid Schweiger uses Baltimore Technologies' MIMESweeper software to scan all incoming e-mail.

"If it intercepts a virus in an attachment, it stops the message from going through and notifies both the sender and the recipient," he said. "It's pretty effective."

Anything that gets through MIMESweeper must contend with anti-virus software at each individual machine.

"On the local level, we've deployed McAfee VirusScan," Schweiger said.

To reduce the risk of contamination at the Entercom Boston stations, certain "mission-critical" applications run on separate computers that aren't used for e-mail, Web browsing or other functions, including downloading

spots delivered over the Internet.

"The four stations here in Boston are all running AudioVault," Schweiger said, referring to the automation system made by Broadcast Electronics. "They're kept segregated from any connection to the WAN and the Internet," he said.

Schweiger has implemented one more layer of protection at his station group, which includes talker WRKO(AM), rocker WAAF(FM), rhythmic WQSX(FM) and sports WEEI(AM): a rule about circulating virus alerts in the office.

"People understand that they need to check with me before spreading virus alerts," he said. That way, computer users at Entercom/Boston are spared the hassle of worrying about "viruses" that turn out to be mere Internet hoaxes.

## Group attack

While Schweiger handles virus protection at a local level, some radio groups are taking advantage of consolidation to help their battle against viruses.

"The first thing we did was centralize the e-mail," said Kelvin Arcelay, information technology director for Cumulus Media.

The company used to have four e-mail servers located at station groups around the country. Since February, though, all e-mail for Cumulus' almost 300 stations has passed through a single Microsoft Exchange 2000 server at the group's Atlanta headquarters, where data is scanned with Group Shield software.

"Viruses were just coming through to our markets and attacking the network and then they'd come back to the central office," Arcelay said.

Since changing to a central server, Cumulus has had no virus problems, he said.

Arcelay urges Cumulus stations to follow his recommendations when sharing audio, such as promos and spots, over the Internet.

"We do promote sending it through

our mail system," he said. "That way we have a chance to scan it."

At supplier Wicks Broadcast Solutions, Bob Leighton, manager of product development, describes viruses as a "nuisance-level" problem.

"We've never been in a situation where it's wiped out our data or a client's data," Leighton said.

The big concern at Wicks, which sells traffic and accounting software under the CBSI and Datacount names, is making sure the data that passes through its system is clean.

"We on occasion get diskettes from customers with a virus on it," Leighton said. While Wicks screens all incoming data for viruses, the challenge is making sure clients clean up their systems when infections are found.

"It's hard to get them to go through all the steps to wipe out the virus," Leighton said.



Bob Leighton

One way to eliminate that challenge is to use proprietary systems that aren't susceptible to the most common viruses, which primarily target users of Microsoft's Outlook e-mail system.

"Our system requires our proprietary encoder on the servers end," said Peter Barnes, executive vice president of FastChannel Network. Its SpotTaxi system distributes commercials to thousands of radio stations.

"You don't just make your own audio file and attach it to the e-mail," Barnes said. Instead, SpotTaxi clients send their audio through the company's system, which is designed to validate and import only 44.1-kHz 16 bit uncompressed digital audio in WAV, SDII or AIFF formats.

"Because these file are passive by nature, we check to make sure there's nothing in the header that would be executable, like a Visual Basic Script file, such as the Melissa or Love Bug viruses. Our system would reject it" Barnes said.



# FastChannel

NETWORK

SpotTaxi does depend on e-mail to alert clients that files are ready for distribution, but those too originate from its own virus-protected servers, Barnes said.

At the user end, Barnes sees a "tug of war" between production staffers and information technology managers. A veteran audio producer himself, Barnes points to the popular Digidesign Pro Tools editing software as an example of the way production departments have embraced the Internet.



Peter Barnes

When it was first released, Pro Tools came with warnings that it should be run only on machines completely separate from the Internet and local networks.

"Now Pro Tools has a very active Internet strategy," Barnes said. "They want people going out to the Internet and grabbing sound files to work with."

While this trend has increased the resources available to production departments, it also makes IT managers nervous.

At National Public Radio, Rodney Armstrong is dealing with just such a conflict. As the network's manager of technical services, Armstrong is responsible for the Microsoft Outlook/Exchange e-mail system that ties NPR staffers together. The challenge: allowing staffers to transfer needed files while preventing viruses from spreading.

"When you try to tighten the system down, you break some of the functionality," Armstrong said.

A year ago, he learned firsthand how much damage a virus can cause. The May 2000 outbreak of the Love Bug virus brought NPR's e-mail system to a halt as the "worm" spread itself from user to user in cascading floods of e-mail.

After the outbreak, NPR imposed restrictions on the attachments allowed through its e-mail system.

"We're taking a hard look at our e-mail policy. We're changing our open policy and will now restrict the kinds of attachments allowed. Human nature being what it is, education and awareness in our users is not enough. Protective systems have to be in place," Ched Hudson, NPR's director

of information technology, told RW after the attack.

Solving the virus problem with software sometimes isn't enough, though.

"We educate (users) not to click on attachments from people they don't know, or things they weren't expecting," Armstrong said.

That sort of education is an even greater challenge at a news organization like AP, with 3,700 staffers in 242 bureaus spread out across 112 countries.

See VIRUS, page 39 ►

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# Virus

► continued from page 38

Phil Avner, director of development at The Associated Press, said the AP's global reach can actually be an advantage when it comes to early warning about viruses.

"Since we're an international organization getting mail from all around the world, things will often hit us before they're well-known or well-reported," Avner said.

While the AP has suffered two virus attacks in recent years that have shut down the corporate Web site, the actual newsgathering and distribution systems have remained safe behind a firewall and virus-scanning system, the exact nature of which the AP declined to disclose for security reasons.

Avner said staffers are warned of the dangers of viruses. And to reduce the danger of a virus entering AP computers, they're prohibited from using the AP network to access external e-mail systems such as Yahoo!'s Mail or Microsoft's Hotmail.



Phil Avner

ry of distributing news copy, "internally, we have message systems other than e-mail," Avner said.

When all else fails, Avner sometimes resorts to the lowest of low-tech solutions to this high-tech challenge.

"You get down to very basic simple things," he said. When it's absolutely essential to warn employees about a virus before they've had a chance to

# Webcasters

► Continued from page 36

The economy has claimed several competitors. Massachusetts-based DiscJockey.com filed for Chapter 7 bankruptcy in mid-April, shutting down a service that had been running since the middle of 1997.

DiscJockey.com wasn't hurting for listeners: its channels ranked in the top 10 in every network survey since Arbitron began ranking them last October. Even in January, the most recent month for which those ratings had been released at press time, DiscJockey.com placed 10th despite technical difficulties that prevented part of its audience from being properly measured.

But a large number of listeners can be a liability when there's not enough revenue coming in.

Founder Richard Chadwick said the Webcaster found itself in a cash-flow squeeze, caught between Internet service providers like Akamai, which demanded immediate cash to distribute DiscJockey.com's music channels, and advertisers who were slow to pay or went out of business before paying.

While traditional broadcasters try to use side channels to build on their brand-awareness advantage, Web-only services like NetRadio aren't sitting still.

At NetRadio, Paulson said the arrival of new wireless Internet services will help him reach listeners when they're not sitting in front of their desks.

### Anytime, anywhere

"Our goal is to surround the consumer in every part of his lifestyle with NetRadio content and NetRadio advertisers," he said, envisioning a future in which his channels are streamed to receivers in cars and on belts everywhere.

Even the shakeout of Webcasters with weaker business models isn't necessarily a concern.

"There are going to be a smaller number of successful players who will make it through this process," Rose said.

"We're looking at a medium that, in the lifespan of an adult, would be only a month or two old."

Gerbrandt said in the long run, the real business success in the Webcasting world may belong to players outside the traditional radio, or even Webcast, environment. He believes giant Web players like RealNetworks may be better positioned to expand when wireless Internet access becomes a widespread reality.

**A large number of listeners can be a liability when there's not enough revenue coming in.**

Even though "they're not a pure radio play," Gerbrandt said the Web giants have the user base and capitalization needed to stay alive until wireless takes off in a big way.

"There's big potential here because there is an untapped market (for streaming audio to wireless customers) and it's going to get better as you get more wireless devices," he said.

**We educate (users) not to click on attachments from people they don't know, or things they weren't expecting.**

— Rodney Armstrong

The AP has another advantage when it comes to alerting staffers about viruses. Avner said virus warnings distributed through e-mail often show up in employees' mailboxes only after the virus-bearing e-mail itself has already been read. But with its 150-year histo-

open their e-mail in the morning, "you type a message, make 100 photocopies and tape it over the screen of each terminal," he said.

Scott Fybush is a free-lance writer based in Rochester, N.Y. Reach him at [scott@fybush.com](mailto:scott@fybush.com)

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**Radio World**

# Web Watch

► Continued from page 35

licensees of MusicNet are America Online and RealNetworks.

Though RealNetworks has gone to great lengths to underscore the fact that music licensing to MusicNet as well as the licensing of MusicNet itself is non-exclusive, questions as to how all this might become problematic in terms of antitrust inevitably arise.

## RealBall

Will this really give anything like a level playing field for third-party outfits wanting to set up a business? Ah, but I forgot — antitrust is likely to be a non-issue given the way the political winds are blowing.

RealNetworks is cooking on other fronts as well. At the end of March, the **Major League Baseball Advanced Media** proclaimed their deal with RealNetworks as the “largest Internet deal in the history of professional sports.”



The three-year contract makes RealNetworks the exclusive platform for MLB online. This includes live Webcasts of all MLB games as well as an on-demand archive of video highlights.

Fans will be able to subscribe to access a wide range of content. All this comes as a Nielsen/NetRatings study shows that the Real format player was more than twice as popular as the nearest competitor, the **Windows Media player**, in February.

Nearly 30 million home users accessed

content using the Real format that month. Meanwhile, Windows Media only accounted for 12.5 million users.

## Surrender — never!

But Microsoft is hardly giving up on the market. On the heels of the MusicNet announcement, Microsoft Network unveiled its beta version of **MSN Music**. The site (located at <http://music.msn.com/>) uses “sounds like” technology run by a staff of music analysts (hipsters with the title of “Groovers”) to connect visitors with new music that they’re sure to love.

Sure. MSN Music is the rebirth of **Mongo Music** acquired by Microsoft last year. Basically, it’s a music repository divided up into 20 different music styles and 200 sub-genres. Users can develop custom channels suited to their listening interests.

Heard any of this before? Yes ... so I’ll stop. Oh, by the way, my visit to the site on my Netscape browser met an unfortunate end.

The following message popped-up at my arrival: “We’re sorry, but MSN Music currently requires a PC system running Internet Explorer 4.01 or higher with Windows Media Player 7.0 or higher installed.”

Any questions as to why Real is doing so well?

## Also

Yahoo!, too, is getting into the game. The Internet portal has formed an alliance with **Duet**, the on-demand music subscription service created by **Sony Music Entertainment** and **Universal Music Group**.

These music giants are, of course, key holdouts in the MusicNet deal. This may offer something in the way of competition yet. And there’s even *more* competition possible from **Viacom’s MTVi Group**.

MTVi CEO **Nicholas Butterworth** told **Reuters** that they’d have more than 10,000 songs available by the end of April. Each of the five major labels would be represented in this smorgasbord.

Wow — 10,000 songs!?! That’s going to be a tough sell to Napsterites accustomed

to having *everything* available.

So, it looks like the age of digital distribution has really begun in earnest. Actually, don’t count on much in the way of a download business anytime soon.

What precipitated this flood of announcements in April? Only a cynic would believe that this was in any way tied to the **Senate Judiciary Committee’s** hearing on April 3, “**Online Entertainment and Copyright Law: Coming to a Digital Device Near You.**”

Last summer, committee co-chair **Orrin Hatch** threatened to put a legislative end to the music industry’s obstructionism here if they didn’t get moving on this.

This hearing saw the Recording Industry Association of America’s **Hillary Rosen** offering a reprise performance of her now-familiar shuck ‘n’ jive.

“Online entertainment isn’t coming soon. It’s here ... and it’s getting better every day,” she said. “The story now is the music industry’s efforts to alert fans and consumers to the huge amounts of legitimately licensed music that is currently available online.” Some story!

## Same old story?

Rosen’s fanciful tale wasn’t the same story that recording artists **Alanis Morissette** and **Don Henley** told the committee. Morissette questioned the terms of the debate over Rosen’s “legitimately licensed music.”

“My initial resistance to the new services online was based on the debate having been framed in terms of ‘piracy,’” she said.

Now, on reflection, she wonders who the real pirates are. “Most recording artists never receive royalties past their initial advance due to the financial structure of most recording company contracts.”

Henley spoke on behalf of the **Recording Artists Coalition**, a group that represents musicians’ interests.

“Napster and other ‘locker’ systems have flourished because the record industry has failed to be forward thinking and has made it extremely difficult for legitimate companies to license the rights on an arm’s-length basis.”

Henley expressed concern that the RIAA’s focus on so-called “legitimately licensed music” might be to the detriment of musicians and music lovers.

“While we support the copyright infringement lawsuits filed by the record industry, the lawsuits should not be used to destroy a viable and useful independent Internet distribution system. It is in the best interests of recording artists, as well as consumers, that Congress promotes an atmosphere of independent digital distribution of music,” he said.

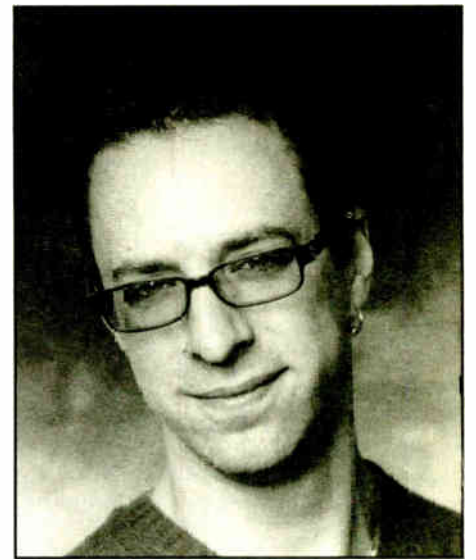
The RIAA and AFTRA are like sharks thrashing wildly at the whiff of prey. They don’t seem to notice — or care — that there’s nothing to get yet.

## Back at the ranch

Meanwhile, the streaming audio business remains in something like limbo as the final outcome of the RIAA’s campaign to squeeze performance rights out of “streamers” repurposing broadcast signals remains uncertain. Still, there seems to be a real business developing here, according to a new **Media Audit** study.

The report, issued in April, noted that 23 Web radio sites in the United States attract at least 2 percent of all adults in their immediate market.

“We think 2 percent is very respectable at this stage of Internet market development,” said **Bob Jordan**, co-chairman of



Zack Zalon

International Demographics, the research firm behind the study.

The ad-insertion technology expected to put Web radio on a paying basis continues to move forward despite the overall dot-com retrenchment. **HiWire** announced an exclusive deal with **NetRadio** to provide targeted ad insertion for the 100-plus NetRadio stations.

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This comes after NetRadio received a new lease on life by restructuring \$9.6 million in debt owed to **Navarre Corp.** Navarre had been NetRadio’s parent company before its October 1999 IPO and remains its largest shareholder.

The restructuring came after the serious threat the online niche format provider would be de-listed off the **NASDAQ** index. Despite the dour financial markets, **NetRadio** scored the No. 1 spot again in the January Arbitron results announced in April.

## Not so fast

Of course, the streaming/download dichotomy isn’t hard and fast. But those blurring the line may risk the wrath of the **Digital Millennium Copyright Act**. **Radio Free Virgin** has added a new feature to its player — a record option. Of course, this makes this something other than just a player.

“We free our listeners from the confines of a Web-based audio stream by enabling them to store their favorite programming and playback a single song or an entire programming block whenever they want,” said **Zack Zalon**, general manager of Radio Free Virgin.

To carry these streams beyond the confines of the PC, RFV also announced a strategic partnership with **Digital eStation**. Digital eStation will offer consumers its set-top box, the **Digital eBox**, which delivers digital content from the Internet — movies, videos, games, software and soon — RFV’s player and content. Very innovative.

Too bad that most innovation in this alternative arena have been met with RIAA lawsuits, not accolades, for offering consumers new ways of listening.

*Carl Lindemann has worked in radio as a field reporter and production director. He consults on radio/new media projects and writes extensively on these subjects. Reach him at [carl@cyberscene.com](mailto:carl@cyberscene.com)*

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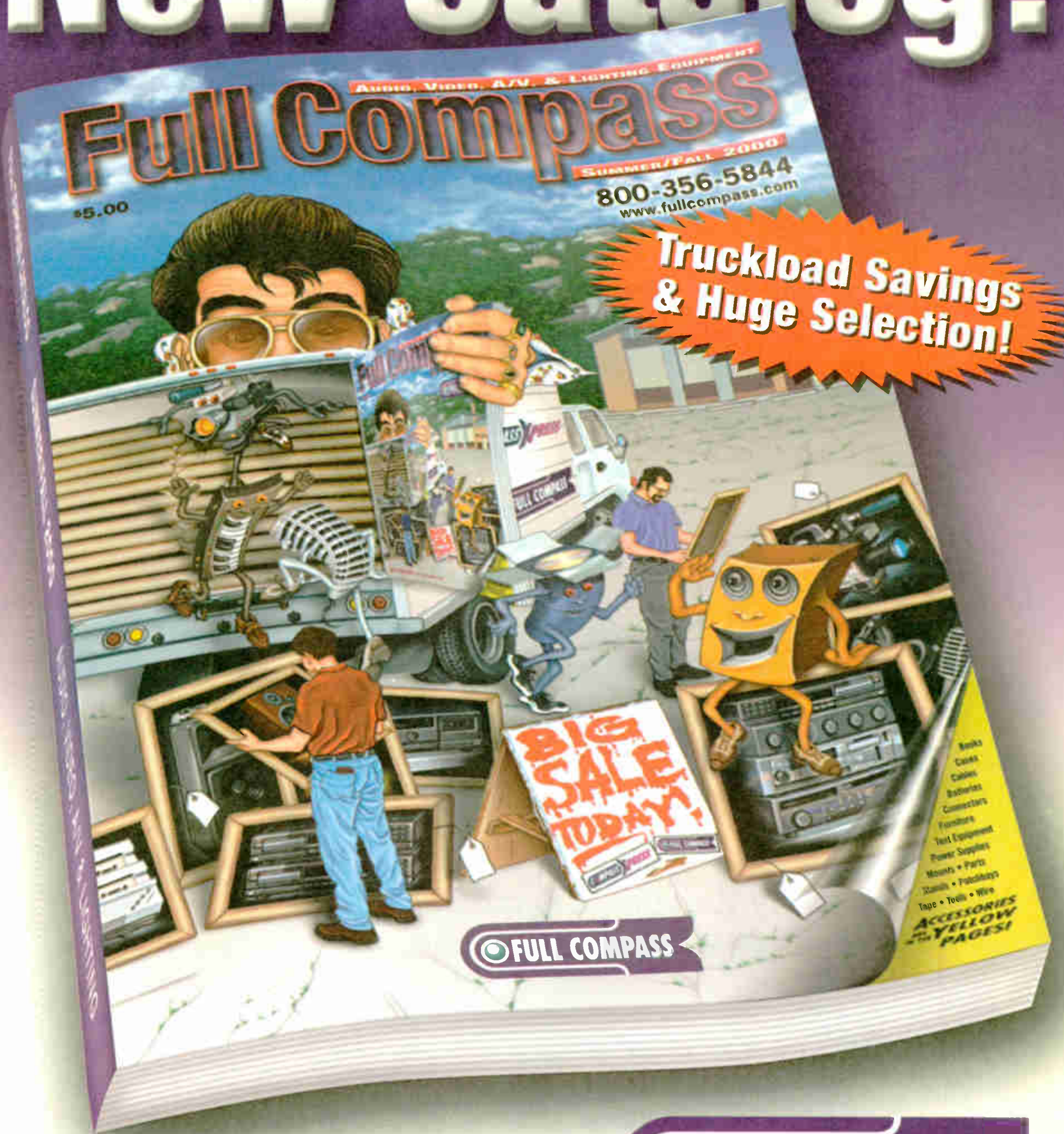
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STATION PROFILE

## All Great Polka Hits, All the Time

Ken R.

Have you ever heard a tune by Lenny Gomulka, Joe Stanky's Cadets or Eddie Blazonczyk's Versatones? Those names are superstars in the world of polka music. You would hear them all the time if you listened to WTKM-AM-FM in Hartford, Wis.

"Our station goes back about 50 years and it has developed a very loyal audience," said Tom Shanahan, human resources manager and station manager. "If we were playing rock or country, we'd be just another station."

While there are about 75 polka shows heard on stations across the United States, WTKM believes it is the only station that plays this type of music almost full time.

"We have a little bit of country music on the air in the afternoons and overnights,

but the rest is all polkas," said Shanahan.

WTKM's call letters stand for "We're the Kettle Moraine," which refers to the geographic area near Milwaukee.

"It's hilly country around here, thanks to the glaciers," said Shanahan.

The area boasts a rich ethnic mix of German, Slav and Polish populations, which makes it a hotbed for old-style European music.

### Polka, polka, polka

"German polkas have a tuba for that 'oom-pah' sound," said Carlo "Spike" Micale, president of the Wisconsin Polka Hall of Fame, near Milwaukee.

"Polish tunes feature trumpets and Polish vocals, and Slavic music usually has a strong accordion lead, a saxophone and a string bass on the bottom."

Micale loves them all and loves WTKM, too. "That station has been a steady, stabilizing influence, which lets the people know that polkas were here yesterday and they'll be here tomorrow, too."

"WTKM has a lot of people on the air who work hard and believe in the music. Scott Lopas, who owns the station, is a real dyed-in-the-wool polka guy," said Micale.

WTKM is heard in simulcast at 104.9 MHz and 1540 kHz, and streams its broadcasts on the Internet at [www.wtkm.com](http://www.wtkm.com)

shows are always very well-attended because they keep their prices down to a reasonable level that working people can afford," said Micale.

"They'll have a lot of live bands performing and everyone can come out and have a good time." WTKM celebrated its 50th anniversary with a live show at the Chandelier Ballroom on May 5 and 6.

Many stations across the country play their music direct from hard disc, but WTKM uses a combination of LPs, MD and CDs. The station has no production director, opting to let each of the personalities records his own commercials. The computer generates the logs and spots are aired from a central server.

PRODUCT EVALUATION

## HHB Follows the Way of the MiniDisc

Carl Lindemann

While it may seem that MiniDisc has become a dominant format for radio field recording almost overnight, that "almost" was, in fact, several years long.

After being introduced in the early '90s, the format was floundering till the ATRAC 4.x codec was incorporated about two years ago. Suddenly, mini consumer recorders with near-CD audio quality flooded the market.

### On the bandwagon

The relatively cheap machines suffered from the usual shortcomings of such gear. Inputs were limited to the usual 1/8-inch minijacks — typically powered for use with cheap electret microphones — which made it a challenge to attach professional dynamic mics.



Despite the need for workarounds and compromises, the consumer MD portables have pushed cassettes and DAT to near extinction. Now, the next wave of professional MD field recorders could finish the job.

See HHB, page 49



Ron Krauss broadcasts while Don Heidt prepares for his afternoon show at WTKM.

"We've got a worldwide audience because people can't find this music anywhere else," said Shanahan. "This is niche radio."

"The Today Show" recently spent three days at the station and followed its polka personnel to several remote broadcasts, giving WTKM a lot of publicity. The AP carried a feature about the renaissance of polka music on the Hartford station.

WTKM also is a retail operation. Visit its Web site, or its reception desk, for that matter, and you will find all manner of polka CDs for sale.

Wondering where to put your hands on the latest disc from the Goose Island Ramblers or the Zolka Brothers? This is the place. The online store has an automated ordering feature, which allows listeners to click their way to polka heaven.

"We have about 24 people on staff here and the advertisers love us because they get results," said Shanahan. "When people walk into a retail business, they usually don't mention that they heard their commercial on a specific radio station, but they do in our case."

WTKM claims to be an old-fashioned station. "There used to be a lot of live programming and live music in the old days of radio," said Shanahan. "But so much of it today is satellite-delivered. We have no network programming here, and we're live 24 hours a day."

But the station also does a booming business in the live events arena. "Their

Ron Krauss handles a live talk program from 9:45 a.m. until noon, covering every topic from current events to recipes.

"Ron has been here about 18 years," said Shanahan. "We have a little turnover with our weekend guys, but our main staff has been pretty stable over the years."

### Talent pool

WTKM takes advantage of a young talent pool from the local high schools for fill-in work. Also unlike many bigger stations, the owner of WTKM handles air shifts, writes and records commercials and gets involved with listeners. Lopas, who started with the station at age 15, is leading a tour of rabid polka fans to Hawaii. The station is not just another "property" to him — it is his life.

"This type of music was really big in the '40s and '50s," said Micale, "but when rock 'n' roll started up in about 1955, polkas waned."

This family-oriented and irrepressibly happy style of music has had a steady resurgence since the mid-1980s, according to Micale, who is seeking a permanent home for his Wisconsin Polka Hall of Fame. In 1995 listeners donated about \$18,000 to help WTKM build a larger transmitter and double its power to 6 kW, according to the Milwaukee Journal Sentinel. That is what is called listener loyalty.

When Ken R. tries to dance the polka, he looks like he's walking up stairs. Reach him at [kenr5367@aol.com](mailto:kenr5367@aol.com)

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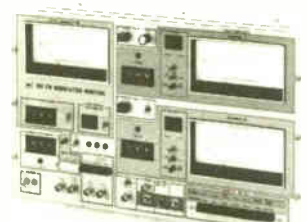


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This was in the TV hall, but how often do you see a purple moose in RW?



Copyright NAB

John Devecka and Dave Strode of LPB touted their new Silent Boom, a mic arm that uses solid extruded aluminum to eliminate echo-chamber effect and flocked springs to kill the twang.



Copyright NAB

George Lucas said he will never shoot another film on film. He is using Sony high-definition digital technology for the next Star Wars epic.



Roe Under Glass: Charles Roe can be seen but not heard inside an Acoustic Systems modular control room.



Klotz Digital America acquired Graham-Patten. Thomas Klotz and Howard Mullinack meet the press.



Photos by Pat McLane except where noted

BSI and AudioScience announced soundcards that play quadruple MP3 files without a software codec. Ron Burley of BSI shakes on it with Richard Gross, left, and Stephen Turner of AudioScience.

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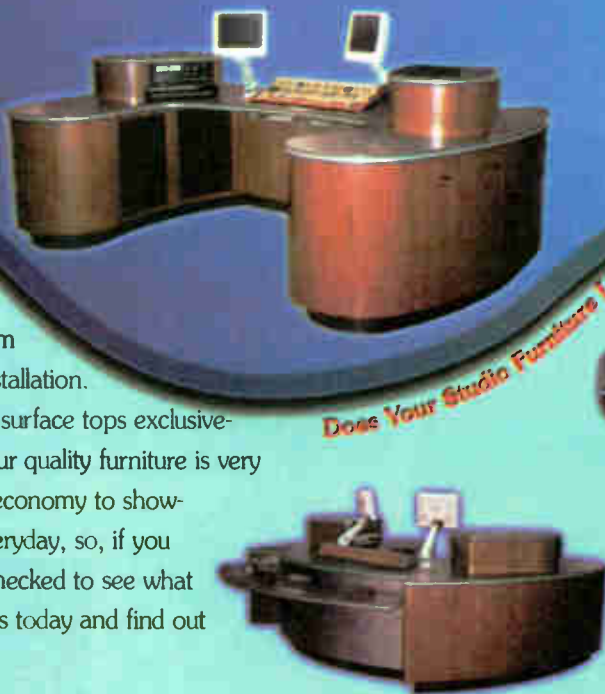
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# Al to Earth: Get a Life. Please.

**Alan R. Peterson**

Finally, after my long hiatus, I am returning back to the Fountain of Despair and Damnation that is radio and greedily lapping it up.

Oddly enough, during my time in the penalty box, the ringing in my ears must have stopped, because I am hearing something I never noticed before.

A lot of folks I have associated with in the past that have either done radio or still have a show somewhere cannot help but turn on that *rrrraaadioooo vooiiiice* even when there is no mic in the room.

Why have I never noticed it before? And why do I now find it grating?

Granted, a lot of us got into the biz because we wanted a shot at low-risk stardom, or just enjoyed the wonderment of having thousands of ears tune in to our every word. But there is quite the sizable camp of folks that either love their voices so much, or just forgot how to speak the Queen's English, that the on-air light is on over their heads 24/7.

It is nice to know we can turn it off when we want to. We just have to want to turn it off.

## Off to Pennsy

By way of Pennsylvania, let me tell you what I am talking about.

I have always enjoyed a shared passion for radio and acting. During a two-year stay in Harrisburg, I divided my day between the production studio of WNNK(FM) and three different theater companies at night.

When I left the Keystone State in 1995, I could boast having done a whopping nine plays in those two years.

Many parallels were observed between my paired interests — preparation (show prep vs. learning one's lines and blocking), the performance (on-air vs. on-stage) and the critique (the PD's office for aircheck dissection vs. crummy newspaper reviews).

talked about boating on the Susquehanna River, or the ones planning kitchen retrofits or starting adult guitar lessons.

## Spam, Spam, Spam ...

I have often heard that actors and DJs are among the most insecure, messed-up people around. But to me, the performers that left it in the dressing room were more interesting, more real and a lot more relatable to my way of living than those stylized British accents rehashing the Spam song for the thousandth time.

great set of pipes." So they decided to talk the same way 24 hours a day.

Fortunately, spotting them from afar does not take an advanced psych degree.

They sidle up to the attractive young lady at the supermarket checkout and out of nowhere say, "Hey, wassup? Ever listen to Mix-96? I do middays there," with a choked laugh at the end that drips with phony bonhomie.

They answer their home phone with the same sneer, vocal tic or dropped octave reserved for the mic at work. When asked for driving directions,



If you own Tribbles you might be a Trekkie.

Good and successful performers have to be ready to show the world "what they got" at any moment. And it is always good to have a routine stuck in your back pocket when the man behind the desk says, "So what do you do?" But even the best of them dials it back when it is time to reenter the real world.

I am fairly confident that Alan Alda did not perform surgery on soldiers once he got home from filming M\*A\*S\*H. Likewise, Moe Howard

they provide them in a timbre best suited for a planetarium soundtrack.

When standing angrily in line at a customer service window, they cannot help but scream what station they work for, as if it will earn them special consideration.

And the effect only becomes amplified when complemented.

Prove it for yourself. Mention to a weekender who seems a little more puffed up about him or herself than others what a great voice he or she has. You will hear their "thank you" pronounced in a way that does not commonly occur in nature.

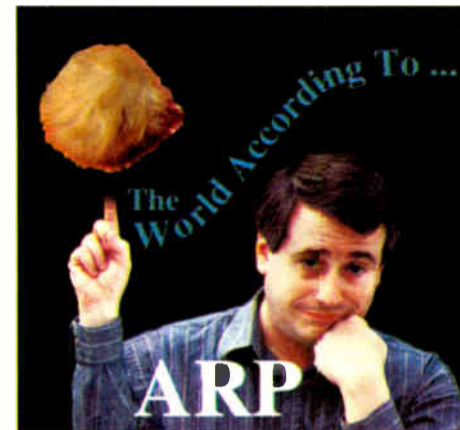
Every waking moment becomes fodder for "the show." A messy accident changing the baby becomes a bit for "the show." Dropping off a video rental after hours and trying to avoid the charges becomes material for "the show."

Real life ceases to exist for these folks. A jock staggers through existence observing it through a keyhole more than living it. When anything happens, the first thought is, "How can I use this in the show?"

I have nothing but admiration for successful air-talent that put in the effort to make the show successful and to promote the station as much as can be tolerated. But the broadcasters I admire the most know when to turn it off.

Yes, this much attention to one's performance is what makes them winners. Unfortunately, it also makes them deathly uninteresting. And I don't care to know my trip to K-Mart to return a clock radio will be a bit for tomorrow's morning show.

Friends, I know what they told you



at the DJ conference and intensive workshop. I went there too. Every waking moment of your life should be geared toward making your show the best thing on the air.

I don't want you to stop, but I would like you to put it in perspective for a moment.

What if your washing machine repairman came to your house and talked of nothing but pulleys and solenoids all morning? How would you feel an hour into the conversation?

Ever spend more than a day with a Trekkie? Not a *Trekker* who goes for the philosophy angle, but a *Trekkie* who owns his own Tribble and gives the entire group a bad reputation. After the seventh or eighth "I'm a doctor, not a ..." gag, you'll be out of there.

## Just a job

Please remember, it's a passion, yes, but it is still a job. I'm begging you: Enjoy a life, your own.

Read USA Today without scissors nearby. Walk the Adirondack Trail without phoning in reports. Take mandolin lessons. Buy a loud shirt. Cook lasagna from scratch.

Push yourself away from the Internet for a day. Forget the garage trade out and change your own oil. Take a vacation where nobody can find you for the whole week. Learn to speak to your children and not *annn-ounce* to them.

Make real friends, not just acquaintances, associates or fans. Hang out with people you can burp with. Meet people that listen to other stations and don't memorize your incredible bits and breaks to recite back to you.

Some weekend this summer, go to the park or the zoo with the family and leave the cassette deck and station jacket home. Those two days are yours, so be *you* for a change and not a billboard.

Talk to the teenager behind the counter in your *soft* voice, not your 100-percent-from-the-diaphragm bellow, when buying ice pops for the gang.

To the insecure — and who in radio isn't — this sort of change may be catastrophic. Nobody wants to be told to divert from what they have been doing for so long. And that is not my aim. I just need to ask you: Remember what you were like before radio? Was that really so awful?

It's okay to be that again.

Al Peterson is chief engineer for the Washington campus of the Connecticut School of Broadcasting, and provides creative and technical support to the syndicated *Greaseman Show*.

He also just learned the word "bonhomie" and couldn't wait to use it in print.

## Make real friends. Hang out with people you can burp with.



But something interesting happened once the stage was cleared and the afternoon jock yielded to the evening jock: More often than not, it was the actor who knew when to turn it off.

Granted, not a lot of them could. After a performance, a few of us used to go out for drinks and pizza after a show. Some members would gravitate together and recite lines or melodies from favorite plays and dramas, or recreate impromptu Monty Python bits already 30 years old (which, sorry to say, gets less funny to me every year).

I preferred to sit with the gang that

did not poke strangers in the eye after the Stooges wrapped for the day.

I must hold this observation up against what I have seen in some broadcasters I know. When the mic is turned off, they stay on. The voice, the swagger, the 'tude, the need to feed "The Show."

At one time, this was the sole behavior of the "puker" jock, hopefully the guy none of us grew up to be, but there are many more today than I previously thought.

Somewhere in that jock's past, he/she was told, "Man, you have a

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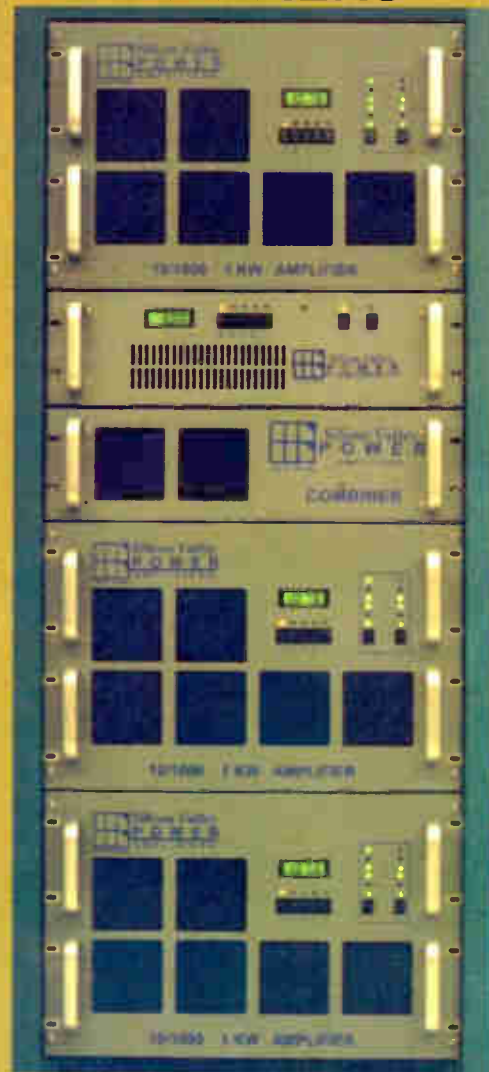
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# HHB

► Continued from page 43

When I received word about the work HHB was doing developing what is now the MDP500 PortaDisc, I was invited to offer my "fantasy specs" for the concept.

Although the reality does not quite live up to that wish list, HHB has created a sturdy, serviceable field recorder that stands equal to its sibling, the now-discontinued PortaDAT. The company doesn't consider this a direct replacement for the PortaDAT; it says it is bringing its ideas behind field equipment to a wider market.

The MDP500 has a familiar feel. It is about the same size as professional DAT and cassette recorders. The layout and feel of the controls are likewise comparable.

## Controls and connections

The transport controls and an integrated speaker/mic are on the top with an LCD screen and additional controls on the front. The right side has all the I/O connectors including three digital formats — two S/PDIF with both RCA and optical connectors and a USB port — analog balanced XLR inputs and RCA line outs, plus a 1/4-inch headphone jack and a connector for a remote control.

The biggest difference between this and other units is the slot for MD media on the left side. The back holds the eight "AA" cell battery pack. Fully loaded with batteries, the 10 x 2 x 7-inch package weighs about 4.5 lbs.

The demo unit seemed rugged and robust. With few moving parts, nothing rattles when you give it a shake. The unit comes in a kit with AC adapter, a set of high-capacity NiMH batteries and an extra battery holder. A car adapter kit is available.

When the MDP500 is put to use, the design shines. The transport controls have a nice "click." Fingers can feel that the connection has been made.

A "keyhold" button disengages other controls and protects against accidentally stopping a session while making a recording. The front controls offer a similar lock feature with the recording level adjustment.

attenuator and high-pass filter.

Altogether, there is a plethora of options here, making this quite customizable to exploit the unit's capabilities of the MD format. What I like most is that the control design here doesn't rely entirely on clicking through menus.

Under the display, three buttons on the front-panel control selections on the options presented above.



PortaDisc Hooked Up to Cool Edit Pro Through USB Port

This can save a lot of fumbling.

Another thoughtful feature shows an understanding of how field recorders are used in real-life settings like a newsroom operation.

Reporters are not stuck with having to reset their preferences when sharing the unit with others. The internal memory stores five configurations of presets and options so that everyone can have it their way without hassles.

The included carrying case has clear panels to access transport and front-panel controls as well as to monitor levels on the LCD. The case comes with a handy pouch to store black discs, cables and other assorted items.

The only alteration I would suggest would be in the design of the flap over the I/O. To get an XLR mic cable and

a USB audio device. I just changed the device option on the audio editor of choice on the computer and it was easy to record directly from the disc.

The advantage of USB over the S/PDIF or even analog outs is that you don't need a soundcard to load recordings. On my original wish list, the USB connector would read the MiniDisc as a data drive — just drop and drag the audio into the DAW in seconds.

That would get past the real-time playback bottleneck so problematic when covering time-sensitive stories. One HHB representative at the AES show in Los Angeles last fall indicated that future versions may have a 4x read speed through the USB port.

The fact is that MD is probably not well-suited to this kind of use anyway. Sony dropped efforts to use MD as a data format — something of a competitor to ZIP drives — several years ago. It seems that MD has inherently slow access times.

Even though USB connectivity here does not allow better than real-time playback, it should be a boon to those working on Macs, particularly iMacs. A portable iMac and a PortaDisc would make a nice combo for the traveling broadcast journalist. Ditto for USB-equipped Windows-based laptops, too. Not having to add a pricey pro audiocard is a real savings.

**Product Capsule:**  
**HHB MDP500**  
**PortaDisc**

**Thumbs Up**

- ✓ Controls are thought out well
- ✓ Extensive I/O options

**Thumbs Down**

- ✓ USB connection only 1x
- ✓ Case flap for connections could be better designed

List price starts at \$1,545

For more information contact HHB USA in California at (310) 319-1111, fax (310) 319-1311 or visit the Web site at [www.hhbusa.com](http://www.hhbusa.com)

The MDP500's ATRAC 4.5 sounded just fine in both stereo and mono. As usual, the depth of ATRAC stereo seems a bit shallow to my ears. Typically, I use the mono settings anyway to extend the length of voice-only recordings.

## Battery life

With an estimated battery life of up to three hours on a charge, that will just cover the 160 minutes maximum on a single disc.

Speaking of sound quality, this was another one of my "dream" criteria. When better ATRAC versions are developed, you usually are married to the outdated one.

It would be nice to design this with an upgradable chip containing the codec so that the investment in all the other hardware can be extended as MD's quality improves.

HHB is definitely on the mark with the MDP500. Though a first-generation pro MD recorder, it shows a deep appreciation for what is needed for fieldwork. The PortaDisc should quickly become the pro MiniDisc of choice much as the PortaDAT was when DAT ruled.



PortaDisc I/O Connections

The rest of the front-panel controls cover a range of options. The setup button takes care of basics such as setting the onboard clock to timestamp recordings; setting the contrast on the LCD screen and controlling whether the LCD reads in peak-hold format.

The system button sets threshold levels for the auto-start recording/cut-off capabilities as well as a variety of additional options. The input button selects which elements of the I/O are initialized including phantom power, automatic gain control, a limiter,

headphone plug in, you have to open the side's Velcro-enclosed flap. It would be better if smaller panels opened to access just the XLRs and the headphone. Otherwise, this unnecessarily exposes all the connectors.

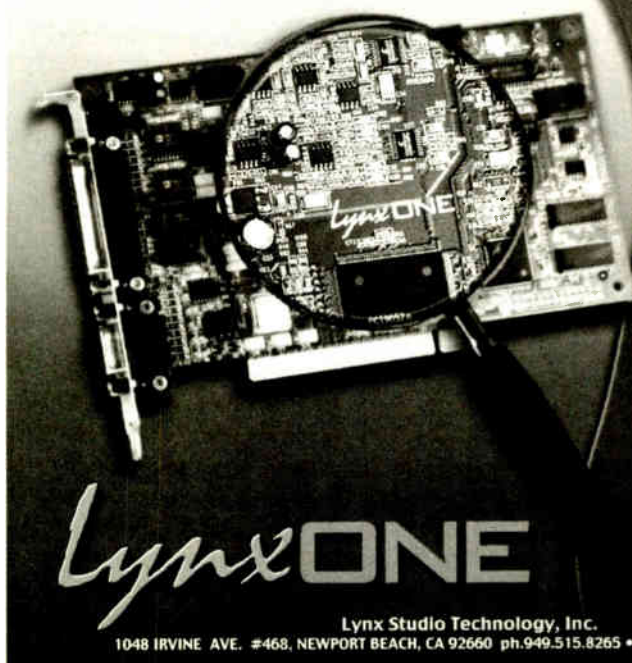
## Hear to believe

Back in the studio, the audio can be offloaded to a computer through the USB port. The process of connecting the MDP500 to my Windows 2000 workstation was a no-brainer.

The operating system identified it as

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Arrakis Digilink II automation system with connections for 2 workstations, includes CD controller, \$2500. John Russin, The Keyed Up Communications Co/WIIS-FM, 3808 W Park Road, Hollywood FL 33021. 954-966-9040.

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◆ READER'S FORUM ◆

Cousin Bruce responds

The following is in response to letters about "Al's Boss Picks Up Big Honors," by Alan R. Peterson, in the March 30 issue.

To all of my colleagues, past and present, thank you for sharing those memories. It always amazes me to think about all of the lives I have somehow managed to touch both physically and electronically.



Copyright NAB

Morrow at NAB2001

Your Cuz continues to love what he is doing. When that "On Air" light illuminates, it still gives me a thrill and I am as happy on the air today as I was back in those "memory days."

The honor presented to me by the NAB is a dream come true. This award means so much to me, as it truly represents an acknowledgment of my peers and peerettes.

I hope to continue to carry the torch of radio and I can only pray that programmers and owners will allow young people to realize their dreams (as I did and continue to do), to allow mistakes and encourage creative broadcasting. I love this business.

Bruce Morrow  
New York

Engineers

I really enjoyed the March 14 article "Do You Respect Your Engineer?" by Mark Lapidus. Thanks for saying the things our managers need to hear.

Myself, I dropped out of full-time radio engineering a decade ago when it became obvious the computer management field was more lucrative. I went into government service, but have kept my hand in radio, with a dip into television along the way.

Currently I work as a local consulting engineer and am working mostly in streaming video, as you can see at our site, [www.AlaskaOnlineTV.com](http://www.AlaskaOnlineTV.com). We are trying to preserve Alaska's history in video on

the Web.

I think Mark's article was right-on. Most stations seem to think the engineer is only important on the day he is needed for an emergency, or to plan the next translator station, but then he should fade into the background. And God help him if he screws up and causes a problem. His problems can cost revenue.

It is only the most enlightened stations that will listen to our suggestions (the ones that cost money) about how best to do stereo AM, or about how to make sure we have a backup transmitter for the revenue-generating FM stations, or about keeping spare parts for the diplexer that keeps our competitors on the air on our tower.

We seem to be a voice in the wilderness calling for more and more, when most station managers aren't interested. Thanks for pointing out that it can have a great long-term benefit even to those kinds of GMs who listen to us. Please keep it up. I plan to clip this latest article and slip it under a couple of doors here in Anchorage!

Scott Dennis  
Owner/Consulting Engineer  
InfoTech Alaska  
Anchorage, Alaska

Contracting licenses

Mark Persons' recent article (April 11, "Low-Voltage, High-Hassle Licensing") regarding contracting licenses is probably just the tip of the iceberg. More and more states will be adding that requirement as time goes on ... probably under the guise of safety, but in reality, to bring in more dollars to local treasuries.

Over the past 30 years I have built communications facilities in a number of jurisdictions, foreign and domestic. Until recently, low-voltage wiring has not been an issue. After Persons' article appeared, I made several phone calls to people I know in contracting divisions of several states. I made four calls asking specifically of deaths, accidents, major conflagrations, etc. resulting in significant property damage attributable to unlicensed people doing the work.

No one could cite any cases. A gentleman in Oklahoma indicated he "thought there might have been a fire" caused by low-voltage wiring, but offered nothing more specific than that.

The truly unfortunate aspect of this contractor licensing is the lack of any national standard. Each state has its own ideas, laws and method of policing the laws. In Persons' case, the results were arbitrary

Mel: Don't Blow Off The NAB

Memo to Mel:  
The NAB matters.

We're not talking about your membership in the association. We are referring here to the spring NAB show. Your company's abrupt decision to yank its membership in the industry's trade association, which your managers announced in a curt press release prior to the

show, sent murmurs through the community, as it was no doubt intended to do. And no wonder. Infinity is at or near the top in every category that matters in radio ad revenue and big-market business success. Few entrepreneurs symbolize our industry or are as recognizable as Mel Karmazin. And although TV and other media reportedly take up some of your time these days, we know you're a radio sales guy at heart.

We also know you have your differences with NAB over TV ownership caps. And we know you're a phenomenal business strategist, and that this move could be part of a plan to get what you want from the lobbyists and eventually come back into the fold.

But your decision has an immediate, negative impact on many of your employees, most of whom had already been obliged to pay their own way if they wanted to take part in our industry's big market bazaar.

Now, those employees are looking over their shoulders, worried they might even short-circuit their careers if they merely attend the show or take part in any NAB-sponsored events. They read between the lines of company memos from on high, and they worry.

Attendance at the show this year was down a tad from last, and some exhibitors wondered if your decision played a part. An NAB spokesman said no, and guessed that your people accounted for perhaps 100 fewer registrants.

But Mel, we think it's a shame that good, hard-working engineers and managers can't come freely to a convention that educates them about the products and trends affecting your bottom line. How are they to learn about developments at iBiquity Digital, in which your company owns a stake, or hear from your competition about their failures and successes in streaming, in consolidation, in designing digital installations?

We hope you'll work out your differences with NAB. In the meantime, why not issue a memo to your staff assuring them on this point?

"CBS/Infinity employees are encouraged to take part in industry-sponsored events and conventions," it might state, "whether CBS is a member or not, and you will not be penalized for doing so."

— RW

enforcement of a law that should never (in my opinion) have been put in place.

It is utter folly to think some fire alarm installer, burglar alarm peddler or similar person could begin to comprehend the complexity of a major broadcast facility as Persons describes.

The nature of the work at my company demands that I maintain a general building and commercial electrical contractor's license. I can legally — in Arizona — take on most any task involved in building a station. After going through an ordeal similar to the one Persons describes to get these licenses, I too had to pay the state "big bucks" for the actual licenses. Every two years I "renew" those licenses, also at significant cost. Don't forget the drawer full of city and county business licenses I have. Each of these costs me money every year. I just paid the city of Glendale, Ariz., almost \$100 to do a job that took two of us less than a day!

As a contractor, I have to collect state and local sales taxes. Not an easy matter, either, as there is no set rate for the tax. This state has a "state" rate and each city, town, county,

municipality and the like gets to set its own "local" rate.

So, my fellow engineers, look forward a few years and start planning on becoming licensed. Look at the bright side. When broadcasting (as we know it) goes into the dumper, you'll be all set to peddle/install burglar alarms!

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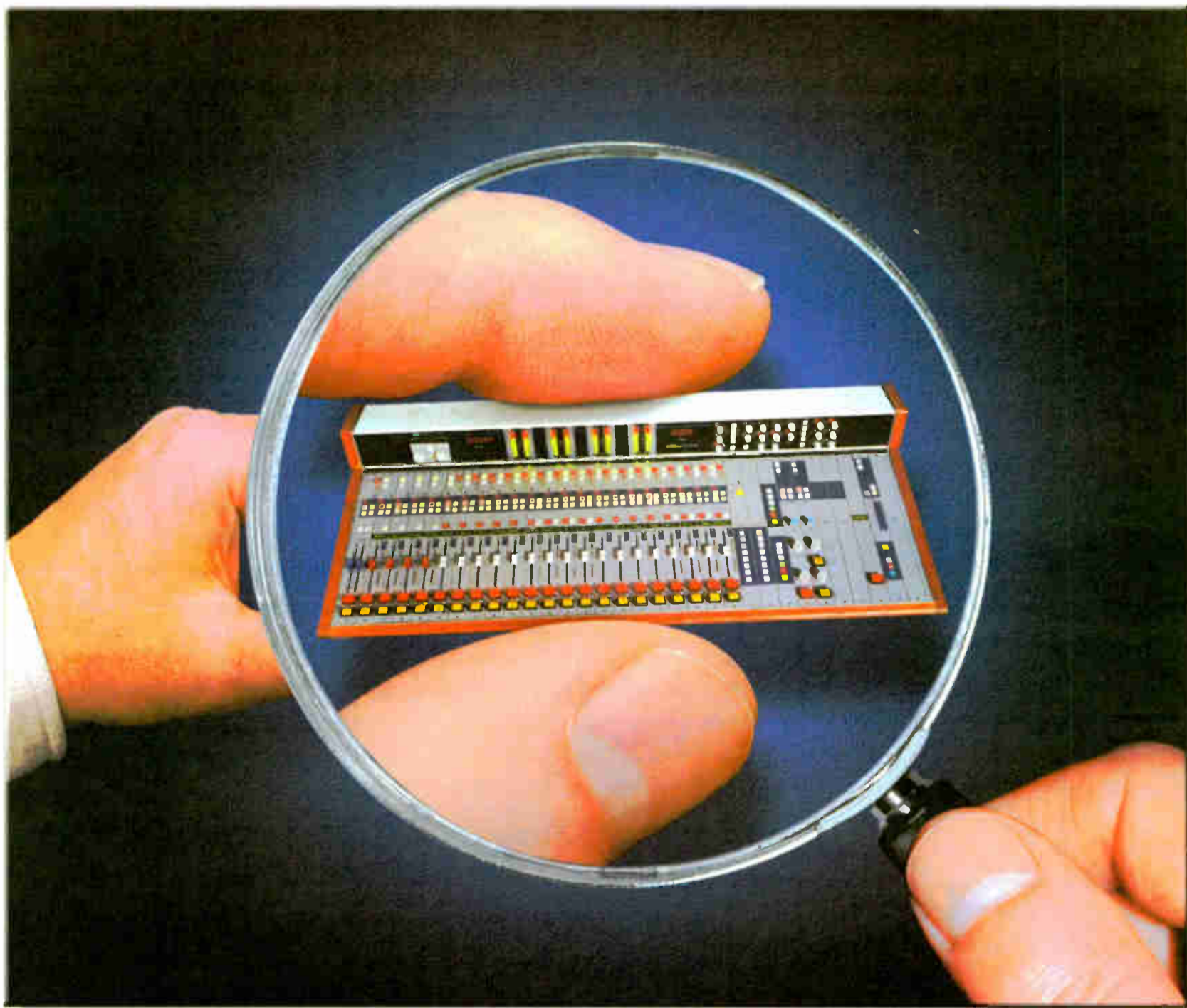
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