

*****AUTO**3-DIGIT 857
 \$117298 D08 0610
 TOM MILLER 206
 ASST CHIEF ENGINEER
 KTZR
 2033 S AUGUSTA PL
 TUCSON AZ 85710 7905

What's Playing, Nationwide

YES.com tries to put its fingerprint on monitoring.

Page 40

Delilah's Secret Weapon

Toni Howell is a 'stick of dynamite' supporting the syndicated host.

Page 22



Radio World

\$2.50

The Newspaper for Radio Managers and Engineers

May 23, 2007

Photo by Bob Kovacs

INSIDE

The NAB Experience in Words and Pictures

photos start on page 4

NEWS & ENGINEERING

▼ SWL Fest features the first sustained trans-Atlantic DRM reception.

Page 12

▼ Remembering the American Forces Network, a vanished shooting star.

Page 26



▼ Saul Levine's stations embrace HD Radio.

Page 36

GM JOURNAL

▼ Boston teens program 'Radio You.'

Page 38

▼ Stations make the most of MySpace.

Page 42

OPINION

▼ Opinions on the satellite merger, amateur radio, Internet radio and more from Lee Tabor, Frank Bellina, Paul Gathard, Allan A. Augustyn and Paul Flint.

Rehr: Drop The Fusty Language

Satellite Merger, Performance Rights Are Highlighted

by Leslie Stimson

LAS VEGAS Radio and TV need to ditch the musty, fusty old terms of a bygone era and speak to regulators and the public about the broadcast industry in terms that benefit the industry's digital future — including the many platforms

See NAB, page 3 ▶

Bangor Stations to Test Disaster Plan

Eastern Maine Radio Broadcasters Cooperate In Emergency Communications Plan

by Randy J. Stine

BANGOR, Maine What participants believe is the first local cooperative emergency broadcasting venture in this market among commercial radio broadcasters and public broadcasting could become a model for others in the industry hoping to combine resources to ensure that public information links remain stable after natural disasters, attacks or pandemics.

Clear Channel Radio, Cumulus Broadcasting and Maine Public

Broadcasting have formed the United Radio Broadcasters of Eastern Maine. The group expects to test its communication infrastructure this month. Its name echoes that of an ad hoc group that formed in 2005, United Radio Broadcasters of New Orleans, after Hurricane Katrina.

Zone Corp., a Bangor-based broadcaster with two FM stations, had agreed to participate in the new venture but later withdrew. No explanation was given for the withdrawal, according to those

See MAINE, page 6 ▶

WHEATSTONE adds features and saves money



This G-7 is NEW and LOADED with FEATURES: event recall, automation interface, bright source displays, and EQ/Dynamics and panning, all recallable on EVERY input channel for production or mic processing—the list goes on.

With the Wheatnet™ network design you'll get a simple, reliable, low latency system with high-speed digital audio, meters and logic commands — all in Real Time. PLUS we'll assemble, test and configure the entire system right in our plant, assuring you a smooth on-time installation.

WHEATSTONE—WE MAKE THE GOOD STUFF.

www.wheatstone.com

Real-Life Lessons for Would-Be Owners
 A three-part series by Jim Withers at radioworld.com

◆ NEWS WATCH ◆

DRE: FMeXtra Can Be Encrypted

SAN JOSE, Calif. Digital Radio Express says it can do conditional access. Its digitized FM subcarrier technology FMeXtra can be encrypted so that only certain receivers can decode the digital signal.

The encryption system is based on Secure Real-time Transport Protocol developed by Cisco Systems, Ericsson Research and other network security experts.

DRE says its encryption technology

includes AES stream encryption, SHA data authentication, timed keys, and encrypted key table management. The DRE software package includes tools for activating and deactivating individual or groups of receivers.

All FMeXtra radios in production are conditional access-ready and a software update for previous FMeXtra encoder versions is available free, according to the company.

With DRE's open standards based approach, a station can use a single conditional access solution across a range of networks and devices including PDAs and mobile phones. Example applications include reading services for the

blind, member-only listener channels, secure emergency and altering systems, and private radio networks.

Separately, DRE said Hunan Broadcasting Company commenced digital radio broadcasting with the FMeXtra system. A 57 kW FM station in Changsha is broadcasting FM programming simultaneously with two FMeXtra digital channels of stereo quality programming, it said. DRE recently announced an alliance with TCL, a Chinese consumer electronics group. The company said that deal "provides the foundation to bring FMeXtra to a large number of China's radio stations in the coming months."

Onkyo Debuts Neural-THX, HD-R and Satellite-Ready Tuners

UPPER SADDLE RIVER, N.J. Last year we reported Onkyo was one of four manufacturers to include Neural Surround and XM-ready features in high-end home theater receivers. Now Onkyo has added Sirius-ready and HD Radio features.

The company said it would introduce four THX Certified home theater receivers this spring, featuring HDMI 1.3a compatibility, including internal decoding for DTS-HD and Dolby.

The new receivers are the first models to feature Neural-THX Surround decoding for broadcasts and gaming. This new surround sound technology allows broadcast content to be transmitted in a two-channel format, and later decoded for up to 7.1 discrete audio channels, according to Onkyo.

One receiver includes HD Radio.

The TX-NR905, planned for August delivery at \$2,099 list, includes HD Radio; it also allows toggling between XM and Sirius if you have both tuners.

An Ethernet port for support of Internet radio and streaming multimedia is included in the TX-NR905, as is a USB port to allow the connection of USB-based portable audio players and memory devices.

The Onkyo TX-SR805 ships in May and lists for \$1,099. Onkyo projects June availability for the TX-SR875 at \$1,699 and July availability for the THX Select2 Certified TX-SR705 for \$899.

An Onkyo spokesman told RW that models 705, 805 and 875 also allow toggling between XM and Sirius if you have both tuners.

THE TOOLS HAVE CHANGED...



BUT THE *MISSION* REMAINS THE SAME

Today's audio control surface has evolved to a very high degree. Yesterday's wish list is today's feature set: total router integration, routable audio and logic, total show recall, and a complete set of DSP audio processing are under the hood of this G7...

All in a package of stainless steel and aluminum designed for years of 24/7 service, with a familiar look and feel that will *help your talent make years of great radio.*

Networked audio requires a higher level of expertise, experience and resources. Benefit from all three with *WHEATSTONE!*

WE MAKE THE GOOD STUFF

Wheatstone

Copyright © 2007 by Wheatstone Corporation

tel 252-638-7000 | www.wheatstone.com | sales@wheatstone.com

Index

NEWS

Rehr: Drop the Fusty Language	1
Bangor Stations to Test Disaster Plan	1
NewsWatch	2, 15
From the Editor	4
Shortwave Broadcasters Test DRM	12

NAB PHOTO GALLERY	4, 5, 16 24, 30, 31, 46
-------------------	----------------------------

FEATURES

Workbench: Critters Invade	
Transmitter Building	18
Who's Buying What	20
Toni Howell: Delilah's Secret Weapon	22
AFN, the Vanished Shooting Star	26
Webcasting Royalties Loom Large	32
Stream on Fiber Eases Webcasting	34
Delays Spark Debate in Africa	35
Levine's KKGO/KMZT Embrace HD Radio	36

GM JOURNAL

Boston Teens Program 'Radio You'	38
YES.com: What's Playing, Nationwide	40
PEJ Confirms Habits Are Changing	41
Stations Make the Most of MySpace	42
How to Hit Your Web Site Budget	48

OPINION

Reader's Forum	52-54
Embrace Internet Radio; It's Here to Stay	53
SBE's DRB Is OK	54

NAB

► Continued from page 1 available to stations to transmit content.

That's according to NAB President/CEO David Rehr, who seems ready and eager to push broadcasters to embrace change now that he's had more than a year and a half at the helm of the trade organization.

Here's an overview of news coming out of this spring's NAB2007 convention.

REHR: RADIO, TV NEED BRIGHTER IMAGE

Rehr wants to re-brand and re-frame radio and TV to reflect "the new digital industry that we are creating."

In his keynote address he said a new vocabulary will make the broadcast industry and its issues more understandable to policymakers and the public.

"Words have consequences," said Rehr. "Words are critical to how we redefine our issues and our identity as we proceed into our digital future."

An example of a phrase from a bygone time, he said, is "terrestrial radio." Internet radio and wireless sound like the future, he added, as do Google, YouTube and Ibiqity.

Touching on performance rights, he called those "a wrong that the record

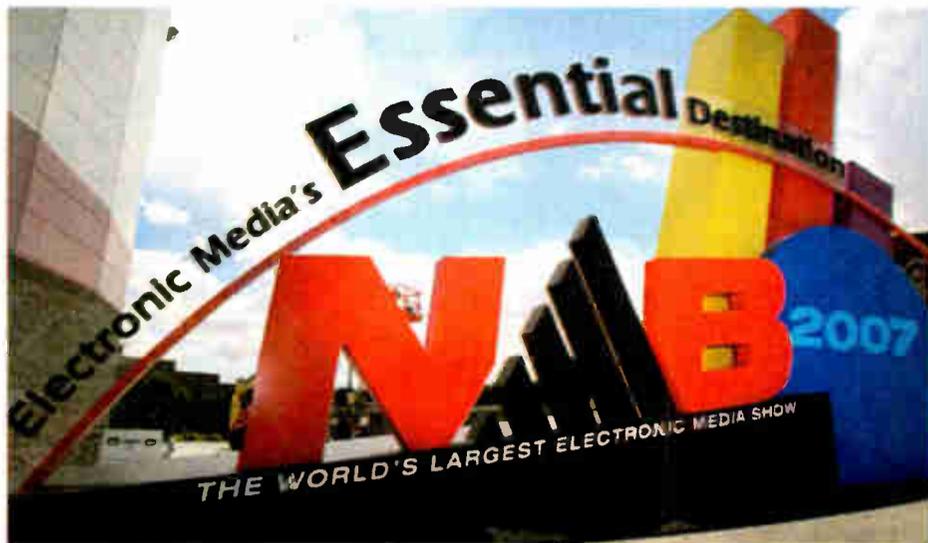


Photo ©NAB

much more sense for us to charge *them* for our promotional efforts," he said.

NAB will lobby Congress — or "advocate" as Rehr said — to oppose the levy.

Of the proposed satellite radio merger, Rehr said it will not be approved and NAB will continue to oppose it. "The bad business decisions of XM and Sirius should not be rewarded with a government bailout in the form of a monopoly," said Rehr.

MORGAN LEAVES NRSC CHAIR

Greater Media Vice President Radio Engineering Milford Smith is the new

help and support."

Morgan has formed a consultancy based in the Scranton, Pa., area. He told RW if a company needs a representative at the NRSC or to have a systems evaluation, he can help.

As Milford Smith takes over the chair of the NRSC, he vacates his position as co-chair of the Digital Radio Broadcasting Subcommittee, a position he held for the last decade. Smith and co-chair Michael Bergman of Kenwood USA oversaw the development of the NRSC-5-A Digital Radio Broadcasting standard.

Andy Laird, vice president and chief technology officer for Journal Broadcast Group, will replace Smith as co-chair of



Lowest Prices and Largest Inventory on EVERYTHING For Broadcast
BSWusa.com **800-426-8434**



NAB President/CEO David Rehr during his keynote address.

chairman of the National Radio Systems Committee after the resignation of Charlie Morgan from that position amid accolades.

Morgan told RW he had been chair of the standards-setting group for more than 24 years.

Although he will still participate in NRSC activities, Morgan said it was time to relinquish the chair because he believes strongly that the person who holds the position "should be employed in the industry on a full-time basis." Morgan, former vice president of engineering for Susquehanna Radio, had worked for the group owner for 46 years before it was sold last year. He has referred to himself as semi-retired.

In his speech in a crowded Hilton meeting room, Morgan said, "I have served as your chairman for well over 20 years and have seen the adoption of AM transmission standards, RDS, and most recently, the IBOC digital radio standards. The NRSC has not only set standards, but has become a venue for industry dialogue on various technical issues, most recently, the surround sound recommendations. I have enjoyed my role as your chairman and I thank all of you and particularly the representatives of our sponsors, the NAB and CEA for your

the DRB Subcommittee. Laird has been an active member of the NRSC for over a decade, and was previously the chairman of the DAB (now DRB) Subcommittee's Test Guidelines Working Group and Test Procedures Working Group, which was responsible for developing the test procedures used in the NRSC's evaluation of IBOC.

BILL DESIGNATES STATIONS 'FIRST RESPONDERS'

Sen. Mary Landrieu wants the federal government to codify the role that broadcasters fill in a disaster and help facilities remain on the air in such times.

The Louisiana Democrat introduced the First Response Broadcasters Act of 2007, which would take steps to help ensure that local radio and television stations are able to broadcast essential information to the disaster area without interruption.

Sen. Ted Stevens, R-Alaska, is co-sponsoring the legislation; Landrieu said a companion bill would be introduced in the House.

As first responders, broadcasters would be entitled to federal supplies of

See NAB, page 8 ►

28,163 products in stock at press time!

Well Balanced.

CD-RW Recorder with Balanced In/Outs. Only 2RU High. Wow!



Fostex CD Recorder/Player

- Best value professional CD recorder at BSW!
- 24-bit/96kHz resolution, BWF files
- Copy and paste data transfer instead of real-time audio ripping is ideal for archiving in 16-bit/48kHz
- Instant Play, Fader Start, Cue Points, etc.
- Balanced XLR and AES/EBU I/O

CR500 List \$599.00

LowestPrice only \$499!



Broadcast Tools 4-Input Passive Audio Switcher

- 4 stereo inputs to 1 stereo output, or vice-versa
- Local and remote control and status via contact closures and RS232 serial ports
- Pluggable screw terminal connectors
- 1/3-rack size, rackmountable with optional shelf

554.1111 List \$239.00

LowestPrice only \$199!

ACCESSORIES:

RA-1 rackmount shelf \$49⁰⁰

Save on 2-Pack Booms!!



OC White ProBoom Mic Boom with Riser

- Two booms for less than \$90 each!!
- Long 41" arm with 12" riser for table-top mounting
- Two sets of springs to handle mics of any weight

PROBOOM-B2PK 2-Pack Black

LowestPrice only \$179!

Hear & Now!



Cambridge Soundworks HD Radio

- We got 'em now!! HD Radio with better FM and AM antennas for superb sound quality
- Desktop model has alarms and headphone out
- Handy wireless remote control included
- You gotta get one for your office!!

NEW!

820HD

LowestPrice only \$299⁹⁹!



Same Day Shipping

BSW stocks a huge warehouse of products. Stock items shipped the same day. Just order by 7:00 PM Eastern Time.

Free Shipping on Most Web orders over \$189
FREE ground service delivery to the contiguous 48 states. Excludes heavy or oversized items.

RW at the Show

Photos and news stories in this issue provide snapshots from the recent NAB2007 convention. IMAS Publishing, parent of Radio World, has a huge presence at the annual show. On this page are some of our own people at work; on page 5 and elsewhere in this issue, RW photographers bring you a taste of the industry's biggest trade show.

— Paul McLane

That's me below with newly minted NAB Broadcasting Hall of Famer Rick Dees in the SAS booth.



Photo by Roger Turner



Photo by Jim Ezell, EZ Event Photography

Radio World Associate Editor Kelly Brooks, right, focuses on the speakers at an RTNDA event.



Photo by John Casey

Radio World International Editor Marguerite Clark draws the winner of a Burk Technology ARC Plus broadcast remote control, an IP-based system. The winner: Larry Howell of CJOK(FM)/Rogers Media in Alberta, Canada.

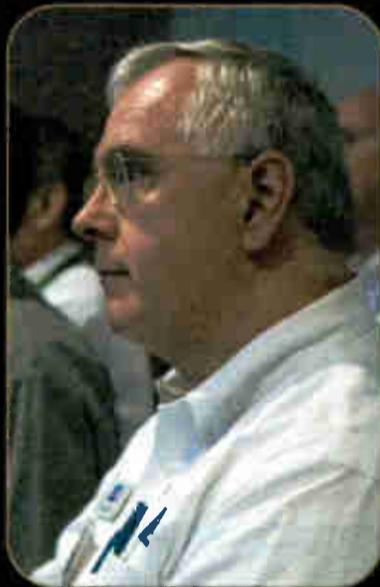


Photo by Jim Peck

Workbench author John Bisset in his day job as regional sales manager for Broadcast Electronics.

Guitarists always get the girls: Publisher John Casey with twin performers Kimberley and Tamara Pinegar, who were promoting Heil mics at the ham reception.



Photo courtesy John Casey



Photo by Roger Turner

IMAS Network Administrator Roger Turner snapped this photo of an attendee reading the NAB Daily News, a product of IMAS Publishing, in the bus line.



Photo by Jim Peck

RW News Editor/Washington Bureau Chief Leslie Stimson, a familiar presence outside NRSC meetings, reported on Charlie Morgan's last day as chairman of the group.

Your Single Source for Broadcast Solutions



ERI is your single source for the broadcast industry's best antennas, filter and combining systems, transmission line and RF components, and towers and structural products. Our professional team of engineers, designers, fabricators, project managers, and installers take pride in contributing to your success by delivering products and services to meet all of your RF and structural needs.

ELECTRONICS RESEARCH, INC. **ERI**

Call Toll-free at 877 ERI-LINE • Visit Online at www.eriinc.com

An attendee plans his day.

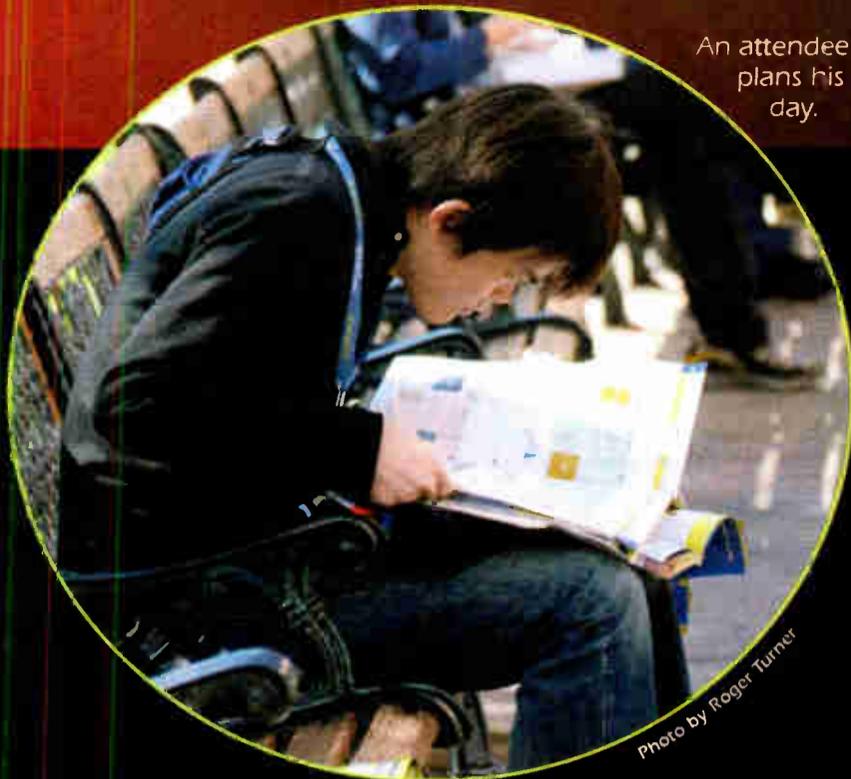


Photo by Roger Turner



Photo courtesy Broadcast Electronics

Hélio Costa, left, Brazil's minister of communications, talks with John Schneider of Broadcast Electronics, right, at a breakfast for Brazil broadcasters sponsored by BE and Ibiqity Digital and held in cooperation with AESP, a broadcast association. Costa is an advocate of digital radio in Brazil, according to BE, where the government is waiving tariffs on HD Radio transmitters for two years. The third man was not identified.

Tom King accepts the NAB Radio Engineering Achievement Award for his father Louis King, chairman of the board of Kintronic Laboratories.

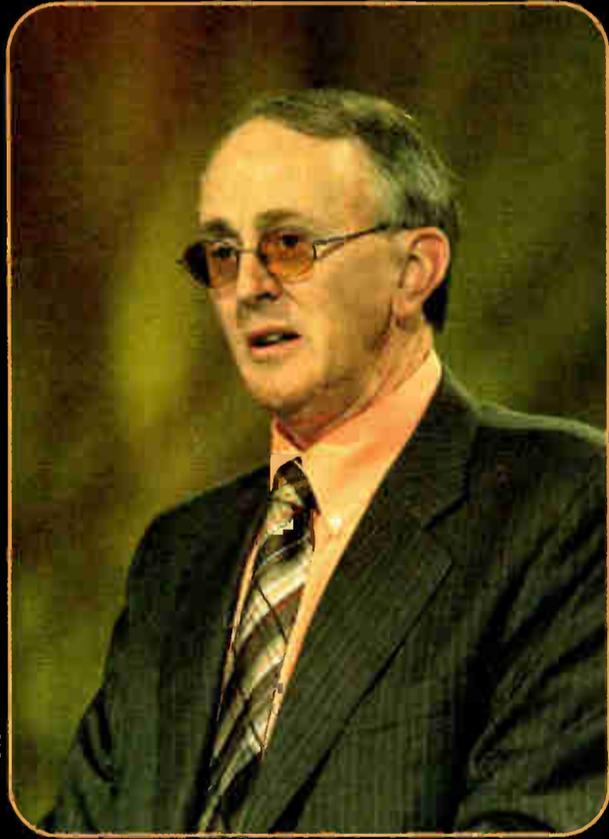


Photo ©NAB



Photo by Jim Peck

Fraunhofer's new MPEG Surround fixed-point DSP decoder for HD Radio, implemented in a prototype receiver on demo.

Sirius Satellite Radio • Univision • KCRW • Nassau Broadcasting • XM Satellite Radio • WCBS-AM Worldspace • KCRW • Radio Free Europe AOL's Kids On-Line • Radio Disney • Nascar WXPW/World Cafe • WOR Radio • WIP Sports Radio KYW • Greater Media • WINS • Salem

The best broadcasters in America are wired with StudioHub®

The money-saving, time-saving, CAT-5 wiring solution from Radio Systems.



Radio Systems, Inc.
601 Heron Drive, Logan Township, NJ 08085
phone: 856 467-8000 fax: 856 467-3044 www.studiohub.com

Maine

► Continued from page 1 familiar with URBEM.

The demonstration will originate from the studios of Maine Public Broadcasting, the primary EAS entry point for the market. The demonstration will be about the same length as an EAS test and air on all participating stations, said those familiar with the plans. Maine Governor John Baldacci is expected to voice the multi-station simulcast announcement.

All of the participating radio stations are licensed to Bangor, Maine, or surrounding communities. The geographic region URBEM expects to serve, a five-county region in the eastern third of the

state, is home to nearly 300,000 people.

"This is a very unique arrangement that takes terrorism and disaster into account and how broadcasters can continue broadcasting potentially lifesaving information in the aftermath of a catastrophic event," said Larry Julius, market manager for Clear Channel Bangor, a cluster of eight stations.

Cooperative broadcasters

"URBEM is intended to be the communications link to the outside world in the anticipation of all wired and cell phone networks within the broadcast services area, or even the entire state, being out of service," according to a URBEM spokesman.

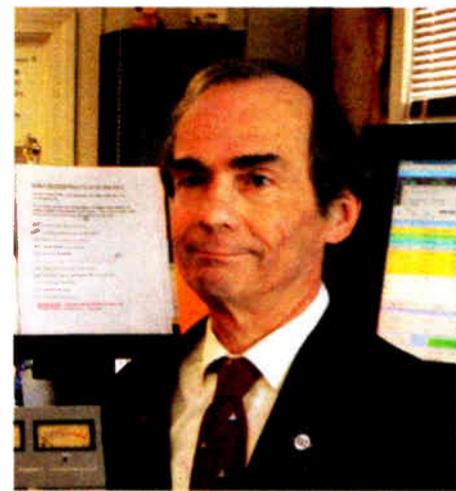
The Maine Emergency Management Agency has told URBEM members, that

as they plan for emergencies, they should assume that no public information would be forthcoming from the government within the first 72 hours after a disaster.

"In a worst-case scenario we want to be able to share programming across multiple locations," Julius said.

The Maine Broadcasters Foundation has given the go-ahead for a \$7,800 grant to be spent on a satellite phone and two-way communications gear for coordinating communications and sharing information among the cooperative broadcasters.

Richard Hyatt, director of engineering/Maine operations for Cumulus Broadcasting, said approximately 90 percent of the radio stations licensed to Bangor and the surrounding communities are participating. Fourteen stations are participating in the demonstration simul-



Richard Hyatt

cast. Bangor is Arbitron market 220.

The technological issues, such as sharing programming among the 14 stations, "are solvable given the requisite time and money. The political issues, however, can be enormous. For instance the determination of at which point one really wants to be broadcasting a competitor's programming," Hyatt said.

The agreement signed by participants establishes answers to those questions in advance so that official information can be broadcast with no time wasted in negotiations, Hyatt said.

The technical infrastructure of the system is fairly straightforward, Hyatt said, with remotely-tunable FM receivers at designated transmitter sites that will enable the selective re-broadcasting of any participant's signals received off-air at a given mountaintop location.

"Pre-coordination of existing, licensed RPU frequencies will also enable the sharing of common programming audio, in short or long form as desired," he said.

The procurement of a satellite telephone system and establishment of a mobile communications network via VHF and/or UHF two-way radio equipment will enable the sharing of raw information among the participants, said Gil Maxwell, senior vice president and chief technology officer for the Maine Public Broadcasting Network.

"My philosophy is to keep it simple. We are adding tuners and antennas and adding them to our patch panels at the transmitter sites," said Maxwell, referring to WMEH(FM) and WMED(FM), the two public radio stations near Bangor.

'One step further'

Maine Public Broadcasting has spent approximately \$1,000 for equipment at its transmitter sites so far, Maxwell said.

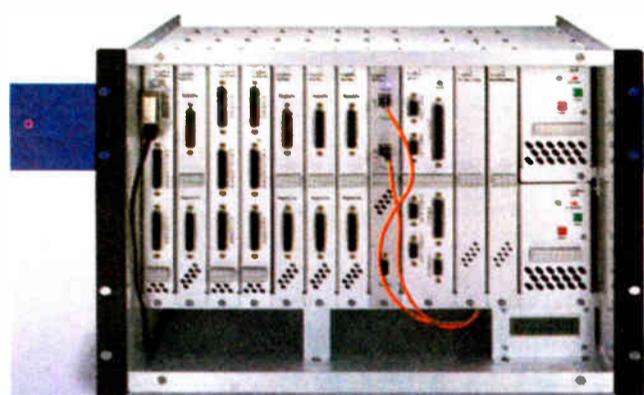
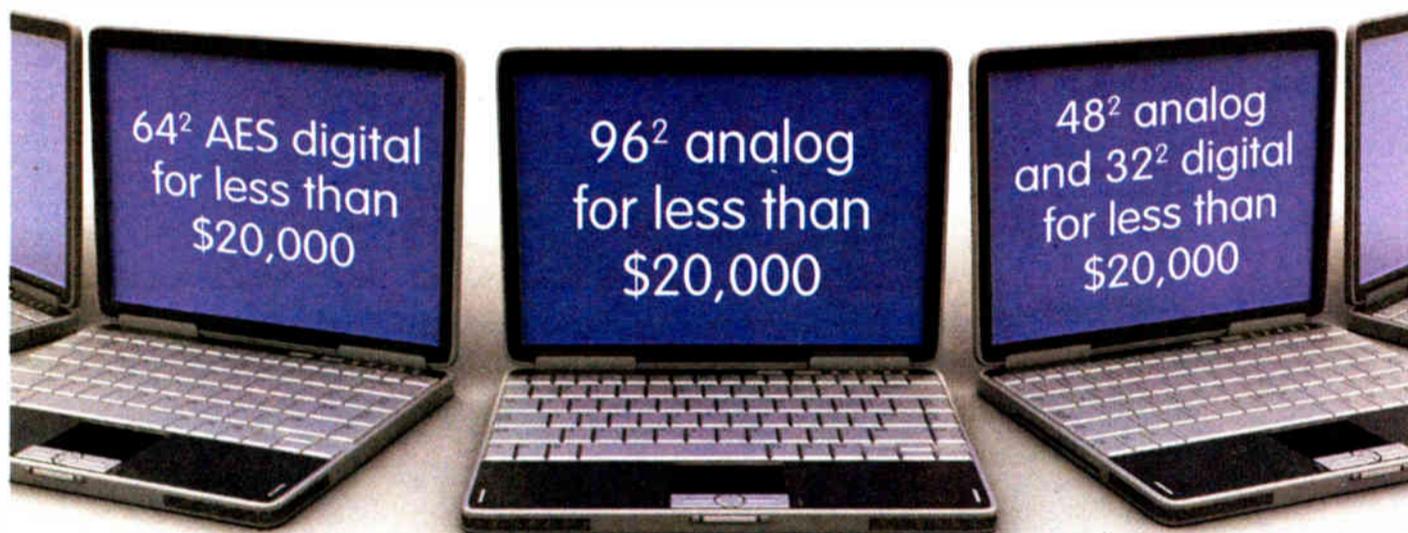
"We are the LPI for EAS in the Bangor region, so part of our mission is to get emergency information out. This goes one step further to ensure one of the three broadcasters will have broadcast facilities operating to maintain public communication," Maxwell said.

The level of cooperation needed to reach such an arrangement is encouraging, said Clear Channel's Julius, who championed the idea from the outset when discussions began last fall.

"We are all competitors in the day-to-day battle for revenue. However, no one gave a second thought to signing the agreement. We welcome any other broadcasters to participate," Julius said.

The Maine Emergency Management Agency supports the agreement, as does Maine Governor Baldacci, a Democrat, and the two U.S. senators representing Maine, Republicans Susan Collins and Olympia Snowe, according to Julius. 

96² < \$20K



The new math of audio routing

With Logitek, you don't have to spend a fortune to move audio signals around your facility. Our Audio Engine router does it all—X-Y routing, mixing, gain control, EQ, compression, limiting—for a great price.

Learn more about the Audio Engine and Logitek's line of console control surfaces at www.logitekaudio.com.


Logitek
 Console Router Systems

Logitek Electronic Systems, Inc.
 713.664.4470
info@logitekaudio.com

5622 Edgemoor • Houston, TX 77081
 1.800.231.5870
www.logitekaudio.com

© 2006 Logitek Electronic Systems, Inc.

Impossible Remote?
Nah, You've Got ACCESS.



Meet Some Real-World Super Heroes...

Mark Ericson and the WOKQ morning team, along with Steve Vanni from Technet, recently used ACCESS to deliver a three hour remote from the top of Mt. Washington. For mere mortals, this would have been an impossible task. The height, the weather, the distance – all conspired to prevent a successful remote. But because they carried ACCESS, they became real-world super heroes.

ACCESS delivers mono or stereo over DSL, Cable, Wi-Fi, 3G cellular, satellite, POTS (yep, ACCESS is a full featured POTS codec and works seamlessly with Matrix, Vector and Bluebox)—plus some services you may not have even heard of. Given the challenges of the public Internet, it's no small boast to say that ACCESS will perform in real time over most available IP connections.

Want to learn more? Contact Comrex to get a FREE booklet that explains ACCESS BRIC technology and how it differs from traditional IP codecs. Become a real-world super hero!



**ACCESS
PORTABLE
NOW
SHIPPING!**
www.comrex.com

Read more stories of real-world super heroes at comrex.com.

- Springfield, MO: Miraculous ACCESS
- San Diego, CA: Somewhere...Beyond the Sea!
- Boston, MA: Zakk Wylde Concert—Ozzie Osborne's Guitarist Plays for WAAF at a Listener's Workplace!
- Lynn, MA: Toys for Tots—Remote on the Move
- Boston, MA: Car Dealerships at Christmas. ACCESS Delivers.
- UK: ACCESS on VSAT—A Clever Solution From Our Friends in the UK
- Cancun: Sunrise Over IP
- Breckton, MA: Minuteman Communications Always Gets Their Man... um... I Mean, Their Remote
- Alpena Tawas City, MI: Are You Tired of STL-Over-the-Public-Internet Stories Yet?
- Dallas: The Ticket
- Amarillo, TX: You Gotta Do What You Gotta Do
- Asia: Radio Free Asia - Live From the Himalayas
- Way Up In The Sky- Live From 37,000 Feet

Are YOU a real-world super hero? Log on to comrex.com and let us know how you've used ACCESS to save the day at an impossible remote!

Toll Free: 800-237-1776 • www.comrex.com • e-mail: info@comrex.com
19 Pine Road, Devens, MA 01434 USA • Tel: 978-784-1776 • Fax: 978-784-1717

Put Comrex On The Line.
COMREX

NAB

► Continued from page 3

fuel, water and emergency provisions.

Fuel procured by Mississippi broadcasters was confiscated following Hurricane Katrina, inhibiting efforts by stations, dependent on generators for electricity, to stay on the air, she said.

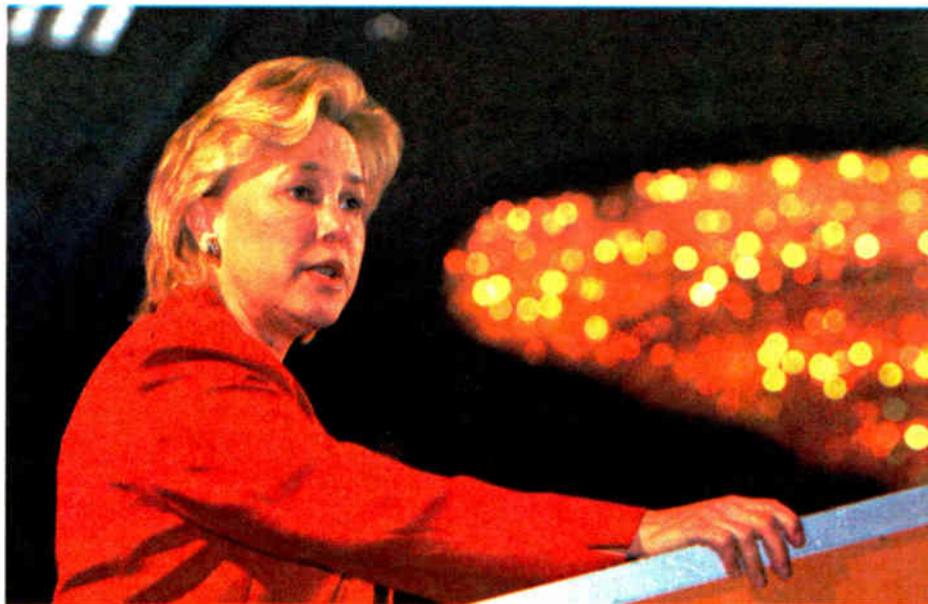
The Landrieu-Stevens legislation also directs FEMA to expedite access to the disaster area by broadcast engineers to restore transmitters and other key facilities and infrastructure.

To better protect critical-to-air facilities, the bill establishes a \$10 million Broadcast Disaster Preparedness Matching Grant Program. The money could be used to protect, upgrade or enhance facilities and infrastructure.

Landrieu thanked broadcasters for helping victims on the Gulf Coast after Katrina and Rita devastated the area in 2005.

"In the chaos, the broadcasters, who themselves had lost their homes, kept doing their job. Police and fire personnel will tell you that if it weren't for the broadcasters, they couldn't have done their job."

"Many of you have been down (here) and put your own boots on, or sent your people down. The story is not done. We have to continue to tell people what happened."



Sen. Mary Landrieu, D-La.

NBC, TELEMUNDO REJOIN NAB

After a seven-year absence, NBC Universal and Telemundo came back into NAB membership. Neither group has radio stations; NBC has 10 owned-and-operated television stations while Telemundo has 16 O&Os and one independent Spanish-language station.

Like other broadcast groups that left the association since the late '90s, NBC quit over disagreements over NAB's lobbying on media ownership rules. Telemundo

dropped out of the organization in 2002 when NBC Universal acquired it.

ABC, Univision and ION Media (formerly Paxon Communications) have come back into the NAB fold; Fox and CBS remain out of NAB membership.

COPPS: SAT MERGER 'BIG CLIMB'

At the FCC Breakfast, NAB President/CEO David Rehr asked commissioners to explain the process to handle the merger now that the satellite companies have filed a plan with the agency.

Tate said her mind is open and she's reading everything she can about the issue. "It's important. It's a big decision."

IMUS A LIABILITY?

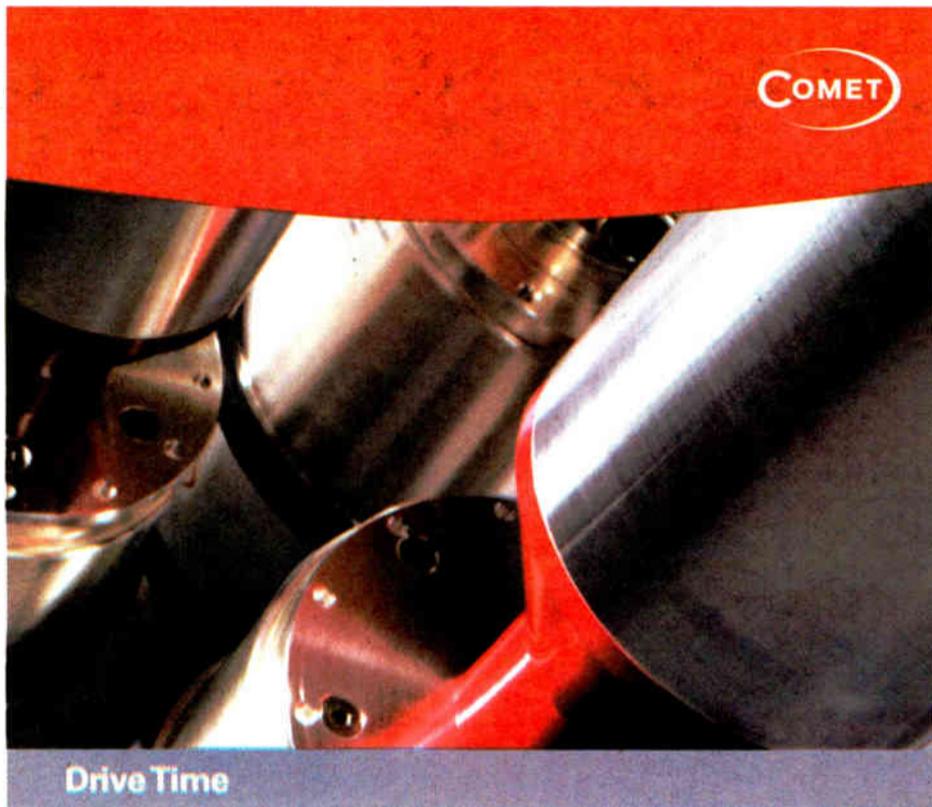
The aftermath of the Don Imus situation and its effect on radio was a topic of conversation.

Commissioner Copps brought up the topic of the shock jock, recently fired from WFAN in New York for on-air racist remarks, when he, Tate and Rehr discussed how to get more women and minorities into station management.

Copps said, "Diversity is not a problem to be overcome. It's an opportunity." The diversity of the U.S. population is not reflected in station ownership, he said. About a third of the U.S. population is minority, however only about 2 percent of broadcast stations are owned by people of color, and the number of women managers is in the low double-digits, he said.

"And you get something like Don Imus. This is really serious; it's not business as usual. It's got to be different." The country must move forward, Copps concluded.

RW asked some attendees whether they believe Imus eventually will go to one of the satellite radio companies. Nearly all said that with the possible merger between the satellite companies, neither would want the publicity. Some attendees believe Imus might try to wait things out and resurface in a year or so and cited Opie and Anthony's two-year hiatus before coming to XM as an example.



COMET, the world leader for high voltage vacuum capacitors, leads the next wave of technological innovation with the Integrated Drive for the broadcast industry.

The ideal solution for today's transmitters, antenna tuning, phasing and coupling units; the Integrated Drive is a multi-functional product for the accurate alignment of motors, couplers and capacitors eliminating the need to source and integrate components from multiple suppliers.

In addition to ensuring 100% accuracy, the Integrated Drive dramatically reduces R&D, procurement and assembly lead times. The once tedious and error-prone assembly of components is now replaced with a standardized, easy-to-install subsystem.

Our single source solution is easily integrated into new and existing applications.

Contact us today for more information!

The X-parts for security, inspection, electronics and communication

COMET North America, Inc., 76 Progress Drive, Stamford, CT 06902
T +1 203 969 2161, F +1 203 969 2162, usa@comet.ch, www.comet.ch



David Rehr with Commissioners Deborah Tate and Michael Copps.

Commissioner Michael Copps said that Chairman Kevin Martin has indicated "it would be a big climb for him, and it would be a steep climb for me, too." Yet Copps added that he would not pre-judge the merger since it's before the commission.

Copps noted there seems to be a discrepancy between NAB's argument that stations don't compete with satellite radio when it comes to this merger and the argument that stations *do* compete with satellite radio when it comes to seeking media ownership rule changes. NAB has said over-the-air radio and satellite radio are *not* substitutes for each other because stations are local and satellite is national; in filings on media ownership, NAB and the top commercial groups list satellite among other technologies with which terrestrial radio competes in the car.

Both Copps and Commissioner Deborah Tate said the Department of Justice has asked the satellite companies for more information, which may slow the review process a bit, according to Copps.

IBOC DETAILS DUE: PUBLIC SERVICE HANGS IN AIR

FCC Audio Division Chief Peter Doyle said the commission is close to releasing details of the IBOC rules recently passed by commissioners. He spoke in a session about changes in FCC rules due to go into effect or that have become effective recently.

Commissioners want to determine whether or if digital stations should have additional public interest obligations to meet. Doyle said, "It's clear the issues the commission is facing are similar to that of DTV. (And) key is the role of subscription services. The FCC is faced with whether or not to put a limit on subscription services and how to preserve free over-the-air service."

One difference, he noted, is that Congress authorized ancillary services for DTV; however the situation is not the same for radio, since radio is using the same spectrum to transmit the digital signal.

See NAB, page 10 ►

“My Number One Codec Rental is Zephyr Xstream”

-Steve Kirsch, President Silver Lake Audio



Rack 'em and stack 'em! The Silver Lake Audio Crew pictured from left to right: Steve Kirsch, Ken Stiver, Kirby Miovac and Jay Shoemaker

“When ISDN equipment rentals began in the early 1990s, we started with an equal number of different companies’ codecs. Today, Silver Lake has over 100 Zephyrs in stock, ten times more than any other brand.” says Steve Kirsch, owner of Silver Lake Audio.

The reasons should be obvious. Reliability, ease of use, compatibility, great support.

Telos: The Best Way To Hear From There.

And there. And there. And there.

Telos
AUDIO | NETWORKS
www.telos-systems.com

The Telos Logo and Zephyr Xstream are registered trademarks of TLS Corporation © 2007 TLS Corporation.
Silver Lake Audio is a registered trademark of Silver Lake Audio™

WorldRadioHistory

NAB

► Continued from page 8

He brought up spectrum fees and said the agency needs to determine whether "some kind of fee system would be appropriate" to impose.

NAB Senior Vice President of Science & Technology Lynn Claudy said subscription services are part of the conditional access concept, a new feature of HD Radio expected to be available for broadcasters by fall. However, he said, "until you've got a critical mass and a real business going, no one thinks of new features. Manufacturers especially have to have confidence in a standard before spending on product lines." He said his comments were a reminder to the FCC.

Doyle replied, "We hear your words," and he complimented NAB and the NRSC for its work on IBOC.

MANDATED IBOC?

Also during this session, an attendee said IBOC adoption seems to be slow and asked whether the commission might mandate it.

Doyle said radio's transition differs from TV in that "broadcasters have gotten out in front" with almost 900 stations broadcasting in analog and digital out of about 1,300 stations authorized to do so.

"The basic decision to go forward with digital terrestrial radio has been done," said Doyle.

PRE-SUNRISE, POST-SUNSET UPDATE

In the same session, attorney Dawn Sciarrino of Sciarrino and Associates asked if "we'd see another round" of AM stations affected by changes in the FCC's pre-sunrise/post-sunset power levels.

Doyle said those are affected by Daylight Saving Time. "The FCC believes this is an area where we need to clean up our records." Many of those records are old and on paper, he said.

The Audio Division Chief apologized for confusion caused by its recent attempt to revise the PSRA/PSSA power levels in which several stations saw their allowed levels drop to a few watts to protect foreign stations. The agency is examining its software and database on this issue and will get something out "when we believe we can get to the correct power levels for stations," he said.

CLEAR CHANNEL, GOOGLE TO DRIVE AD EXPANSION

More than 675 Clear Channel AM/FM stations will carry a guaranteed portion of 30-second advertising from Google Audio Ads under a multiyear agreement.



MPEG surround was demoed in a car in the Telos/Omnia/Axia booth.

Financial terms were not disclosed.

Under the deal, Google Audio Ads will have national distribution to reach specific audiences at specific times in targeted regions. Google will focus on bringing to radio those advertisers who traditionally run online ads while Clear Channel will focus on its most lucrative advertiser relationships and on those clients who seek specialized packages.

Clear Channel said the deal opens up an additional sales channel and provides supplemental revenue by making its inventory available to advertisers who have not used radio.

The companies have an existing agreement whereby Google provides text ads for Clear Channel station Web sites.

As part of the Google Audio Ads agreement, Clear Channel also will implement compatibility for AdSense for Audio with Clear Channel's system that helps sales managers and sellers dynamically evaluate and price ad inventory.

MPEG SURROUND NOW ON WZLX

CBS Radio's WZLX(FM), Boston is transmitting 5.1 surround sound on the station's main HD Radio channel.

At NAB last year the proponents announced the plan and were hoping to air the entire WZLX rock format in surround by last summer; however the MPEG Surround standard was recently finalized.

The WZLX service is based on MPEG surround technology provided by Fraunhofer and its partners Agere Systems, Coding Technologies and Philips. The partners say MPEG Surround operates on top of any core audio codec such as AAC, HE-AAC and MPEG-1 Layer II and is backward-compatible to stereo. In combination with HE-AAC, MPEG Surround can carry a five- or seven-channel surround program at a total bit rate of 64 kilobits-per-second or less, according to the proponents.

Fraunhofer says the standard works with other digital radio systems besides HD Radio. MPEG is one of four surround sound systems examined by the National Radio Systems Committee in its recently released educational document (nrscstandards.org). The others are from SRS Labs, Neural Audio and Dolby.

Denny Sanders, managing director of Telos Systems, said the Axia Audio division provided the integrated digital multi-channel studio infrastructure for WZLX.

Boston area receiver manufacturers Bose, Boston Acoustics and Tivoli Audio are monitoring and evaluating the WZLX broadcasts on prototype receivers provided by Fraunhofer, according to Sanders.

LINEAR ACOUSTIC NOW IN TELOS GROUP

Linear Acoustic became a member of the Telos Group, joining Axia, Omnia and Telos as the fourth member of the high-technology partnership. Terms of the merger were not disclosed.

Linear Acoustic offers solutions for distributing and processing multichannel TV sound. "We have spent five years developing successful digital audio processors and infrastructure products for the international television community" said President Tim Carroll. "There are clear and exciting synergies with what we are doing and their capabilities."

"Tim and I have known each for a number of years, and we respect his company's work," said Omnia President Frank Foti. "We look forward with eager anticipation to the opportunities offered by our new partnership."

108,000+ ATTENDEES IN VEGAS?

NAB says registered attendance was up about 3 percent compared to NAB2006. Some attendees we spoke with didn't believe the figures based on their experience in the exhibit halls.

The trade group said 108,232 attendees registered for NAB2007; that compares to 105,046 for last year. International attendance was roughly a quarter of the total, at 26,824.

Final numbers typically vary after final registrants arrive and duplicates are eliminated.

Next year's schedule: Conference April 12-17, exhibits April 14-17, 2008.

Next issue: HD Radio news from the show and Radio World "Cool Stuff" Award winners.

Boarding Pass to a new world

Exacting specs. Outstanding quality. Absolute reliability. Total connectivity.

The new PCIe bus PCX and VX sound cards are not only built with Digigram's expertise and commitment to quality, they are also network-ready, designed to blaze new routes for digital radio infrastructures. Thanks to Visibu[®], the network audio operating system by Digigram, you're connected to the world of distributed IP audio. Combined with Digigram's legendary audio processing and encoding, these sleek pieces of technology will take you to all the right places...

The future has arrived Now boarding

visibu ready
PCI EXPRESS

www.digigram.com

We hear the impossible

Wireless Broadband Internet Remotes



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

- Christian Vang
Chief Engineer
Clear Channel St. Louis



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

- Grady Jeffreys,
Technical Manager,
Mackay Communications



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

- Mike Rabey
Chief Engineer
Entercom Indianapolis

100%
*COMREX
POTS
Compatible



Get Free demo codecs delivered to your door Now!!

Tieline 
www.tieline.com

800-750-7950

*Compatible with Comrex Matrix, Blue, Vector POTS Codecs Comrex is a registered trademark of Comrex corporation

GUEST COMMENTARY

Shortwave Broadcasters Test DRM

First Sustained Trans-Atlantic DRM Reception Heard at Gathering

by Kim Andrew Elliott

KULPSVILLE, Pa. In a time of local crisis, the Internet can fail locally due to overuse or sabotage. In a time of global crisis it can fail globally for the same reasons.

The world must return to shortwave for information.

We shortwave listeners who are experimenting with Digital Radio Mondiale, the technology for digital transmission below 30 MHz, want to continue to help push DRM to its greatest capability. However, because DRM shortwave probably will be easier to jam than analog shortwave, we continue to need analog shortwave.

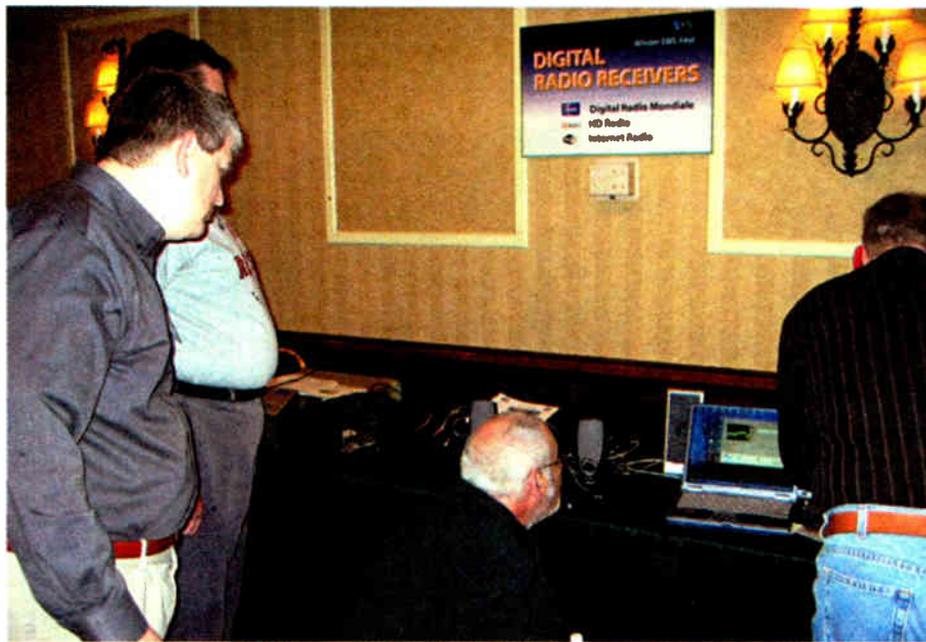
The Winter SWL Fest, held this year in March just north of Philadelphia, is a showcase for the new media of international broadcasting. The fest is organized by the North American Shortwave Association and claims to be the largest gathering in the country of shortwave and radio spectrum listeners — including long-wave, medium-wave, shortwave (broadcast, utilities, pirates), VHF/UHF, FM, scanners, television and satellites.

I organize the DRM listening exhibit for the Fest while John Figliozzi and Richard Cuff are the overall organizers of the SWL Fest.

This year's exhibits featured DRM-capable receivers picking up live DRM transmissions. Other forms of digital radio also were demoed, including Wi-Fi Internet radio and IBOC.

No standalone receiver was available in the North American market in time for this year's DRM display, so instead Fest organizers used the receive sides of two amateur radio transceivers, modified to provide the necessary 12 kHz IF output.

We also had a U.S.-manufactured Ten-Tec RX-320D "black box" HF receiver, which is "DRM ready" in that it already has a 12 kHz IF output. All three units were connected to personal computers with DRM software installed. We



Attendees check out the DRM receive setup.

installed a large double antenna on the roof of the hotel for our event.

In addition to the DRM transmissions already in regular operation, we arranged for special transmissions. We were especially interested in attempting trans-Atlantic DRM reception, though we realized that transoceanic distances are probably beyond the expected capabilities of DRM shortwave.

Vatican Radio. Vatican Radio added special transmissions at 1300–1400 UTC on 15460 kHz. [Times are given in

"Coordinated Universal Time." For North America, hours are subtracted to convert to local; for example subtract four hours from UTC to arrive at Eastern Daylight time.]

On March 9 at 1300 UTC, we were able to see the data ID for Vatican Radio on the computer screen, but we could not hear the audio.

After a telephone conversation with

HCJB (Ecuador). HCJB transmitted from Quito, Ecuador, to the event using only four kilowatts. At first, audio reception was usually unsuccessful. After frequency changes, to 15200 kHz during the day and 9800 kHz at night, and lowering the bitrate, DRM audio reception was consistent.

However, the bitrate was about 9.8 kilobits per second, producing a telephone-grade audio. But given the modest power output, the DRM reception from HCJB was impressive.

TDF (France). We monitored the TDF DRM transmissions of Radio France International from Montsinéry, French Guiana, from 1200 to 2000 on 17875 kHz. Audio reception was usually successful. The TDF relay of Radio Netherlands on 15425 at 2200–2300 UTC was flawless.

Radio Canada International. RCI transmitted various programs from its Sackville, New Brunswick, site during the day on 9800 kHz. These were usually audible, although there were periods when the audio dropped out.

Assessment of DRM reception

Transmissions from Sackville's northerly location sometimes suffer from poor propagation. The RCI relay of China Radio International at 0100–0200 UTC on 6080 kHz was completely audible.

Our DRM listening was mostly successful. However, audio dropped out on enough occasions that the non-enthusiast shortwave listener likely would be frustrated.

Analog shortwave will always be needed as the failsafe for international communication.

Careful frequency management will be necessary to make DRM work on shortwave circuits over medium to long distances. This might be aided through the use of remote monitoring stations that automatically receive the DRM transmission and send signal information back to the transmitter via the Internet.

If the audio signal drops out, the transmitter would adjust the QAM and/or bitrate levels until audio is achieved. A frequency change might even be implemented, automatically triggering a frequency change in a "smart" receiver, or at least placing a text message on the receiver display announcing that a frequency change is imminent.

IBOC

We also listened to HD Radios that were part of the exhibit; when the station dropped below a certain signal level the radio would blend to analog, thus retaining the station's audio. This is an attractive feature.

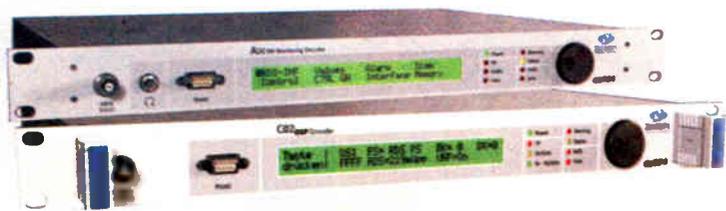
If the DRM transmitter and receiver can automatically switch to analog under the worst reception conditions, this might maintain audio where it would otherwise be lost.

Will DRM be useful for long-haul
See SHORTWAVE, page 14 ►

ViaRadio Corporation
info@viaradio.com
www.viaradio.com
(321) 242-0001

Specializing in RDS Solutions

viaRadio
Radio Data Systems



C02 dsp RDS Encoder
A20 FM Monitoring Decoder
Emergency Warning Receiver
Emergency & Community Messaging System
To see these and more stop to see 2wcom
booth 8K2-07
at BroadcastAsia2007

BroadcastAsia2007
The 13th International Digital Multimedia & Entertainment Technology Exhibition & Conference

2wcom
Wireless-World-Communication
www.2wcom.com



*C'mon babe, there's enough room
in the rack for both of us.*

OMNIA ONE: Small Box. Big Attitude.

Omnia
A Telos Company
OmniaAudio.com

Omnia, ONE are registered trademarks of TLS Corp. ©2007 All Rights Reserved.

World Radio History

Shortwave

► Continued from page 12
shortwave? The sole remaining advantage of shortwave in this modern multimedia age is that shortwave can deliver a signal under adverse conditions.

Shortwave can overcome jamming better than can satellites, and better than Web sites can circumvent blockages. Shortwave can deliver a signal into a distant target country when a nearby relay is not available.

DRM is more sensitive to reductions in signal strength, and to the presence of interference. As such, DRM could eliminate the last remaining advantage of shortwave. Analog shortwave will always be needed as the failsafe for international

communication.

Perhaps DRM makes better sense for local and regional applications, such as long-wave, medium-wave and short-hop shortwave broadcasts. Radio New Zealand International is an example, with its feeder transmissions to radio stations in the Pacific region.

Radio Canada International might experiment with a transmitter in southern Ontario, using 2 or 3 MHz bands at night, and 5 or 6 MHz by day, for DRM early adopters in North America. These lower shortwave frequencies, at those times, do not propagate well over especially long distances. But they do provide more stable day-to-day propagation over shorter paths.

DRM works better in stable propagation conditions. Radio Canada International is in a unique position,

because it can place such shortwave transmitters close to large populations areas in the United States. RCI could use those transmitters for their own broadcasts, and for lease or barter to other international stations.

Internet radio

Fest participants also demoed two Wi-Fi Internet radios: the Slim Devices Squeezebox and the Energy Wi-Fi Internet Radio. The Squeezebox would not work with the hotel's wireless system; however the AE unit worked well.

On the AE, we listened to Vatican Radio and to the identical station via DRM shortwave simultaneously.

Listeners I spoke with at the Fest were impressed with how easily the AE could receive audio streams from VOA New Now, BBC World Service and the domes-

tic BBC channels, Radio Prague and many of the thousands of other audio stations available through its menu.

Now that Internet radio can be listened to on a device that looks and operates like a standard radio — and is portable at least within a short range — it may have potential as a replacement for shortwave radio for the reception of foreign broadcasts. These Internet devices could be usable in cars, in locations where "city-wide" Wi-Fi will be available.

To be sure, Internet radio requires a broadband connection, in a country where your favorite station is not blocked by the authorities. But a person who can afford the first generation of DRM receivers is more likely than the general population to afford a broadband connection. And if a station is blocked via the Internet, chances are its DRM signal would also be jammed.

Dr. Kim Andrew Elliott is an audience research analyst at the International Broadcasting Bureau. Views expressed are his own.

RW welcomes other points of view to radioworld@imaspub.com.

The best use the best.™

9000 stations 100 countries

Welcome to the World's largest broadcast software company



RCS
Sound Software

Visit us at www.rcsworks.com or www.prophetsys.com Email us at best@rcsworks.com

© Copyright 2007, RCS, Inc. All Rights Reserved. RCS, RCS Sound Software, the featured product names and their logos are registered trademarks, or trademarks, of RCS, Inc.

NEWS WATCH

Howard Enstrom Dies

INVERNESS, Fla. Howard Enstrom, known by some as the father of FM translator service died at 84 in April, according to his wife, Grace. The couple lived in Inverness, Fla.

As a consultant to Tepco, he sent mailings to every FM station in the country: "The pitch was this: If you locate a translator in the center of a small community, you can be heard just as well as a 100-kilowatt station 50 miles away," he said in a 2004 interview in RW.

For eight years, he published a newsletter called Signal Source; for three years, he wrote the Low-Power Lowdown column for Radio World.

Enstrom was born in 1922 in Chicago; during the Depression, as a teen, he built receivers and transmitters using discarded radios; he earned his first amateur license at age 15.

After World War II he worked for Chicago's Moody Bible Institute as assistant technical director for WMBI, did engineering work for AMs WGSB and WGN and built WGSB, a five-tower facility with day and night directional patterns. At WGN, as assistant chief, he managed a staff of 27 studio engineers.

But it is for his work in translators that many knew him best.

"As a broadcast service," he recalled in 2004, "initially low-power FM translators were 'pooh-pooed' by full-power station owners and the NAB. Many missed a fact: a low-power FM translator may deliver to a community and surrounding area stronger signal field than a distant Class C 100 kW FM station. When this was realized, full-power FMs were alarmed and concerned. Thus the commission had to adopt special service contour protection rules. I was part of such proceedings in filing petitions for rule making."

NEWSWATCH

News Roundup

IBIQUITY DIGITAL unveiled an HD Radio rebate program aimed at parents and graduating seniors, "Moms, Dads and Grads." The \$40 rebate applies to most HD Radio receivers and runs to July 3. The rebate certificate is at www.hdradio.com/rebate.

BEST BUY is expanding its HD Radio offerings to all of its 832 stores; it becomes the first national retailer to make HD-R available through its entire national chain. HD Radio also will now have in-store interactive listening stations. Best Buy is carrying the JVC HD-W10 Mobile HD Radio receiver and the Visteon Zoom. The HD Radio line-up will expand to home products and more mobile offerings this year.

The retailer's broadened HD Radio product emphasis is also supported by advertising in its weekly newspaper inserts and a point-of-sale program featuring in-store branding and product displays.

CLEAR CHANNEL will sell its Television Group to a private equity firm, Providence Equity Partners, for \$1.2 billion. The sale includes 56 television stations in 24 markets, their Web sites, the Clear Channel Television Operations Center and other assets; it should close in the fall or early winter.

AS FOR RADIO: Clear Channel added this radio update in April: "Clear Channel previously announced that it was also attempting to divest 448 radio stations in 88 markets. To date the company has entered definitive agreements to sell 161 radio stations in 34 markets for a total consideration of approximately \$331 million. The company expects these transactions to close during the second half of 2007. The company estimates net proceeds after-tax and after customary transaction costs for these 161 stations will be approximately \$300 million. The company continues to pursue the divestiture of 287 radio stations in 54 markets."

KEVIN STERNE FUND: The SBE wanted to show its support of Kevin Sterne, the engineer at the Virginia Tech station WUVT(FM) in Blacksburg who was injured in the recent shootings on that campus. "We wanted to show our support and introduce him to the large group of broadcast engineers that work to support each other," said SBE Treasurer Barry Thomas.

Clear Channel and Harris are trying to help Sterne with his five-year effort to move the station transmitter and antenna off of a dorm rooftop to a nearby mountain. They planned to donate a 3.5 kW transmitter to WUVT. Sterne and his family have asked that recognitions and donations be made to the station. Donations should be noted as being for "Kevin" or "transmitter." Mail donations and items to: WUVT, Att: Kevin -OR- Transmitter (your choice), 350 Squires Student Center, Blacksburg, VA 24061-0506.

X-DIGITAL SYSTEMS has acquired certain assets of StarGuide Digital Networks from DG FastChannel Inc. It also obtains a patent license for certain StarGuide patents. Financial details

weren't disclosed. X-Digital President/CEO Ian Lerner said by acquiring the license to the current platform, his company plans to integrate StarGuide technology into the XDS-PRO line of receivers. X-Digital also is telling users of StarGuide II and III receivers that they can transition to XDS-PRO receivers, which have features such as copy splitting, targeted ad insertion, store/forward capacity to accommodate multiple time zones, and Web-based network management.

AFTRA applauded a decision by the Copyright Royalty Board to deny pleas from Webcasters for another hearing on

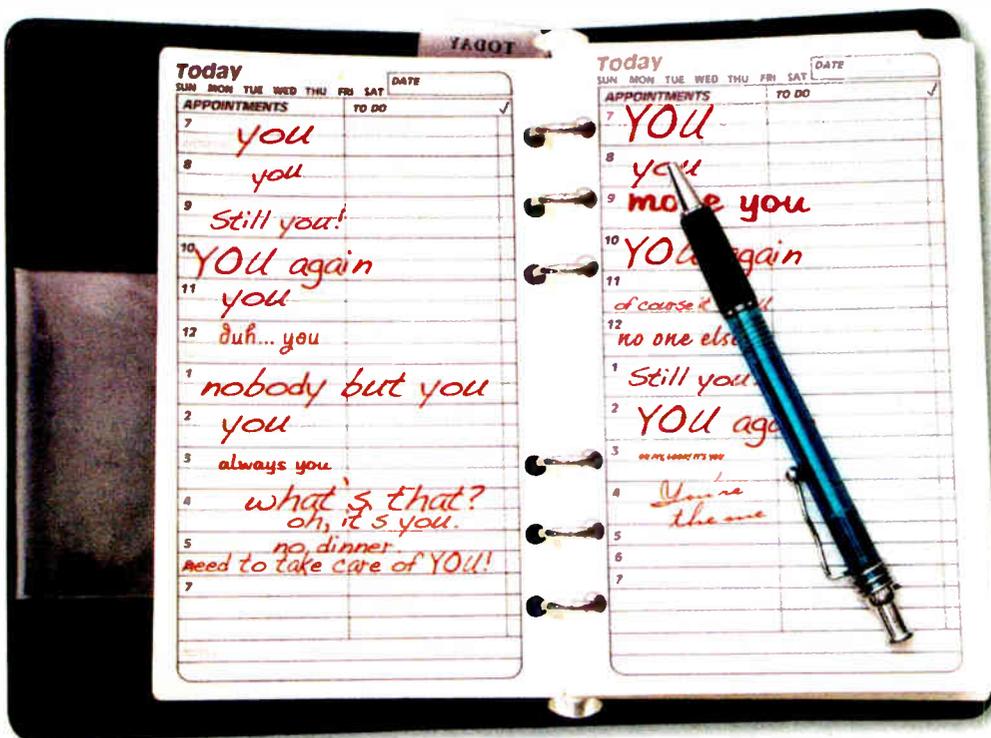
new payments to artists for use of recordings online. The ruling upholds royalties that Webcasters have to pay artists and labels in the period 2006-2010. Radio groups that stream, particularly public stations, are opposed to the higher fees.

MOBILE: Pursuing video and data outlets for radio broadcasters, Harris signed a strategic alliance with Swedish company Factum Electronics AB. It said the deal will allow Harris DMB and DAB solutions to broadcasters that want to offer digital audio, mobile video and data services over a single platform to consumer handheld devices.

TARGETSPOT won funding from several organizations including CBS Radio, which helped create it. The company calls itself an ad serving technology and marketplace for advertisers and Internet broadcasters. Co-founder Doug Perlson was announced as CEO; he is former COO of Seevast, which had been Kanoodle, and was an executive at About.com.

BIRDS: NAB and several allies said the FCC should not adopt regulations in the bird/tower debate but take other steps including fostering negotiations between infrastructure groups and avian environmental groups.

Total Radio. Guaranteed.



No appointment necessary.

BE is always there for you.

Innovative technologies are only part of BE's story.

With the values of a company founded in 1959 and the responsiveness of a startup, BE has been rolling out new products, adding staff and expanding our factory to continue to earn your confidence.

Our mission-critical solutions for analog and HD Radio go the distance for you with unparalleled customer service and product reliability. BE products—AudioVAULT, The Radio Experience, Big Pipe, the FXi FM+HD Radio exciter and more—offer stations a competitive edge for greater listenership and revenue.

That's Total Radio. Guaranteed.



Broadcast Electronics, Inc. • 4100 North 24th Street, Quincy, Illinois 62305
Telephone: (217) 224-9600 • bdcast@bdcast.com • www.bdcast.com

Broadcast Electronics, the BE logo, and AudioVAULT are registered trademarks. The Radio Experience, Big Pipe and Total Radio are trademarks, and MessengerVault is a service mark of Broadcast Electronics Inc. HD Radio is a trademark of Iquity Digital Corporation.

NAB 2007



Photo by Scott Fybush

Clear Channel Radio's Engineers of the Year. The company named recipients in three market sizes for each of its major geographic regions. From left: John Rigg, Wilson Welch, Mike Irby, Greg Gade, Brett Gilbert, Mike Fleming, Mike Camarato, Gerry Westerberg and Rich Chalfant



Photo ©NAB

Katharine McPhee of 'American Idol' sings the national anthem at the show opening.



Photo by Jim Peck

Party goes dug into a cake noting Henry Engineering's 25th anniversary.



Photo by Jim Peck

Ibiquity had a suite and exhibited mobile, desktop and component HD Radio receivers.

Mike Irby, one of Clear Channel's nine Radio Engineers of the Year, ponders his award.



Photo by Scott Fybush

DSI's Herb Squire demonstrates the company's new RF-IPMax 5.8 GHz digital transmission system for program and data transport.



Photo by Bob Kovacs

Paul Dengate, left, of Logitek in Australia demonstrates the company's Remora radio console for Rob Carpenter of Dillingham City Schools.



Photo by Scott Fybush

MUSICAM USA

The World Leader in IP Codecs

Introducing our next generation of IP Audio Codecs

featuring

Suprema

IP DUAL AUDIO CODEC

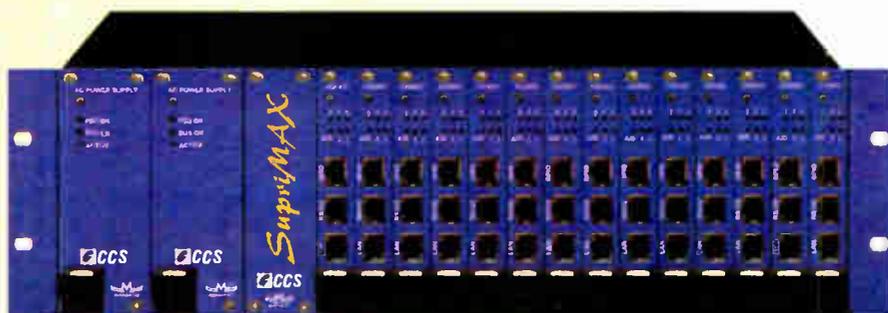


- Includes LAN, ISDN U & S/T, and X.21 interfaces standard
- Auto backup to ISDN from IP or X.21
- Built-In Web server for control and monitor from remote locations
- Includes SIP protocol over IP, MPEG2, MPEG3, MP2/4 AAC, apt-X, G.722, G.711 & PCM
- Portable and Decoder Only versions also available

SupriMAX

MULTIPLE IP CODEC

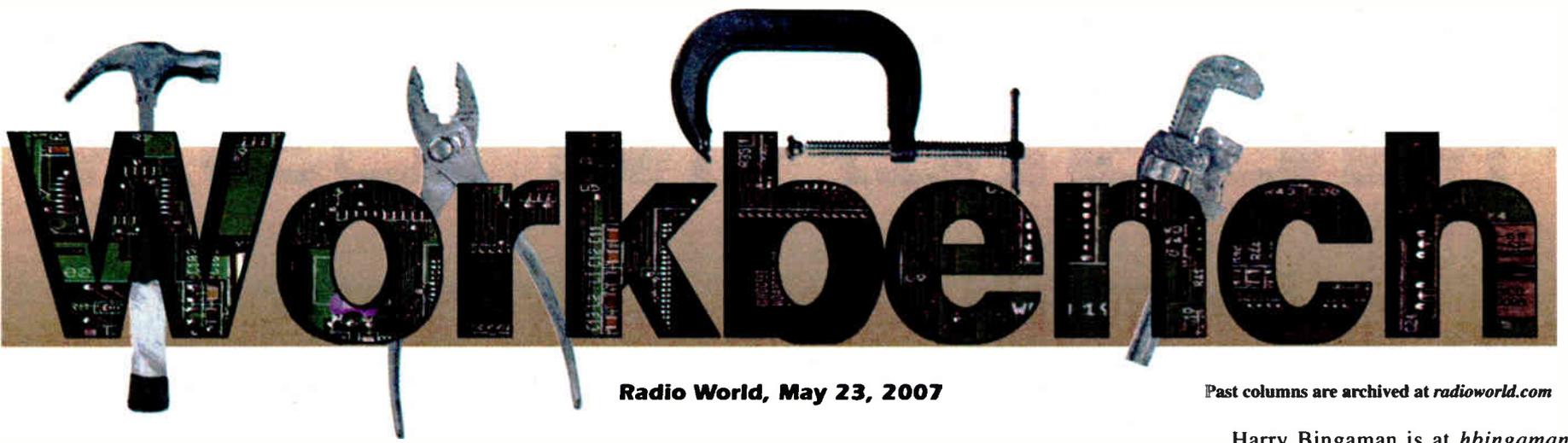
- Up to 14 full-featured IP codecs housed in one unit
- Each module is hot-swappable
- Ideal for multicast applications
- Redundant Power Supplies
- Comes fully loaded with every available algorithm included
- Monitor large systems with SNMP management



Visit our website to view the MUSICAM USA Product Portfolio and contact MUSICAM USA, the IP technology leader, for more information about how easily our products can help you master the "audio over IP" direction for your station(s). We are already shipping products to major groups and small stations alike. Check our references and let's go!



670 North Beers Street, Bldg. #4
Holmdel, NJ 07733 USA
phone: 732-739-5600 - fax: 732-739-1818
email: sales@musicamusa.com
web: www.musicamusa.com



Radio World, May 23, 2007

Past columns are archived at radioworld.com

Harry Bingaman is at hbingaman@wkok.com.

Critters Invade Transmitter Buildings

by John Bisset

Dave Ernewein writes that he has enjoyed *Workbench* for years and looks forward to learning a new trick every now and then. He serves as a contract engineer for a number of facilities and has seen some "very familiar" things depicted in this column.

Among reader favorites are photos of odd things found at transmitter sites. Dave included pictures of a site where a Harris DAX-5 was not sealed properly when it was installed.

Opening up the transmitter for some routine maintenance, Dave met two snakes that had crawled up inside the lower portion of the transmitter. Fortunately, nothing got shorted out in Fig. 1. But in the second image, it looks like the snake has taken a mouthful of resistors.

Make sure you seal cable entry points to keep snakes and rodents out of your transmitter. This can be as simple as stuffing steel wool in the cable openings.

Long-time readers will remember the picture of a bird's claws stuck to a cable feeding an AM tower with a horrendous base impedance. Dave was working at a station with his son Jeff shortly after that photo hit the pages of RW. Jeff came running into the transmitter building holding a smoldering squirrel by the tail!

His son saw the squirrel running across a power line; when it touched the transformer, the squirrel erupted in a fireball and ended up with a 2 inch hole in it. It would have made an interesting video.

Like many of us, Dave started in broadcasting as an announcer, then migrated to engineering. He finds himself working as a contract engineer because, as he puts it, "It's the only way you can receive decent compensation for your

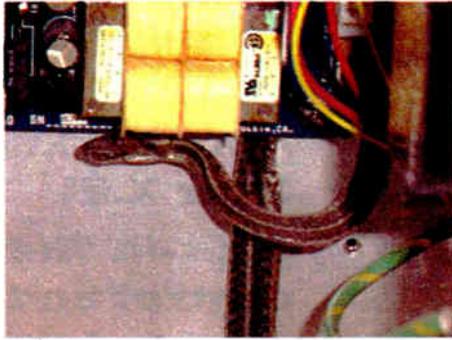


Fig. 1: Warm transmitter components may attract snakes.

services."

Though he works in the Minneapolis area, Dave is wrapping up a total rebuild to a hurricane-destroyed station in Florida. Like his dad, Jeff has paid his dues in broadcasting, now handling the engineering operations for a TV ENG/SAT truck. An avid photographer, Jeff improved the resolution of the snake pictures shown in Figs. 1 and 2. Neat to see that his interest in critters around the transmitter site hasn't waned.

Dave Ernewein can be reached at dnecompanies@msn.com.

Harry Bingaman, director of engineering for Sunbury Broadcasting in Sunbury, Pa., cautions engineers to check attic crawl spaces in transmitter buildings this time of year. You might be surprised what you find — like the active hornet's nest in Fig. 3.

This kind of infestation is common at many sites. But a spritz of hornet spray under the building eaves may keep these varmints from nesting at your building. The spray also will be absorbed by any existing nests, destroying them.

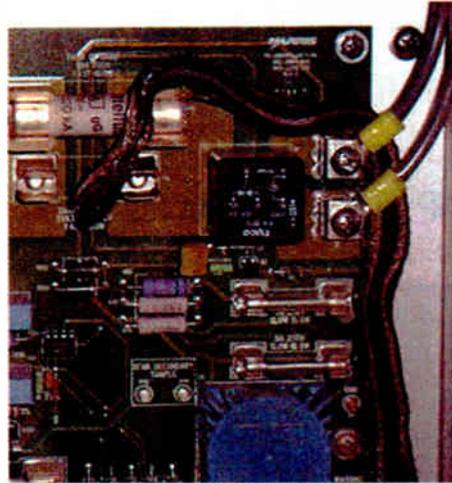


Fig. 2: Rough edges of circuit boards and components can help a snake shed its skin.

Ed Treese provides broadcast technical services in Kansas and says uses his digital camera more than an oscilloscope!

The camera can, among other things, help refresh his memory when he is ordering parts to fix items like AM RF contactors in an ATU that may not be convenient to a phone.

In talking to our RF service techs at BE, I've heard this suggestion used to identify transmitter parts, especially when there is no schematic. The compact size of many digital cameras makes them ideal to snap a picture behind a transformer to check on wiring, too.

Reach Ed Treese at tbs@kc.rr.com.

See COPPER, page 20 ▶



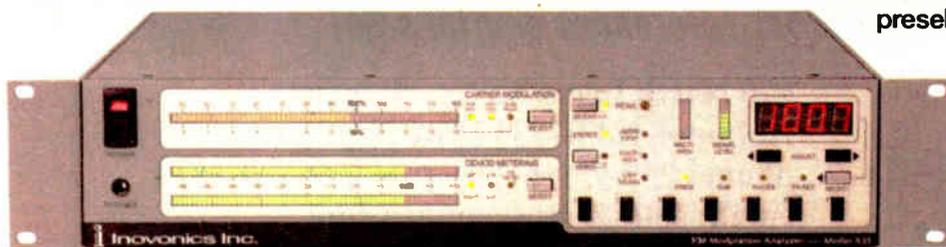
Fig. 3: Who knows what's lurking in your transmitter building attic?

Top-Value FM Monitor

Retains FM measurement accuracy with IBOC digital broadcasting*

Compatible with...

IBOC
DIGITAL RADIO



Visit www.inovon.com for full technical details.

A wealth of features makes Inovonics' second-generation 531 the undisputed value leader in FM monitoring. In addition to the high-resolution total-mod display, the 531 also shows stereo audio levels, SCA and RDS subcarrier injection, plus a relative indication of incidental AM noise. A digitally-tuned preselector with programmable presets lets you quickly compare your station's parameters with those of market companions.

*+4% max. Total-Mod offset with IBOC carriers on.

Model 531 - \$2700

i **Inovonics**
1305 Fair Ave. • Santa Cruz, CA 95060
TEL: (831) 458-0552 • FAX: (831) 458-0554
www.inovon.com • e-mail: info@inovon.com



Harris is your end-to-end radio solution provider.

AM/FM Analog or HD Radio™ • Audio Consoles • Broadcast Studios
High Power AM • Systems and Service • Intraplex Transport

HD Radio™ is a trademark of iBiquity Digital Corporation

Harris PR&E NetWave console with optional networking.
Available in 8-16-24 channel frames, all with fully modular construction.



ZX1000, 1 kW tri-mode FM/FM-HD or digital only transmitter. FM transmitters available from 250 W to 70 kW, in analog or HD Radio.



FlexStar HDx exciter—the gold-standard for FM and FM-HD excitors, featuring RTAC (Real Time Adaptive Correction for best mask compliance) and Engine, the latest iBiquity platform in HD Radio.



Destiny 3DX-50, 50 kW medium wave direct digital drive high efficiency, high reliability AM transmitter. AM transmitters from 1 kW to 2 megawatts, all fully compatible with HD Radio.

Imagine Harris transmitters... combined with legendary Orban audio processing.



OPTIMOD 9400-AM Digital

No-compromise, independent, multiband processing for analog AM and digital radio—in one box!

For over 20 years, OPTIMOD-AM has dominated the sound of major-market AM radio. Orban's new 9400 offers even better analog AM processing, while its unified analog and digital design substantially reduces costs compared to a two-box configuration.



www.orban.com

Contact Harris at 800-622-0022 or email autoconfirm@harris.com



assuredcommunications™
Government Systems • RF Comm • Broadcast • Microwave

www.harris.com

Copper

► Continued from page 18

In a column in November, I postulated that copper was becoming the new gold, given all the thefts of strap, ground radials and even ground wires.

Paul Sagi, a frequent *Workbench* contributor all the way from Kuala Lumpur, writes that even in Malaysia, the neutral earthing bus, which is copper, often is stolen from electric utility substations. In Malaysia, their power is three-phase, four-wire. Most homes are fed a single phase and a neutral, so the phase-to-neutral voltage is 240.

The fun begins when the neutral bus is removed. The voltage rises to 415, which is the phase-to-phase voltage, damaging lights and other items in homes and businesses that are fed single-phase power.

The electric utility claims it has no responsibility and will not entertain claims for compensation. There is a law in Kuala Lumpur saying the utility cannot be sued. Paul adds that there have been times when phone service has been lost, sometimes for a length of time, because someone came and stole the phone cable that runs along the street.

Theft of various metals, including copper, is in the newspapers from time to time, he says. But it's not just wire. Drain gratings, even steel manhole covers disappear from roads, as do guard rails from highways.

Write Paul Sagi at psagi92@gmail.com.

John Bisset has worked as a chief engineer and contract engineer for 38 years. He is the northeast regional sales manager for Broadcast Electronics. Reach him at (571) 217-9386, or jbisset@bdcast.com. Faxed submissions can be sent to (603) 472-4944.

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



APT said it received a "significant" order from Gulf News Broadcasting in Dubai. Gulf News is a division of Al Nisr Publishing LLC. Consultant Ian Duddridge of Telesto Broadcast Solutions suggested the organization use six WorldNet Ohio codecs for the STL application. ...

Independent Audio, the U.S. distributor for Merging Technologies in Switzerland, announced the installation of Merging digital audio workstations at the Library of Congress and the National Gallery of Art.

The Washington-based Library of Congress has acquired several Pyramix DAWs, each built around a Merging Mykerinos MB5 card with an AES-EBU digital output daughterboard. The DAWs are being installed in the Library's new facilities at the National Audio Visual Conservation Center in Culpepper, Va., where staff will be using them to digitize the Library's audio collections to create high-quality preservation files. The dealer was Parsons Audio.

In a separate sale, the National Gallery of Art in Washington has installed a Pyramix DAW for



APT Commercial Director Jon McClintock, left, meets Gulf News Broadcasting's engineer Sajjid Ali (rear) and consultant N. Sathyaseelan at Cabsat

use by the audio-visual staff. ...

Envision Radio said WCJK(FM) in Nashville is now an affiliate of its Pump Audio production library, which provides independent music to content creators. ...

Regulator NPT in Norway is a user of ATDI's planning and modeling tools, ICS Telecom and ICS Manager. The supplier said NPT now is using custom tools based on the software to make optimum use of the spectrum for users such as emergency services and taxi companies. ...

Jampro Antennas won a contract to supply six Penetrator broadcast antennas to Citizen FM, a private station that covers Nairobi and central Kenya.

MARKET PLACE

PSI Offers Turnkey for FM and TV

Propagation Systems Inc. announced it now offers TV and FM turnkey transmission systems.

Packages include a PSI antenna; PSI transmission line, rigid or flexible; a transmitter of the customer's choice; tower, building and commissioning.

"The customer has the flexibility to utilize all or any part of the turnkey offering," the company stated.

PSI antenna models include directional and non-directional using panels and slots for television, and panels, Vs and Power-Tillers for FM and IBOC at all power levels.

Also available are pattern optimization, customization, multi-station antennas, filters and combiners.

Contact the company in Pennsylvania at (814) 472-5540 or visit www.psibroadcast.com.



PSI installs a high-power broadband panel system for a Barrington Broadcasting Corp. television station in Bay City, Mich.

Kaltman Introduces Cable Coiler

Kaltman Creations is offering a handheld, motorized cable coiler that allows the user to remove the cable once coiled.

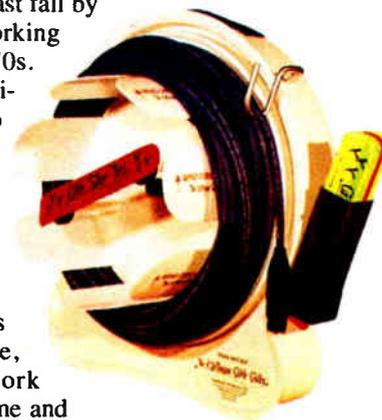
The company was founded last fall by Mark Kaltman, who began working in home recording in the 1970s.

He also was a live touring engineer and is familiar to radio equipment buyers from past sales and marketing positions at Denon Electronics, Sabine Inc., Wheatstone Corp., Aeta Audio and Klotz Digital.

The Kaltman Cable Coiler is a patented device that winds up most medium-duty cable, such as microphone or network cables; it is intended to save time and labor as well as wear and tear on cables. The Slap Tie cable wrap, part of the system, is faster than tying or taping cables; the system keeps cables organized for easy identification and speedy set-up.

A video on the Web site provides details.

For information call the company in Georgia at (678) 714-2000 or visit www.cablecoiler.com.



Your Headquarters for Cool Stuff

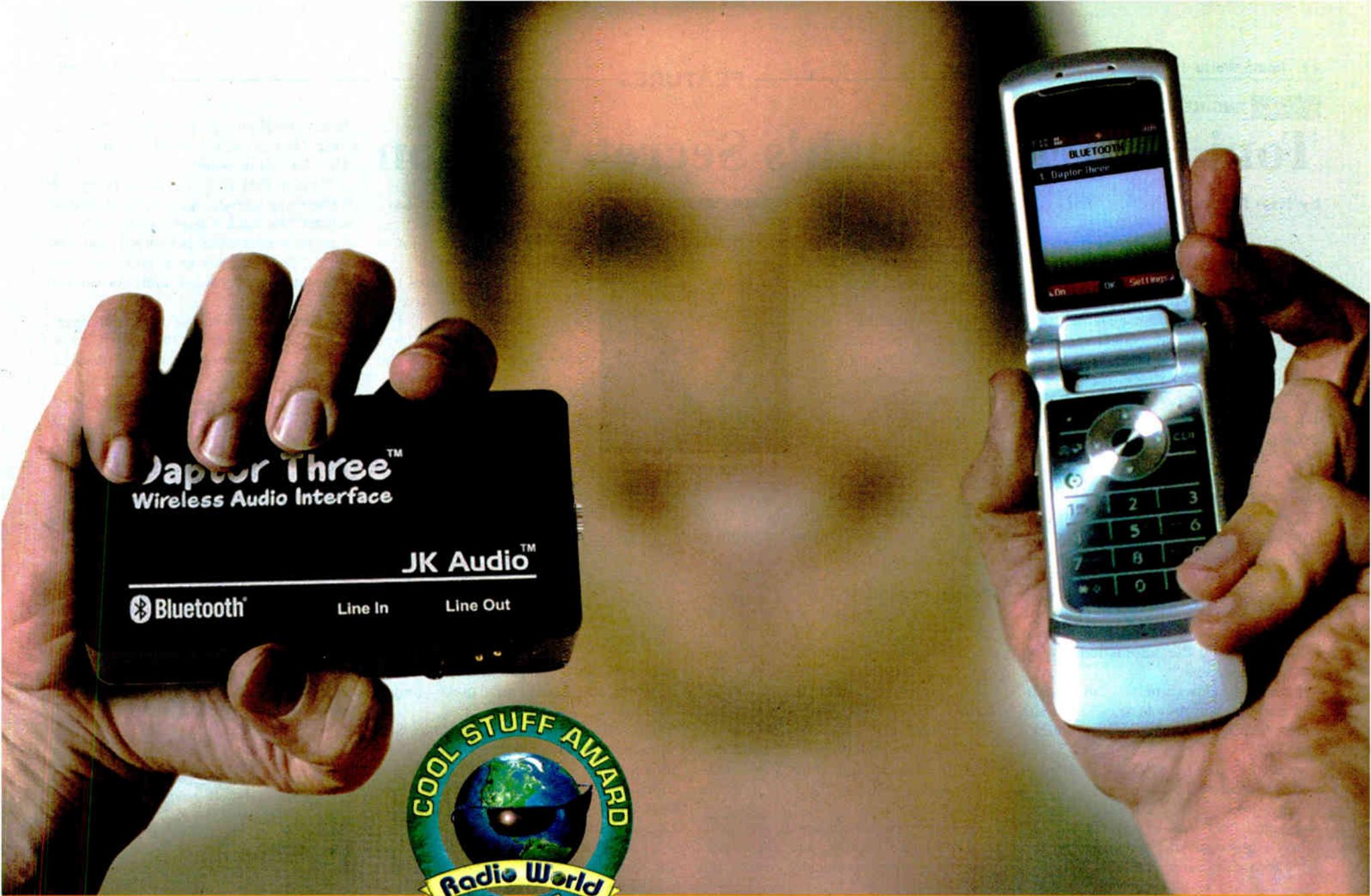
BROADCAST

www.BRADLEYBROADCAST.com

PRO AUDIO

800-732-7665

Local Phone: 301-682-8700 • Fax: 301-682-8377 • Address: 7309-D Grove Road, Frederick, MD 21704



Cool Stuff: Daptor Three

JK Audio's New Bluetooth® Enabled Wireless Audio Interface.
You'll Be Smiling, Too.

At NAB 2007, JK Audio introduced Daptor Three, a simple, professional audio interface using Bluetooth® Wireless Technology. We knew we were onto something, but weren't really prepared for the exceptionally enthusiastic response we received!

Daptor Three allows balanced and unbalanced mono connections to your cell phone and connects like any other Bluetooth® Wireless Technology enabled headset. Simply press and hold the recessed button on Daptor Three to initiate pairing mode.

If a connection to your cell phone is not available, it will connect to any other product, such as a laptop, that allows a Bluetooth® wireless connection. This wireless headphone mode offers a full audio bandwidth stereo connection.

Simple and exceptionally cool. Now, if you want to go ga-ga, we understand completely...

Available August 2007 through authorized dealers.

JK Audio
TOOLS FOR SUCCESSFUL RADIO

www.jkaudio.com

JK Audio, Inc. Sandwich, IL 60548 USA • Toll Free: 800-552-8346 • Tel: 815-786-2929 • Fax: 815-786-8502 • info@jkaudio.com

RADIO ENGINEERS

Toni Howell: Delilah's Secret Weapon

by Ken R. Deutsch

One in a series of articles on the evolving face of radio engineering.

When Premiere Radio Networks' nationally syndicated host Delilah tells her stories, talks to her callers and plays her music, someone is behind the scenes making it all click.

That is 32-year-old Toni Howell. Her duties have included moving the studios from Clear Channel's facility to one owned by Delilah and upping the number of show feeds from one to four within the first year of her tenure.

"After graduating from Southern Oregon State University, I started out working with Art Bell before he was syndicated," said Howell. "At the time he was converting from the old cart system to automation. Our engineer didn't really know how to do it, but I was willing to learn. I installed the automation just by reading the manual."

Eventually Howell helped build, manage and maintain remote sites. Then she went on to learn about satellite uplinks and ISDN.

Bell offered her a scholarship through engineering school.

"The deal was that if I would stay for two years, Bell would pay for it," she said. "I got on that roller coaster and went to a community college and also

completed a correspondence school course Bell suggested. He was an engineer himself."

About this time, Bernie O'Brien entered her life.

"He owned his own consulting engineering company and he took me under his wing and taught me everything at this FM station. So I had a CCA 25 kW transmitter and helped with the construction of the FM station and my career was taking off.

I was also the chief engineer for five Clear Channel radio stations in Southern Oregon."

Words and music

Premiere, the company that syndicates "Delilah," is owned by Clear Channel and offers about 70 radio shows to more than 5,000 affiliates. Content includes Rush Limbaugh, Glenn Beck, Donald Trump, Dr. Laura, Bob Costas and "American Top 40" with Ryan Seacrest.

When Howell arrived in 2005 she went to work building studios and making sure Delilah had the best possible working conditions.

"The content of her show is very positive and I like making sure she is performing in an ergonomically correct and



Toni Howell

functional studio. It makes a difference in the overall air product and I take a lot of pride in that," she said.

Toni Howell believes that her job is collaborative in nature.

"The engineer is a huge contributor," she said. "I'm

interested in the end result. There is magic behind the scenes that makes magic over the air."

interested in the end result. There is magic behind the scenes that makes magic over the air."

Howell's typical day is diverse. She starts early putting together the "Delilah" broadcast for one of her affiliates in the morning. Then she might move on to troubleshooting automation in Premiere's Los Angeles office.

"Delilah always has some new project she wants me to work on, anything from a Halloween broadcast out at a farm to working on servers and networks," said Howell. "She recently went to Iraq on a USO tour so I set up equipment for that. The show keeps growing in different ways we didn't see coming."

Jane Bulman is executive producer of "Delilah." "The show has grown tremendously over the past two years and I can honestly say that Toni Howell deserves a great deal of credit," she said. "Toni is one of those rare individuals who can communicate with almost anyone. She is intelligent, patient, creative and someone who will never back away from a challenge."

Another of her fans is Karen Eding, business manager of Clear Channel, Medford, Ore.

"Toni is one of my favorite people and I miss working with her terribly," she said. "She knows every aspect of radio and could probably do any job at a radio station. It's hard to categorize her within the engineering world, even though that is her title."

Whatever it takes

As is often the case with engineers, Toni Howell's job description changes by the hour.

"We recently had a bad wind storm and the roof was torn up so I worked on that," she said. "Sometimes I fix the bathrooms, too. It's just because we (engineers) are the only people who can think on their feet."

Time card? Forget about it.

"I love to work and maybe I care a little too much," she told RW last winter. "This morning one of the girls who works here was in a bus that slid off the road in a snowstorm and she called me at 6 a.m. to bring her to the studio. I was in the shower but I got out and did it. I'm the one they always call."

Alan Corbeth was a senior vice presi-

dent with Premiere between 1998 and 2002. He now works on "Coast to Coast AM" for that network.

"When Toni first started working for me she was a board operator, still in high school," he said. "Toni has become an extremely competent broadcast engineer with a keen ear for programming. She will stay with a problem until she finds a solution."

Sam Thompson, operations manager, "After MidNite" and "The Blair Garner Show" for Premiere, is another member

Engineers are the mythical Atlas holding up the globe, trying each day to be perfect, not to shrug in the slightest and throw off the cycle.

— Toni Howell



of the Howell fan club.

"We have nearly 250 'After MidNite' affiliates, so when we changed digital audio systems everything had to be perfect," he said. "With Toni's help, it was. Toni is passionate about radio and the connection that we in radio hope to make with our listeners. She never forgets what we're trying to accomplish."

The star of the show weighed in.

"Toni is a little stick of dynamite," Delilah said. "She isn't bigger than a minute, as my southern mother would say, but she is one of the brightest, hardest-working young people I have ever met."

While Howell is a woman in a career traditionally populated by men, she makes her own mark.

"I have heard many women talk about the glass ceiling and how it has held them back from success," she said. "I can confirm that the glass ceiling definitely exists, but it's really more of a weathered window in your own mind. It lives in the form of fear and insecurity. It slowed me down greatly for a few years, but now I work to embrace each struggle as an opportunity to improve. I can't tell anyone that I have crossed my own personal finish line or accomplished anything truly great, but I can tell you that some day I will."

Howell waxes philosophical about the nature of her job.

"Engineers are the mythical Atlas holding up the globe, trying each day to be perfect, not to shrug in the slightest and throw off the cycle," she said. "I am very proud to be amongst this amazing proletariat of radio broadcasters."

Ken R. is a former broadcaster and a frequent contributor to Radio World.

EXPECT MORE FROM YOUR AM TRANSMITTER



Made in USA

Armstrong Transmitter X-1000B

1KW HD Radio ready AM Transmitter for under \$10K

Built with dual hot-swappable 600 Watt RF modules capable of 150% modulation, X-1000B can bring that major market sound to your radio station. Engineered with the latest technological innovations, X-1000B offers high reliability, built-in redundancy and it is HD Radio ready.

Best of all, our customers tell us that the money they save running the X-1000B pays for itself with savings in electricity and

maintenance costs over an older transmitter ...and as a bonus they get exceptional reliability and that major market sound for free.

But, don't take our word for it. Talk to our customers already on-the-air with the X-1000B. Call or email for a users list and decide for yourself why owning this transmitter is a no-brainer.



ARMSTRONG
TRANSMITTER CORPORATION

Tel 315-673-1269 / sales@armstrongtx.com / www.armstrongtx.com

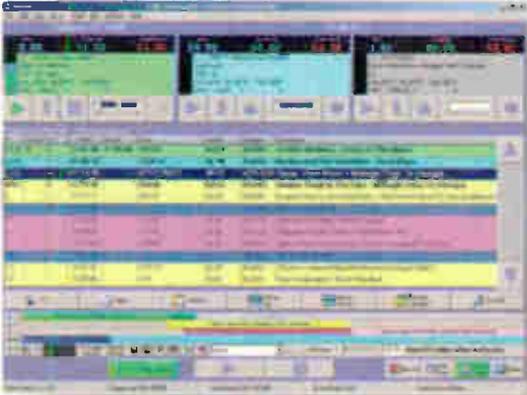
HD Radio is a registered trade mark of iBiquity Digital Corporation.

Broadcast Software

1-888-274-8721

www.bsiusa.com

Radio Automation



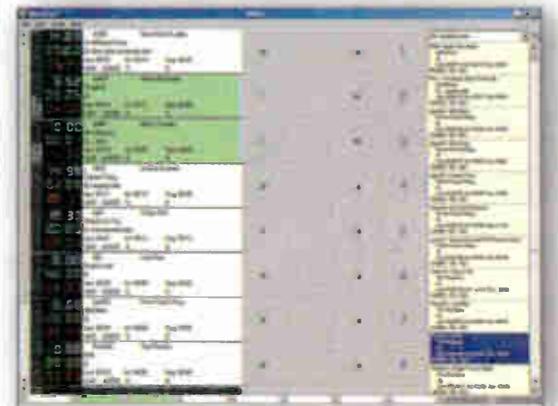
Simian - radio automation and digital playout system.

Instant Audio



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

Digital Cart Player



WaveCart - the original on-screen cart machine replacement.

Audio Logging



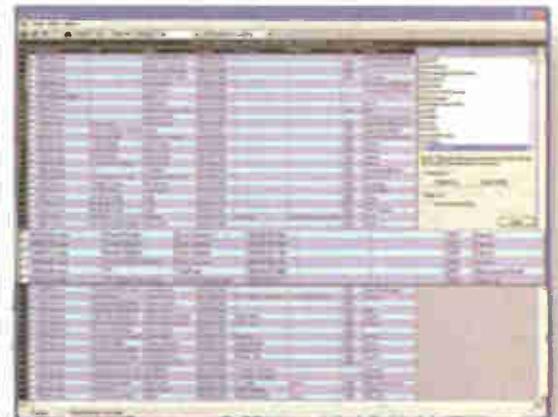
SkimmerPlus - skimming and audio logging with web playback.

Complete Systems



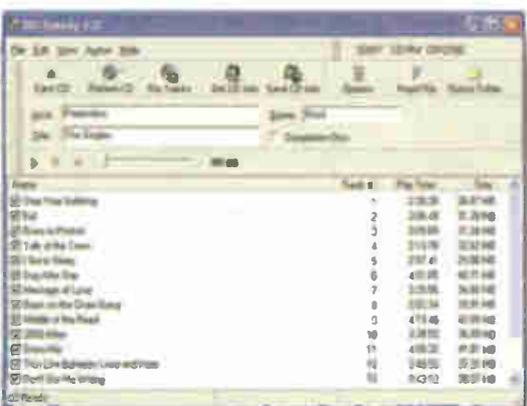
Systems - fully configured with hardware, software and music.

Music Library



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

CD Ripping



Speedy - fast CD ripping with automatic file tagging.

Sound Cards



AudioScience - professional sound cards built for broadcast.

Remote Control



Trigger & Relay Kits - for GPI/O and satellite operation.

Broadcast Software International
503 E. 11th Avenue
Eugene, Oregon 97401 USA
Direct: 541-338-8588
Fax: 541-338-8656
www.bsiusa.com sales@bsiusa.com



NAB 2007



Photo by Paul McLane

Sprockit the robot was on hand to help the National Weather Service draw attention to its services. Bob Payton is at left.



Photo ©INAB

HD Radio made it into the pressroom. At a reception for journalists, NAB Executive Vice President for Media Relations Dennis Wharton helps his boss, President/CEO David Rehr, draw the winner of a receiver.

A display in the Dolby booth promoted surround for radio.

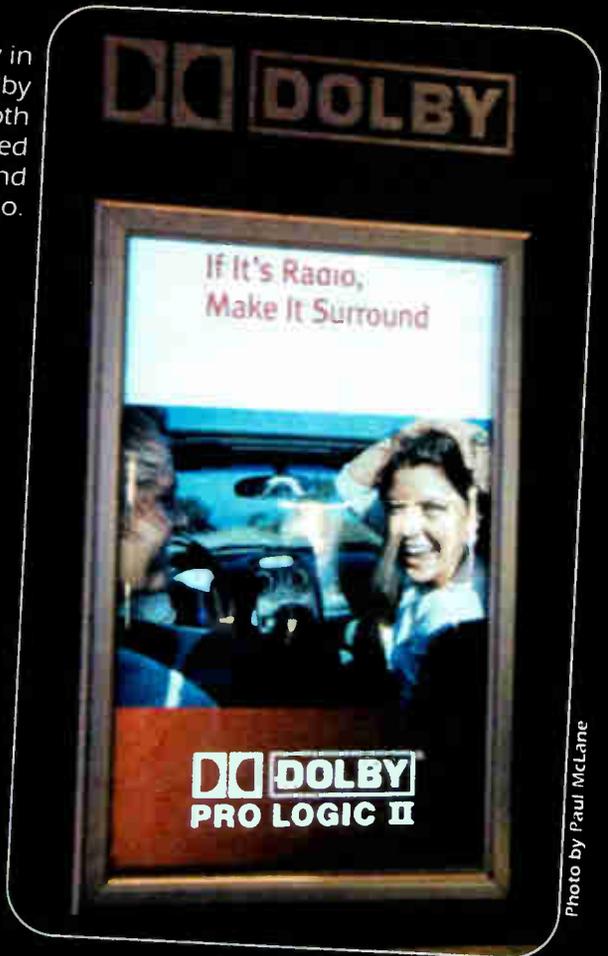


Photo by Paul McLane



Photo by Bob Kovacs

Dom Bordonaro, chief engineer for Cox Radio Connecticut, hosted the BEC sessions on RF implementation for HD Radio.



Photo by Jim Peck

Carol Rassier of LEA shows Robert Kowalchuk of D.E.M. Allen and Associates an SL series Single Line Surge Protector.

Harris hosted a series of new technology demonstrations at the Advanced Applications Area of its booth.



Photo by Roger Turner

End-to-End Solutions From SCMS

Moseley SL9003Q Studio Transmitter Link

Get your **STL** Solution from
the Dealer That Knows Radio.



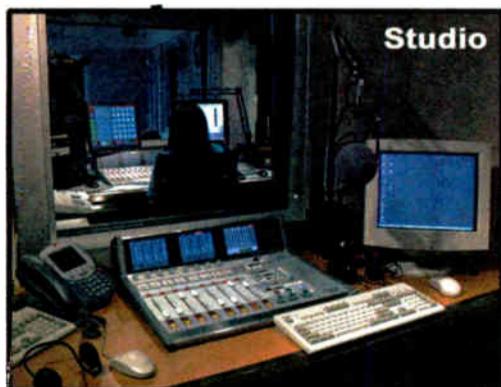
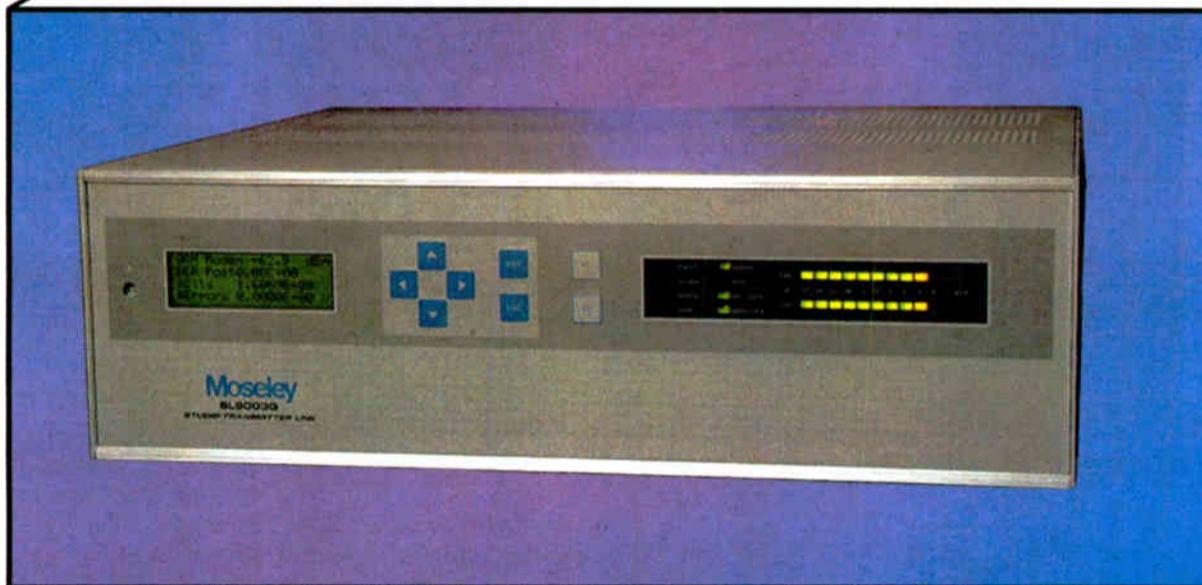
The Starlink is SMOKING HOT!

Whether you are faced with a studio move or IBOC conversion, make the right STL choice for today and tomorrow.

Moseley Starlink SL9003Q-2SLAN and new 4SLAN is the first STL to provide AES digital audio and Ethernet over the traditional 950 MHz STL band.

For T1 lines and license-free links, the Moseley Starlink SL9003T1 gives you bi-directional digital audio, Ethernet LAN extension, remote control, and telephone.

**Your best value for the future is the right STL choice today
Moseley Starlink is available from the most reputable
supplier in radio broadcast – SCMS**



Contact SCMS
at any of its offices
to discuss your needs.

1-800-438-6040

Bob, Ernie, Matt or Mike
HQ in Pineville, NC

Mid-South: 1-877-391-2650 Bob Mayben
Central: 1-731-695-1714 Bernie O'Brien
West Coast: 1-866-673-9267 Doug Tharp
Mid-West: 1-513-899-3036 Mary Schnelle
South-Atlantic: 1-770-632-1295 Art White
North-East: 1-315-623-7655 Jim Peck
South-West: 1-210-775-2725 John Lackness
Pro Audio: 1-877-640-8205 Ric Goldstein
Latin America: 1-760- 650-1427 Lily Massari



www.SCMSinc.com

ROOTS OF RADIO

AFN, The Vanished Shooting Star

by Patrick Morley

During World War Two, the Armed Forces Radio Service "may well stand as the highest expression of American broadcasting." That was the view of one of the leading figures in the broadcasting world.

From 1942 it put out hundreds of hours of programs unrivalled for quality, as all the top stars in America gave their services free "for the boys over there."

As well as direct broadcasts, it produced over a million disks that were distributed to its offshoots all over the world, wherever American men and women were serving. The biggest of those was the American Forces Network.

From 70 broadcasting stations in the United Kingdom it transmitted programs from July 4, 1943, to Dec. 31, 1945, when it finally moved to Germany. Its intended audience: the many thousands of American troops pouring into Britain for the invasion of Nazi-occupied Europe and servicing the vast air armada carrying out the great offensive against Hitler's Germany.

Surviving AFN programs can be numbered by the hundred — "Command Performance," "Mail Call," "GI Jive" and many others. Yet of the 2-1/2 years of AFN daily output, less than an hour is known to have survived.

Of course a great deal of its output consisted of rebroadcasts of AFN programs. There were also a number of record programs that it would be pointless for the broadcasters themselves to record; and listeners would be unable to record at all because in the days before audio tape only professional equipment was capable of recording radio broadcasts.

Nevertheless AFN originated a number of its own programs and it is surprising not one of these has survived.

AFN's own archives have no material from the war years, nor does the BBC Sound Archives, with two brief exceptions. A dwindling number of AFN personnel who survived from the war years have nothing.



AFN announcer Sgt. Harry Lytle



Johnny Kerr, presenter of 'Duffle Bag,' works with BBC announcer Margaret Hubble on the AEFN in a photo taken from the BBC Year Book in 1945. Hubble recently passed away. I have not been able to learn about Kerr's life after the war.

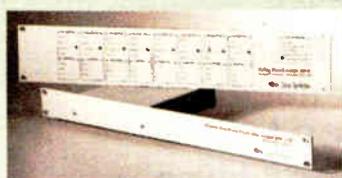


Another photo from AFN shows studios in Germany in the years not been able to establish

Control Solutions

Model RFC-1/B Remote Facilities Controller

- control transmitter from any telephone
- 8-64 channels of telemetry and control
- programmable control by date and time
- optional printer and modem adapters
- programmable telemetry alarms
- integrated rack panel



Model RAK-1 Intelligent Rack Adapter

- parallel printer interface
- internal modem for data transfer
- front panel status indicators
- battery backed power supply
- rack mountable chassis
- accessory package for RFC-1/B



Sine Systems, Inc.

615.228.3500

more information: www.sinesystems.com

Syl Binkin, the first man to put AFN on the air on the Fourth of July 1943, kept some recordings from those days that he hung on to for years; but they vanished in a move, never to be seen (or heard) again.

There is any amount of material from AFN's long stay in Germany, but from the 2-1/2 years in wartime London, virtually nothing. It is particularly surprising that AFN's opening broadcast, an historic event in broadcasting, was not recorded or, if it was, has vanished. The various institutions in the States that hold audio recordings of all kinds have a wealth of wartime programs but of AFN output, not so much as a station ident. It was the same story at the German national sound archives and other broadcasting archives on the Continent.

A few brief fragments of AFN's final day of broadcasting in the United Kingdom on Dec. 31, 1945, have come to light. But the source for these is something of a mystery. It is understandable that AFN's final program in Britain should be recorded for posterity, presumably by AFN itself. But why only a few disjointed fragments have survived is puzzling.

Another oddity is that the BBC, which

at first resisted the creation of AFN, later got on so well with the broadcasting "intruder" that it transmitted a special tribute, "Farewell AFN," in peak listening time. No recording of that program can now be found.

There is one other possible source for AFN program material, and that is the "Allied Expeditionary Forces Program," or AEFN. This was set up at the insistence of General Dwight Eisenhower, who commanded the great army that was soon to invade Europe. He wanted one single broadcasting station that would send the same message to all the thousands of servicemen taking part in D-Day and beyond.

AEFN

The BBC strongly opposed the idea and so did AFN, which was perfectly happy with the way things were — Yanks and Brits doing their own thing in their own way.

Ike was furious. AFN, a military outfit, could be ordered to toe the line, but not the BBC. Finally Eisenhower went to the top and took the matter to Winston Churchill, who had no choice. He told the BBC to stop arguing and get on with it. And so the AEFN came into being.

In the event, it proved a remarkably successful program. Over half its output

came from AFN and its lively, informal style was adopted as the way the program was presented on the air. The BBC has 10 AEFB programs in its Sound Archives but all are clearly combined efforts and not the individual programs that were special to AFN's output.

There are just the briefest fragments in the Archives of two of AFN's own most popular record shows: Johnny Kerr introducing "Duffle Bag" — voted their favorite listening ahead of all the star-studded programs from Hollywood by 72 percent of U.S. service listeners — and George Monaghan introducing "On the Record," another much-loved show.

Sad that so little remains of what so many listened to with such enjoyment.

AFN London gave pleasure to many thousands of American servicemen and women during the war, as well as 5 mil-

worked in newspapers in Britain before joining the BBC, where he held senior posts in radio and television news. He wrote the first news story to be broadcast in Britain on the assassination of President Kennedy. He has been listening to AFN since 1944; upon retiring he wrote its history, "This is the American Forces Network," published under the Praeger imprint by Greenwood Publishing 2001. E-mail him at pmoldrad@aol.com.

For those interested in this topic, also try "Brass Button Broadcasters" by Trent Christman, Turner Publishing, 1993; "Star Spangled Radio" by Edward M. Kirby and Jack W. Harris, published by Ziff Davis, 1948; and "Tune Into Yesterday," the journal of the Old Time Radio Program Collectors' Association (e-mail graemeotr@yahoo.co.uk).

WE GIVE YOU WITHERS

Name: James G. Withers
 Occupation: Radio station owner
 Certifications/Honors: Lifetime General Radiotelephone License; past speaker/panelist at NAB, TAB and Digital Hollywood
 Hero/Mentor: Robert Shrader, author, "Electronic Communications." Without that book I would never have passed my Second or First Phone.
 Favorite Station Growing Up: WIL, St. Louis — Dick Clayton, Gary Owens, Ron Lundy. Best group of Top 40 jocks, ever.
 Most Memorable Broadcast: Engineering a live audience, two-way, four-station lash-up for a Bill Clinton Town Hall meeting from KDFW(TV)
 Favorite Saying: The only thing in life that's not for sale is your character.

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

Radio World



young men, probably at one of the immediately after the war. I have who they are, where or when.



Unknown sergeant from the war years.

lion Britons who tuned in regularly, though they were in effect eavesdroppers. Like a shooting star it shone brightly and briefly, then vanished almost without a trace. But its successor, AFN Germany, glows in the broadcasting firmament still.

In a journalistic career extending more than 40 years, Patrick Morley

Able to leap tall buildings?

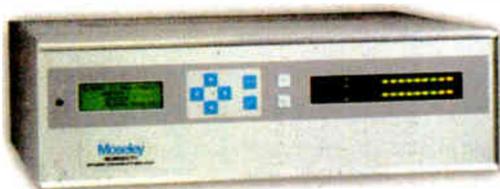


No distance or line-of-sight restriction makes **Starlink SL9003T1** the ideal choice for STL/TSL and intercity links.

Starlink T1's bidirectional high capacity significantly reduces communications costs compared to discrete audio, telephone and data circuits.

And **Starlink's** uncompressed digital audio will stand out above your competition.

STL over any distance or terrain... ...Moseley Starlink T1



- HD Radio™ and Multicasting
- Transmitter remote control
- RBDS data
- Telephone extension
- IP-based equipment control
- Internet and e-mail connection

Call the digital STL experts today.

Dave Chancey 805.968.9621

Bill Gould 978.373.6303

www.moseleysb.com

Moseley

You're looking at a complete audio-over-IP routing system.

(Just add Cisco.™)

Administer this • The beauty of the Web is that you can get information anywhere. Same thing with Axia: you can set up and **administer an entire building full of Axia equipment** – audio nodes, consoles, virtual routers, whatever – from your own comfy office chair. All you need is a standard Web browser (PC or Mac, we like 'em both). Put an Internet gateway in your Axia network and you can even tweak stuff remotely, from home or anywhere there's a Net connection. Mochachino, anyone?

Automation station • Wouldn't it be cool to have a **self-monitoring air chain with silence-sense** that can fix problems, then e-mail a status report? To be able to switch your program feed from Studio "A" to Studio "B" with one button? Or build custom switching apps and scheduled scene changes based on Boolean logic and stacking events? PathfinderPC software does all these things and more. But unlike HAL 9000, it doesn't talk back to you.

Ether Net • Hardly a month goes by without a story concerning someone getting knocked off the air by STL frequency interference or bandwidth reductions. There's also the headache of trying to add HD Radio™ program streams to already maxed-out transmission links. Luckily, Axia clients have a way around this particular roadblock: they've been using Ethernet radios from well-known manufacturers like Orthogon, Dragonwave and BE to construct a link between the studios and the transmitter that operates *above* the crowded 950 MHz band. Put an Axia AES/EBU Audio Node on both ends of that link and before you can say "Look! Up in the sky!" you've got an Ethernet STL, with room for multiple channels of program audio plus backhaul. And that's **uncompressed 48 kHz, 24-bit audio** — without nasty compression artifacts that degrade your lovingly-tweaked audio chain. Add a couple of Axia GPIO nodes to the mix, and your new STL link can carry remote control commands for transmitter and processing gear, too.

Brains in the box • The typical radio jock cares for studio equipment about the same as a five year-old cares for a puppy: haphazardly, if at all. That's why we **took the CPU out** of our Element modular console and put it in here, with the power supply and GPIO ports. That means a greatly reduced chance of being taken off the air by a Coke spilled into the board. C'mon, don't you have better things to do than trying to dehumidify circuit boards with a hair dryer?

That's cool • Noisy fans in studio equipment? That's a major *faux pas*. You won't find a fan in any Axia Audio Nodes — they're designed to run **cool and silent** (unlike your morning show talent).

Let it grow • Growing your business computing network is easy: just add more PCs and hook them to the Ethernet switch. But with broadcast routers, adding more capacity usually means buying another frame, installing more I/O cards, pulling more discrete cable through conduit that's already full to the brim... Hope you've got stock in Grecian Formula! But since IP-Audio networks use standard Ethernet, **adding more capacity to an Axia system is as simple as plugging in an Audio Node** wherever you need inputs. And should you need to move to new digs, you can just unplug your Axia system and take it with you. Try doing *that* with a big iron router.

0rc slayer • Hooking up an Axia Audio Node may be the simplest thing you've ever done. All our I/O is presented on RJ-45 and adheres to the StudioHub+ standard, so connecting audio devices is as simple as plugging in an Ethernet patch cable. All of which gives you more time to play World of Warcraft with those guys from IT.

Level headed • These green, bouncing dots built into every Axia Audio Node are confidence meters. One glance and you know whether an audio source is really active — or just playing possum.

A node for every need • Someday, all broadcast gear will speak Livewire (so says our Magic 8-Ball). Until then, there are Axia Audio Nodes that turn analog and AES sources into routable 48 kHz / 24-bit audio streams.

It's not rude to point • Little kids tell mommy what they want by pointing — a pretty intuitive way of doing things. PathfinderPC software gives talent the same convenience. You can **build custom "button panels"** to execute complex operations with just one click. You can map these panels to controller modules on Element consoles or to turret-mounted controls, place mini-applications on studio computer screens, even run them on touchscreen monitors.

AES yes • You like your audio to stay digital as much as possible, right? We get that. That's why we have AES/EBU Audio Nodes that let you plug AES3 sources right into the network. Studio-grade sample-rate converters are inside: anything from **32 kHz to 96 kHz** will work. Oh, and there's 8 AES ins + 8 AES outs in each node. Digital distribution amp, anyone?



Push to play • Axia Router Selector Nodes are pretty cool. Think of them as **really advanced selector and monitor panels**; put one anyplace you need access to audio streams from the IP-Audio Network. Like newsrooms, where a reporter might need access to a satellite feed or a Zephyr connection. Or dubbing stations, where audio is captured and stored for later use. Or in the station's TOC, so you can monitor any of the hundreds — or thousands — of audio streams on your network at a moment's notice. Use the LCD screen to scroll through a list of available streams, or use the eight Fast Access keys on the front panel to store and recall the streams you use most. And Router Selector nodes have something standard X Y panels don't: an input for fast connection of an analog or AES device. Sweet



« Thinking about Axia but waiting 'til we're "more established?" You might not know that there are over 400 Axia studios on-air around the world — and counting.



« An Axia system can expand or shrink as much as you want it to — the Ethernet backbone lets it scale easily, on demand. Portable too: just take it with you if you move.



« Axia systems install in as little as half the time of hardwired routers — and without expensive, bulky multi-pair cable. Whatever will you do with all the time you save?



« Is IP reliable enough for 24/7 audio transport? Millions of VOIP business phone users with systems based on Cisco routers certainly think so. Coincidence?

Nothin' but Net • Did you know you can plug a PC directly into an IP-Audio network and use it to send and receive audio? Can't do that with a mainframe router. Well, you *could* add more input cards to the mainframe, and then buy high-end audio cards for your PCs, and then run more wiring all over the place... but with Axia, you just install the **IP-Audio Driver** on any Windows * PC to send and receive pure digital audio right through the PC's Ethernet port — no sound card required or additional router inputs needed. You get better, cleaner PC audio that's sharable right to the network. The single-stream version is great for audio workstations; the multi-stream version lets you send and record **16 stereo channels simultaneously** — perfect for digital automation systems.

CYA • Sooner or later, someone's going to ask for a hard copy of a specific broadcast. Whether it's a client looking for proof of play, a Group PD that wants airchecks, or a listener claiming your morning show did something naughty, you're going to need a way to prove what was said. Axia makes it easy to keep archives of your programming with iProFiler networked audio logging software. Just install iProFiler on a Windows PC with a NIC and connect it to your Axia network; tell it what audio streams you want to record and it goes to work, sucking audio out of your network like pimientos from

Martini olives. iProFiler can record **up to 16 channels of stereo audio simultaneously**, storing them as time-stamped MP3 files you can save to a network drive or FTP server for listening or re-broadcast. And since logic always follows audio in an Axia network, you can tell iProFiler to record only when the jock's mic is open (or vice-versa). And of course, you can listen to saved audio from any PC connected to the Axia network.

Put that in your pipe • How many discrete wires can a CAT-6 cable replace?

Well, a T-3 data link is pretty speedy with 44.7 Mbps of throughput. But Axia networks use Gigabit Ethernet links, with 1000 Mbps between studios. That's more than 22 times the capacity of a T-3; enough throughput for 250 stereo channels per link — the equivalent of a **500-pair bundle on one skinny piece of CAT-6**. You can even use media converters and optical fiber for higher signal density if you want. Think that might save a little coin in a multi-studio build-out?

Heavyweight champion • This is an Axia StudioEngine. It works with our Element Modular Consoles (the fastest-growing console brand in the world, by the way) to direct multiple simultaneous inputs and outputs, mix audio, apply EQ, process voice dynamics, and generate multiple mix-minuses and monitor feeds on-the-fly. To make sure it delivers the reliability and ultra-low latency broadcast audio demands, we powered the StudioEngine with a fast, robust version of Linux — so fast that **total input to output latency is just a few hundred microseconds**. How can one little box do so much? There's a blazingly-fast Intel processor inside, with enough CPU muscle to lift a small building. Strong *and* fast: Ali would approve.

Hakuna matata • Axia networks are self monitoring and self-healing. Spanning Tree Protocol in the Cisco Ethernet switches we use combines nicely with PathfinderPC's automated program stream monitoring to help ensure that your studio network is **on the air 24/7**. And all Axia gear (like this StudioEngine, that mixes control room audio streams) runs real-time Linux for operation that's as bulletproof as Superman's boxers. Which means "no worries, mate."

You got to have friends • Sure, we think IP-Audio is cool. But it's even cooler that so many *other* folks think so too. Delivery system providers like ENCO, Prophet, BSI, BE, iMediaTouch, DAVID Systems and more all have products that **work**

directly with Axia networks. So do hardware makers like AudioScience, International Datacasting Radio Systems, Telos and Omnia. Check out the whole list at AxiaAudio.com/partners/.

Jammin' on the mic • Radio studios and microphones go together like Homer Simpson and donuts. Unfortunately, so do preamps, mic compressors, EQ boxes, de-essers — let's face it: most studios house more flying saucers than Area 51. Axia helps clean up the clutter by including mic preamps with our Microphone Nodes; not bargain-basement units either, but **studio grade preamps** with headroom enough to handle Chaka Kahn. Phantom power, too. And if you choose to use Axia Element consoles in your studios, you'll find world-class mic processing built right in: vocal dynamics (compression and de-essing) from the audio processing gurus at Omnia, plus three band parametric EQ with SmartQ, available on every mic input. Rap on, Grandmaster.

Very logical, Captain •

Routing logic along with audio used to be almost as hard as performing the Vulcan Mind Meld. But Axia makes it simple, because machine logic can easily be converted to data and paired with Livewire audio streams. So **logic follows audio throughout the facility** on Axia's switched Ethernet backbone. Eight assignable GPI/GPO logic ports, each with five opto-isolated inputs and five opto-isolated outputs, are built into every Element power supply, so you can control on-air lights, monitor mutes, CD players, DAT decks, profanity delays, etc. If you've got more than eight audio devices (and who doesn't), just add a standalone GPIO node like this one wherever you've got gear.



AxiaAudio.com

NAB 2007



Photo by Jim Peck

Paul Shulins, center, of Greater Media visits with Dave Chancey and Bill Gould of Moseley Associates. Its LANLINK 900HS bi-directional Ethernet extension for HD Radio and other applications can be used with 950 MHz STL path and hardware or stand-alone.



Photo by Bob Kovacs

Eamonn Heffernan, left, of Sonifex shows off its line of audio interfaces and processors to Kenneth Fause of Auerbach Pollock Friedlander.

Commercialized System Capabilities

HD Radio System Capabilities



Program Service Data - First generation HD Radio receivers support

ID3 Tags	Sample Content
Title	Margaritaville
Artist	Jimmy Buffet
Album	Songs You Know By Heart
Genre	Rock
Comment	In Concert MSG July 5



Jordan Scott of Ibiqity, far right, addresses opportunities for market and revenue growth and the list of development partners during the multicasting presentations.

Photo by Paul McLane



Edd Forke, Angela Gillespie and Bob Surette of Shively show off the Model 2606 FM Bandpass Filter.



Marty Draper and Robert Lisiak of Emmis listen to Ted Nahil, newly hired at APT, discuss enhancements to the WorldNet OSLO including an IP Network card.



Photo ©NAB

Shen Tong, founder and president of VFinity, says the 'next revolution will be social networking.' He called it the most challenging and important question for media business.





Multi-casting was the topic of a Broadcast Engineering Conference session chaired by Jeffrey Smith of JRS Engineering Services.

Photo by Jim Peck



Photo by Bob Kovacs

Alex Perchevich, president of Jampro, demonstrates the RCP-307-Q RF patch panel to Ronny Gozali of Caturmitra Adhikara PT in Indonesia.

Photo by Jim Peck

Gary Crowder recently retired from ClearOne (the former Gentner) and met with broadcast industry friends and former Gentner co-workers after a multi-year absence from NAB. The group also celebrated Ellen Crowder's recovery from cancer. Clockwise: Paul Anderson, Tim Schwieger, Ellen Crowder, Hugh Heinsohn, Dale Tucker, Gary Crowder and Bill Gillman. Not shown: Walt Lowery, John Lackness, Way Reed and Elaine Jones.



Photo by Elaine Jones

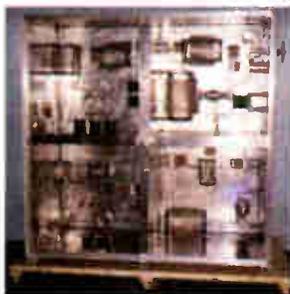
Photo by Jim Peck



AM Antenna Solutions



Directional Antenna Systems



Diplexer/Trippler Systems



Tunipole™ Folded Unipole Systems



RF Components

LBA Technology – your trusted supplier of digital engineered AM antenna systems. Customized products include ATU's, DA Systems, Multiplexers, Combiners, PCS/Cellular Colocation Systems, Filters, and RF Components – for every power level. Complete RF project design, management and installation available.

We enable thousands of broadcasters in the USA and worldwide to –

**Reach Farther,
Sound Better!**



www.Lbagroup.com

LBA TECHNOLOGY, INC.

3400 Tupper Drive, Greenville, NC 27834
800-522-4464 / 252-757-0279 Fax: 252-752-9155
Contact Jerry Brown at jbrown@Lbagroup.com



LBA
SINCE 1963

Webcasting Royalties Loom Large

Webcasters Are Looking Closely at What New Rates Will Mean to Their Operations

Last time we discussed some of the changes in the digital music industry that could affect radio, including the Copyright Royalty Board's recent action that increased the royalties paid by online radio services for use of published music by U.S. statutory license. This time we will continue our exploration of that topic.

First, let's clarify one of the points made in the last issue regarding online radio services moving offshore to avoid these royalties.

The CRB rules actually apply to online radio *listening* in the United States, not to the location of Webcast origination. This means that any online radio service that has listeners in the U.S. would be subject to the royalties set by the CRB and collected by Sound Exchange, the non-profit organization established by RIAA to collect and distribute these royalties to rights holders and musicians.

Exactly how Sound Exchange would collect royalties from offshore organizations that do not voluntarily comply — or what enforcement options would apply — are uncertain, however. Sound Exchange is negotiating with performance rights bodies in other countries to establish reciprocal arrangements, but to date few are in place.

One possibility for enforcement is that non-compliant offshore services could be

technically blocked, which is something that there is precedent for — and which some U.S. Webcasters already do to themselves in reverse, so they are not liable for Webcast music royalties levied by other countries.

A rogue operator could keep popping up in different locations, but in each case could eventually be blocked. This "Whac-A-Mole" process could become expensive for the Webcaster, of course, not to mention the difficulty listeners would have in

Royalty rates will more than double over the next five years.

keeping up with the site, thereby thwarting any growth in loyalty for the service. There would also be a paper trail to the Webcaster from the online hosting service(s) used that would have to be obfuscated, if possible. Thus the concept of "Internet pirate radio" is not as appealing as the over-the-air case, where the station operates its own transmitter and is therefore more self-sufficient, and if necessary,

mobile and relatively clandestine.

This also implies that some existing, legitimate offshore Web radio services may now institute voluntary blocking to the U.S., to avoid these new fees. (Some already do.)

Dollars and sense

Discussion on this topic has been clouded by both rhetoric and complexity of calculation of the actual impact. In essence, the real concern is not so much what happens immediately, but how rates increase over the five-year period affected by the new rules (2006–2010).

Recall that most Webcasters have been paying some music royalties since the ruling of the Copyright Arbitration Royalty Panel went into effect in 2002. Empirically speaking, the new baseline (2006) performance royalty rate set by CRB, the successor to CARP, is actually *less* per performance than under the CARP rules, although the method of royalty calculation differs significantly (more on this below). But this royalty rate will more than double over the five years covered by the CRB ruling.

Moreover, since the rules have been under debate for over a year beyond their effective date (the CARP rules expired at the end of 2005), Webcasters are now liable for retroactive payments based on the new rules for all of 2006 and for 2007 to date.

Complicating matters further (and most impactful to many Webcasters), the method of royalty calculation has changed from the previous period.

Under the old rules, Webcasters had the option of paying "per performance" (i.e., per listener, per song), or they could base their fees on the concept of Aggregate Tuning Hours (ATH), which is a simple measure of listeners to a stream

The Big Picture



by Skip Pizzi

paid a flat fee of \$250-500/year for up to 146,000 ATH/month (equivalent to an average of about 200 listeners per hour), above which they paid royalties at one-third the commercial ATH rate.

The new rules vacate the SWSA (since it only applied as an amendment to the CARP rates), and they include no such revenue- or expense-based exceptions for small commercial operators. Non-commercial operators do retain a \$500 annual flat rate, now adjusted up to 159,140 ATH per month, but beyond this limit they will now pay the full commercial rates, on a per-performance basis. This implies that royalties for large noncommercial Webcasters could approach an order of magnitude (10x) higher in 2010 than they were in 2005.

One more change that's significant to some Webcasters is an adjustment in minimum fees, which are the flat, annual fees paid by all Webcasters regardless of the amount of music they air. Under CARP, this minimum fee was \$500 per Webcaster, but the CRB rules change this to \$500 per *stream*. For stations simply simulcasting their OTA signal this makes no difference, but for big multichannel Webcasters it will have substantial impact.

The new rules eliminate the ATH concept for commercial Webcasters.

over time. (Like the kilowatt-hour basis for electricity rates, 1 ATH = 1 listener for 60 minutes, or 2 listeners for 30 minutes each, or 6 listeners for 10 minutes each, etc., or any combination thereof.)

The new rules eliminate the ATH concept for commercial Webcasters, setting all fees on a per-performance basis (i.e., royalties for each song must be paid based on the listeners online during that song). Beyond the additional burden of tracking and reporting that this creates for Webcasters, it makes the differential cost of the new royalties harder to quantify as a percentage of revenue, and complicates the comparison to the ATH method that most Webcasters previously used.

Another change may have even greater impact on some non-commercial and small independent commercial Webcasters.

After the CARP ruling in 2002, these operators successfully lobbied for a law called the Small Webcaster Settlement Act (SWSA) that ultimately resulted in a flat-rate royalty based on a percentage of the operator's revenue. Under this law, CARP rates were adjusted such that commercial Webcasters with annual revenue of less than \$1.2 million paid flat royalties of 10–12 percent of revenues, or 7 percent of expenses, whichever was higher. Also under SWSA, noncommercial operators

A specific group that is also hit hard by these changes is public radio (i.e., Webcasting services from CPB-qualified stations). The noncommercial rates noted above will apply to them under the CRB ruling, but their impact is made much larger by the fact that these stations have never themselves paid any Webcasting royalties under CARP.

This is because during the CARP process, NPR negotiated with music rights holders a separate, blanket arrangement, and CPB paid this fee for the period (2002–2005) for the entire national system. No such separate deal or any payment by a national organization was arranged under the new rules, however, so all CPB-qualified stations — many of whom are major Webcasters, some with multiple streams — are now directly (and retroactively to 2006) liable for music Webcast royalty fees for the first time.

Numerous requests for rehearing were filed with the CRB when its ruling was announced in March, but the CRB has subsequently rejected all of these requests as without merit. Thus the CRB ruling is now final. Nevertheless, other venues for petition remain. We'll examine those next time.

Skip Pizzi is contributing editor of *Radio World*.

PREVENT BROADCAST DOWNTIME WITH STABILINE® POWER QUALITY SOLUTIONS

Transient Voltage Surge Suppressors



CS1 Series / Service Entrance Protection

- Parallel Connected
- 60 to 300kA Surge Current Capacity
- Single & Three Phase Models
- All Mode Protection
- Individually Fused MOV's
- NEMA 4X or NEMA 4/12 Enclosure

Automatic Voltage Regulators



WHR Series / Transmitter & Facility Protection

- Rugged & Robust Technology
- Single & Three Phase Models
- 2 to 1,680 kVA Capacities
- 19-Inch Rack Mount Models
- Narrow & Wide Input Correction Ranges
- High Overload Capability



Superior Electric

28 Spring Lane, Suite 3, Farmington, CT 06032

Phone 860-507-2025 • Fax 860-207-2050

www.superiorelectric.com

RADIO IT MANAGEMENT

Stream on Fiber Eases Webcasting

by James Careless

Streaming station audio is a great idea ... until it is time to actually do it. With all the software, servers, codecs, bandwidth and other considerations that go with streaming audio, Webcasting can be a real headache if not a full-time job.

Certainly this describes how the OK Radio Group, which has launched nine radio stations in western Canada, felt about streaming audio.

"We experienced tremendous challenges in trying to get all of our stations streamed," said Andrew Snook, operations manager of the Stream on Fiber division of OK Radio.

"It was a lot of hassle for us to encode and send out the audio. It was also overly complicated for our listeners to have to download the Windows Media Player, QuickTime or RealPlayer, then get it configured to hear us on the Web."

Fed up with this state of affairs, OK Radio decided to do something about it.

"We said to ourselves, 'Let's go back and think of a totally different way to stream audio. Let's come up with something simple and easy to use at both the transmission and listening ends,'" said Snook.

"So we developed what we called 'streaming in a box,' which we now call 'Stream on Fiber.' It's a box that comes with just three cables to connect: one for power, one for audio input and a third to connect to the Web. That is all there is to it."

How it works

The Stream on Fiber concept is simple: Create an integrated Web-connected hardware/software "box" that broadcasters can plug in, then leave the rest to Stream on Fiber. The company takes care of receiving the station's audio stream and serving it out to the world.

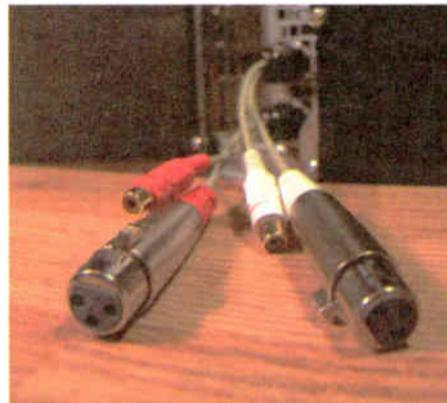


As for sound quality? According to Snook, Stream on Fiber can deliver good quality stereo audio at 32 kbps.

So what makes Stream on Fiber different from the other streaming host services out there?

"We deliver the best quality audio at the lowest bit rates possible, when compared to the three big formats (Windows, RealAudio and QuickTime)," said Snook. "We also provide stations with a Web-based player that can be used by listeners with a simple click on the radio station's Web site. There's no player for them to download or configure."

What is in the box? Secure Unix-based encoding hardware plus a modem. "Our appliance uses an Ogg Vorbis Unix encoder to produce higher quality audio at lower bit rates," said Snook. "Combined with our audio player, your listeners can enjoy Ogg-quality audio right within their own Web browsers."



Clockwise From Top: The Stream on Fiber Box, a Look at the Back Panel and a Closeup of the Inputs and Outputs

No headaches

Because the Stream on Fiber box uses Unix, backed by the company's end-to-end management of this system, there is nothing for broadcasters to maintain or fix.

Once a station is plugged into Stream on Fiber (so-named because signals are carried on fiber-optic backbones to the OK Radio Group server farm), the system can be ignored.



The beauty of using Unix for streaming is that Unix is a comparatively simple and notably stable operating system. In fact, the kind of outages common to Windows are almost unheard of in the Unix world.

For surfers, using the Stream on Fiber player is a matter of clicking a link on the station Web site. The link directs the listener to the Stream on Fiber site, where the company serves up a stream. But this is invisible to the Web-based listener, who sees only a Java applet with a VCR-style control panel and a volume slider. The player can be customized to display a station logo, too.

The cost

There are two costs to using the Stream on Fiber package: the hardware and a monthly hosting fee.

"The box itself costs \$600," said Andrew Snook. "Meanwhile, our monthly fees start at \$95 per month for 32 kbps streaming, and more if you want 64 kbps streaming." Bandwidth fees are covered by those charges, he added, with Stream on Fiber having the ability to support tens of thousands of surfers at a time.

Once a broadcaster signs up for Stream on Fiber and makes the initial payment, an account is set up and the Stream on Fiber interface box is sent to them. Just plug in the Internet, audio and power, and the station is ready to go.

Stream on Fiber provides statistical analysis of traffic to stations at no extra charge and has 24/7 support and service.

"If you want to keep fighting the headaches of doing your own streaming, go right ahead," said Snook. "But if you've had enough, and want to work with broadcasters who have solved this problem, then contact us."

For information from Stream on Fiber visit www.streamonfiber.com.

Time is Money

Save Both with ESE

Broadcasters have saved both for over 35 years using ESE precision master clocks and timing-related products. ESE products accurately synchronize broadcast operations using a choice of GPS, WWV, Modem, Crystal or line frequency for affordable, reliable, perfect time.

Spend a few seconds on www.es-web.com to discover a complete array of timing systems that are designed for easy installation, set-up and operation.

142 Sierra Street
El Segundo, CA 90245 USA
Tel: (310) 322-2136
Fax: (310) 322-8127
www.es-web.com

Delays Spark Debate in Africa

by Franz van der Puye

The latest broadcasting technology introduced in Ghana is profanity delay equipment. Observers say it may help calm an ongoing debate over phone-in programs.

The U.S. ambassador to the western African nation, Pamela E. Bridgewater, presented delay equipment to six radio stations in February. The beneficiary stations were Joy FM, Citi FM, Peace FM, Radio Gold and Uniiq FM in Accra and Diamond FM in Tamale.

The equipment, familiar to U.S. radio broadcasters, allows producers of live programs to screen and edit out inappropriate language without interrupting the free flow of the program.

Good time

According to the ambassador, the equipment will help stations improve and promote professionalism.

"I know that many of you rely upon call-in shows as an integral part of your daily programming and we hope that these systems will allow you to continue to reach out to your listeners directly, while maintaining the professionalism and focus necessary for your mission as journalists," Bridgewater said.

[The announcement did not state the model of equipment donated; in online photographs they appear to be Symetrix AirTools delays. The ambassador stated that the gear was manufactured in Washington State, where Symetrix is located.]

Phone-in programs attract large audiences, but they also draw additional governmental and regulatory scrutiny and ire.

Prior to 1995, most Ghanaian talk radio involved a one-way conversation from the announcer to the listeners. Joy FM then broke with convention and introduced interactive programs, asking listeners to phone in and express their views on the issues under discussion.

Since then, radio stations across the country have added phone-in segments. The staple diet is political debate, and the views expressed by listeners have sometimes proven highly controversial.

Some critics of the format argue that some callers misuse the programs to foment crises.

Swift response

At one point, critics called for a ban on phone-in programs, particularly during the run-up to general elections in December 2004, saying that on-air airing of opinions might whip up ethnic resentments and threaten social stability.

The Reverend Dr. Fred Deegbe, general secretary of the Christian Council of Ghana, was a force behind the debate. In January 2004, Deegbe sent a passionate appeal to President John Agyekum Kufuor, calling on the government to restrict radio phone-ins. He argued that many callers had abused the opportunity to use the telephone as part of broadcasting.

There was a swift response from the National Media Commission, which rejected the suggestion of banning phone-in programs. The NMC argued that any attempt to curtail phone-ins would amount to restricting freedom of speech.

Since then, there have been calls for broadcasters to find a way to temper their audiences.

In an editorial, the state-owned

Ghanaian Times newspaper urged broadcasters to purchase delay technology so that they could cut off inappropriate callers before their comments made it to the airwaves.

Greater control

The presentation of the profanity delay equipment by the U.S. diplomatic mission in Accra is seen as an apparent response to this appeal.

Those who support the presentation are calling for the use of delay equipment in all radio stations in the country in order to give program hosts greater control over what goes on air.

But not everyone is excited about the

technology. Some critics argue that the introduction of the delay equipment could lead to restriction on the freedom of speech.

They argue that the question of what constitutes "inappropriate" language is relative, and that some hosts may abuse the system and deny air space to those who disagree with their views.

However, Edward Ameyibor, general manager of Diamond FM, speaking on behalf of the recipient stations, contended that while the Ghanaian constitution guarantees freedom of expression, that right was not meant to encompass the broadcasting of "unhealthy" comments on the airwaves.

He is confident that the delay equipment will help the media in the role of gatekeeping.

Text messaging

Other than delay equipment, SMS text messaging has been considered one of the best technologies for helping to calm the debate over phone-in programming format.

Since the introduction of SMS text messaging services in Ghana, radio stations have asked listeners to express their opinions via texting. Some critics favored this technology, underlining its advantages over telephone calls.

They argued that because the available telephone lines are quickly engaged, it can be difficult for listeners to call in to popular phone-in programs. SMS text

See DELAY, page 37 ▶

Get "In The (Talkback) Zone"!



Use up to 12 Guest Pods in any combination

The new **MultiPhones II** multi-user headphones system now has **Zoned Talkback!**

Use separate Guest Pod **Talkback Zones** for Host, A-Guests, and B-Guests. Talk to each group without bothering the others!

For complete details 626.355.3656 or visit www.henryeng.com

- Easy upgrade for existing systems
- Simple "daisy chain" installation
- Uses cat5 cabling

Get MORE MultiPhones for LESS cash! The new lower price is just \$250*. In stock at all Henry Engineering dealers.

We Build Solutions



*Price is for MultiPhones II Master unit; Guest Pods sold separately.

Levine's KKGO/KMZT Embrace HD Radio

Indy Owner Also Puts 'K-Mozart' Format on HD2 Multicast Channel

by Scott Fybush

There aren't many broadcasters working today who were active on the radio scene back in the days when FM was an unproven, commercially questionable technology. There are fewer still who put a station on back then and still own that station today. And there's only one doing it in a major market: Saul Levine at KKGO and KMZT in Los Angeles.

Back in 1959, Levine put KBCA(FM) on the air at 105.1, broadcasting from more than a mile above downtown L.A. as one of the first FM stations on Mount Wilson. KBCA soon became all-jazz KKGO, then flipped to classical in 1989, eventually becoming "K-Mozart," KMZT.

In 2005, Levine flipped the switch to put K-Mozart on the air in HD Radio, a move he says he never doubted he'd make.

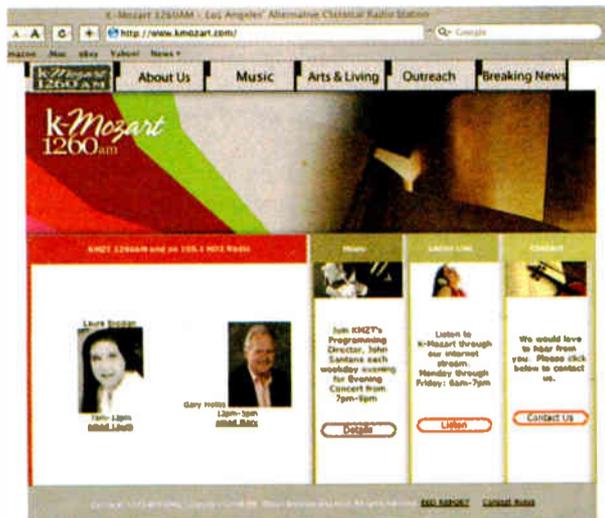
"There was never a moment's hesitation about going digital," Levine said. "That was a natural progression we thought we had to make."

The motivation, Levine admits, was as much promotional as technological.

"There's the perception, which I don't agree with, that analog radio is dead," he said. "So terrestrial radio had to go digital to stay competitive."

Technological leap

When KMZT(FM) went HD, it was still using the same Mount Wilson transmitter site where the station began almost five decades earlier, not to mention an



The way we promote it, it's K-Mozart on HD2, and also simulcast on AM," said Levine.

analog transmitter with plenty of history — a BE FM30 that was "about 20 years old, with upgrades," says John Davis, the consulting engineer who's maintained the Mount Wilson site for much of its history.

The first big HD decision — whether to combine the digital signal into the existing Jampro two-bay analog antenna, or whether to use a separate antenna — was an easy one, Davis says.

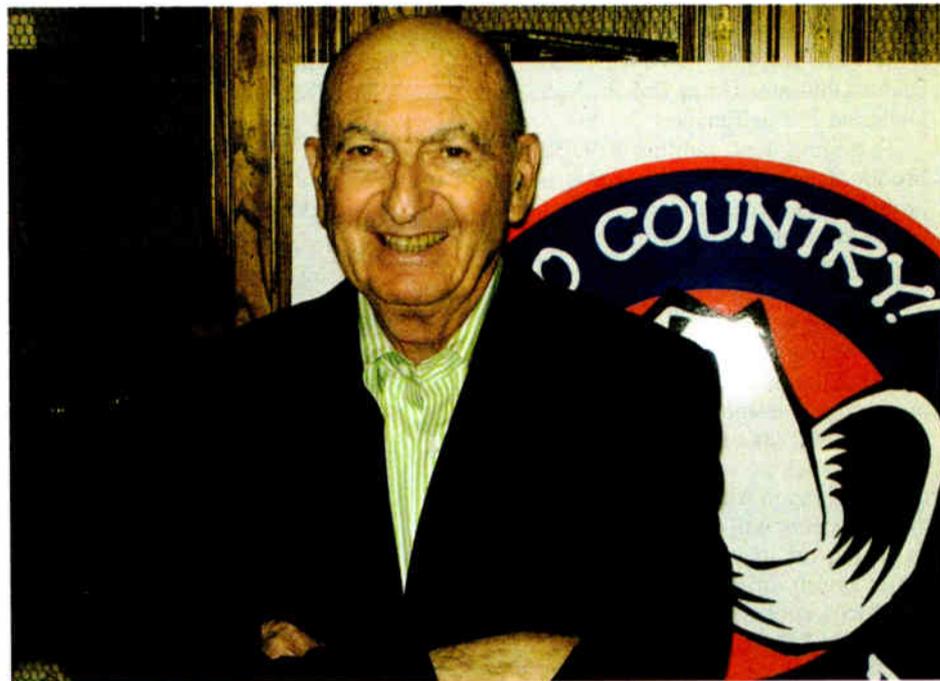
Since KMZT owned its own 220-foot self-supporting tower just west of the main ("Mount Alta") cluster of towers on Mount Wilson, there was plenty of space for a new antenna, but only limited space in the transmitter building for the combiner, higher-powered transmitter and heat-generating reject load that would have been needed to implement high-level combining.

While the "space combining" approach that Davis chose can cause issues for listeners close to the transmitter, where the ratios between the analog

and digital signal levels can vary, that's not a factor for stations on Mount Wilson, 5,700 feet above sea level and many miles from the valleys and hilltops where its listeners are.

"From anywhere, the (separate) antennas are going to look like a point source," Davis said.

For an antenna, Davis went with a vendor he was already comfortable with.



Saul Levine at the launch of 'Go Country'

Jampro had provided KMZT with a two-bay main antenna and, about 20 feet below that, a four-bay JSCP auxiliary antenna. Between those two antennas, the station mounted a one-bay Jampro JSCP for HD Radio.

Davis and Levine went with a trusted source for their transmitter as well.

"Our (BE) analog transmitter has been about as reliable as one could hope for, and dealing with BE has always been a pleasure," Davis said.

New way of thinking

KMZT chose BE's FMI 106 transmitter for its HD Radio signal, fed by the FSi 10 HD Radio signal generator. It's a combination Davis says has been very reliable, once he learned to think of today's transmitters in terms of software as well as hardware.

"You're now dealing with computers. It's a new way of thinking," he said. "We had one software upgrade that didn't work, so we had to revert to the previous version."

Other than that, the only headache KMZT encountered in its transmitter conversion came in getting the signal from the station's studios, just off the 405 Freeway in West L.A., up to the transmitter some 30 miles away. The station's existing one-hop analog microwave STL system had to be replaced as part of the upgrade to HD.

"We have a Moseley Starlink digital STL, running analog input at the studio and digital out at the transmitter site," Davis says.

"We'd have liked to have had the importer and processing at the studio, but we have a very long STL, and I wouldn't want to rely on that as a data path."

At the transmitter end of that long STL path are separate Aphex 2020mkIII audio processors for the analog and digital program chains, feeding the BE IDi 20 HD Radio Importer, which generates

the station's HD2 signal and PAD data. (The audio path for the HD2 is a telco line from the studios to Mount Wilson.)

"The audio processing for the digital signal is significantly different from the processing for analog," says Tom White, the station's director of engineering. "With the digital, we want to keep the dynamic range intact, while the analog is more heavily processed."

At the studio end, upgrades for HD Radio are still in the future. White says soon he hopes to replace the station's

analog Pacific Recorders BMX-II consoles with digital consoles.

Adding an HD2

While Levine says HD Radio's multicasting capabilities weren't a deciding factor in his decision to go digital, his station wasted little time taking advantage of the opportunity to add an HD2 multicast channel.

"We kicked around some ideas for doing something separate on the HD2," said Mike Johnson, the station's operations manager.

In the end, though, he says the decision to simulcast KMZT's sister AM signal was an obvious one. Levine's Mount Wilson Broadcasting purchased what was then KGIL(AM) 1260 in 1992, and over the years it's changed the station's city of license from San Fernando to Beverly Hills, upgraded its power (from 5 kW to 20 kW days/7.5 kW nights), and changed its format multiple times.

Through all those moves, the AM station was hampered by a signal that, especially after dark, lacked the wide reach of the Mount Wilson-based FM signal. While Levine boasts of a "100 mile" reach for the FM, the AM was hard to hear in important areas such as Orange County. Levine added another AM on 540 in Tijuana to help reach Orange County and the San Diego market, but the combined reach of the two AM signals was still no match for the big FM on 105.1.

When the AM began simulcasting on 105.1-HD2, it was doing standards as KKGO(AM), "Unforgettable 540 & 1260." But an abrupt change in the L.A. radio scene soon brought a new format to the AM and HD2 airwaves, and then an even bigger shift a few months later.

After several years of rumored flips away from country, Emmis' KZLA(FM) finally changed format in August 2006 to rhythmic adult contemporary, becoming

See LEVINE, page 37 ►

Easy Ordering In Nanoseconds



- The ONLY New Catalog Every 90 Days
- NEWEST Products & Technologies
- Over 800,000 Products Online
- More Than 330 Manufacturers
- No Minimum Order
- Fast Delivery, Same-day Shipping



a tti company

The Newest Products
For Your Newest Designs

mouser.com (800) 346-6873

The NEWEST Semiconductors | Passives | Interconnects | Power | Electromechanical | Test, Tools & Supplies

Mouser and Mouser Electronics are registered trademarks of Mouser Electronics, Inc. Other products, logos, and company names mentioned herein may be trademarks of the respective owners.

Levine

► Continued from page 36

"Movin' 93.9" as KMVN(FM). The format change left southern California fans of Vince Gill and Carrie Underwood without a home for their favorite music, and it opened a window for Levine to make another change on his AM and HD2 signals.

In December, KKGQ became "Country 540 & 1260," hiring former KZLA morning man Shawn Parr to do mornings, with Dial Global's syndicated country format filling the rest of the day. Even with the limited AM signals, Levine says the format quickly found an enthusiastic audience, inspiring him to make an even bigger move.

K-Mozart goes HD2

"I've done classical for 18 years, and I had no intention of switching the FM from classical," Levine says. But the success of country on KKGQ(AM), combined with frightening declines in ad revenue for the classical KMZT(FM), all but forced his hand.

"Our year-over-year revenues were down 40 percent in January, and we projected they'd be down 80 percent for the year," Levine said in a mid-March interview. "And believe me, that was scary."

Levine blames ad agency buyers and their single-minded focus on consumers in the 25-54 demographic for the slump.

"The median age for classical was 60 to 62," he said. "The advertisers we had counted on year after year — BMW, Mercedes — they abandoned us."

While Levine disagrees with that conventional wisdom — noting, for instance, that his wife was away in Africa on a safari that cost "a fortune," celebrating her 60th birthday — as a standalone station operator, he couldn't ignore financial realities forever.

"The decision to go country (on FM) was made in a very short time," he said. On Feb. 26, KKGQ moved from AM 1260 to FM 105.1 as "Go Country" — and "K-Mozart" became one of only a small handful of stations to move from analog FM to an HD2 multicast channel.

While "K-Mozart" remains available to analog listeners on the AM 1260 signal, now renamed KMZT(AM), Levine says the station's branding makes it very clear that the HD2 takes priority.

"The way we promote it, it's 'K-Mozart on HD2, and also simulcast on

AM,'" Levine says.

HD2 "is built into our legal IDs, and it's built into our imaging," says Johnson, who's now operations manager of both stations as well as PD of KKGQ(FM). The stations are also heavily touting the absence of a monthly subscription fee for HD Radio, something they see as a selling point against satellite radio.

Johnson says educating listeners about HD Radio has been a learning experience.

"Some people have their own tabletop radios and think they can already hear HD Radio on them, and they call up asking 'How do I do it?'" he said.

Levine says he's upset by what he calls the 'very cynical and negative' attitudes expressed by some in the broadcasting community about HD Radio.

While Johnson says few country listeners had made the move from AM to the HD2 FM simulcast, he thinks the move of the established "K-Mozart" classical brand to HD2 has been a big incentive for classical listeners to seek out HD Radio receivers.

"That definitely plays into it, that we have an established format, an established audience. It's a big help," he says.

Johnson says the conversion to HD has been a learning experience at the station's end, especially where the first generation of receivers is concerned.

"There's a big difference between receivers, and the most expensive is not necessarily the best," he said.

Bandwidth

Levine, who's been deluged with listener responses, many of them angry, since the switch, says amidst the complaints from classical listeners have been a few positive responses from new HD Radio converts.

"Last week, we got a call from a listener in Newport Beach, about 50 miles away, who said he went out and bought a radio just to hear the HD2," Levine said.

He's hopeful that prices for HD Radio receivers will continue to fall, and that their availability will continue to grow, and he points to Wal-Mart's announcement in March that it would offer a \$169 car receiver as a potential turning point.

Davis and White say the processing on the FM signal is still being tweaked since the flip to country, which calls for much

more aggressive analog processing than the classical format did.

Also under review is the bandwidth split between the HD1 and HD2 signals. Right now, the HD1 signal gets 76 kbps, while HD2 gets only 20 kbps, but with classical now on HD2, Davis expects he'll soon be increasing the bandwidth on the subchannel.

As for the AM 1260 signal, Levine credits veteran Los Angeles contract engineer Burt Weiner with cleaning up its analog audio considerably after the format change. He says he can imagine a time when "K-Mozart" will reach enough lis-

teners on the FM HD2 signal that he can again offer separate programming on AM.

But Levine is less certain about any plans to put HD Radio on the AM signal itself.

"We purchased a license (from Ibiquity, for HD on AM), and ultimately we will do so, but we have some questions that need to be answered, including reducing the analog audio bandwidth."

Levine says he's reluctant to narrow the analog audio on the newly improved AM signal for the sake of digital subcarriers.

"If that (issue) weren't there, I'd do HD even in spite of the questions about nighttime AM operation," Levine says.

The long view

Overall, though, the staff at KKGQ and KMZT are strong believers in HD Radio.

"I'm really excited about it," says Johnson. "It opens up new spectrum, and I hope everybody does something unique to double the choices available to listeners. This is really important to our industry."

For Levine, the \$250,000 investment that he made to take 105.1 digital doesn't have to be recouped overnight to be worthwhile.

After all, unlike most of today's FM owners, he's been around long enough to know that that medium didn't become profitable overnight, either.

"When I put the station on the air in 1959, FM receiver penetration in the market was 30 percent. AM reigned

supreme," he recalls. "You couldn't sell FM advertising. AM stations were bonus-ing their FM simulcasts."

For most of the station's first decade on the air, Levine worked during the day as a lawyer to help support his struggling FM operation.

"It took 10 years, or a little longer, to make a go of it. But I had no regrets, because I knew it was a superior product."

In time, of course, Levine's faith in FM paid off. Today, he takes pride in his status as one of the last independent station owners in a major market, as well as in the support his stations have provided for the arts community in almost 50 years on the air. In addition to being committed to classical on his HD2 signal at 105.1, Levine recently signed a deal with California State University-Long Beach to take over management of its noncommercial jazz station, KKJZ(FM), reuniting him with the jazz format he programmed on KKGQ(FM) before the station flipped to classical in 1989.

Levine says he's upset by what he calls the "very cynical and negative" attitudes expressed by some in the broadcasting community about HD Radio. He says he's sympathetic to smaller stations that may not be able to afford a conversion to digital, but he remains hopeful about a successful move to HD for the industry as a whole.

"I feel it's a wonderful technological advance," he says, "and everyone who can run it should run it."

Scott Fybush, a frequent RW contributor, writes from Rochester, N.Y., where he's on his third HD Radio receiver.

Delay

► Continued from page 35

messaging, on the other hand, allows many listeners to deliver their opinions simultaneously.

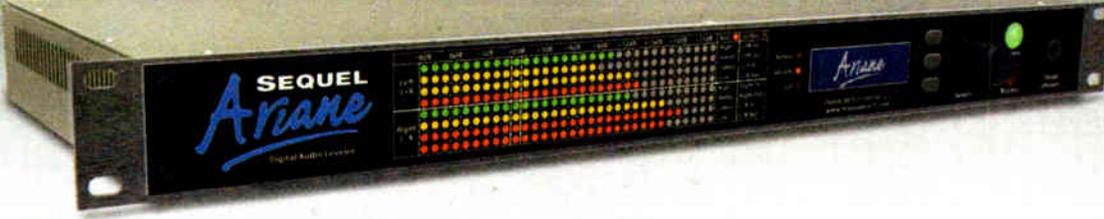
Also, a presenter can screen text messages and set aside those that do not contribute to the discussion at hand. Screening telephone calls is more difficult, they argued, because callers can disguise their reasons for calling.

And with a program host reading the text messages, there is no worry about inappropriate language and thus no need for broadcast delays.

Franz van der Puye covers the industry for Radio World from Accra, Ghana. Contact him via e-mail at vanpee@igh-mail.com.

When quality level control matters, you do have a choice:

Ariane...



Or these:



The Ariane Sequel ...There Is NO Equal!

High-quality, multi-purpose AGC... for pre-processing level and ambient control • low-artifact streaming and digital broadcast • program distribution • television audio loudness optimization

TRANSLANTECH SOUND, LLC Sound Processors and Broadcast Sound Consultation
<http://www.translantech.com> • email: Sales@translantech.com • New York: (212) 222-0330 • Europe: +49 2361 9049 649

©Copyright 2007 TransLanTech Sound, LLC

HD RADIO IN THE REAL WORLD

Boston Teens Program 'Radio You'

*Greater Media Lets Air Talent Pick
The Music on Multicast Experiment*

by Ken R. Deutsch

Teens have left the building.

According to Arbitron, 12-to-17-year-olds spent 11.3 hours a week with radio in 1998. Today that number has dropped to 8.7 and is trending downward.

By comparison, men 25-34 spend about 15 hours per week. Whether the kids are listening to their iPods, playing video games or touching up their MySpace homepage, radio is where they are not hanging out.

Greater Media, Boston designed a station to lure the younger demographics back to the FM dial. "Radio You Boston" is the HD2 channel of rocker WBOS(FM) and is also available as an Internet stream at www.radioyouboston.com. At press time, launch was set for sometime in May.

The secret behind the station is who is running the show.

"It's a grassroots operation," said Program Director Cindy Howes, age 25. "I've gone out into the community and found interested people who want to do their own shows, two hours, once a week. I've used MySpace, gone to schools and checked out message boards. I've talked to some of my old friends from Emerson College who like music.

"Some of the people we're finding are not necessarily in the radio business. They might be local club spinners. This is a little like running a college station but we have more resources at Greater Media and we have a clear path."

In the Judy Garland/Mickey Rooney spirit of "Let's put on a show!" these newbie DJs are all volunteers. One would think riding herd on so many inexperienced young people would present legis-

tic challenges, but Howes believes she can handle it with a little help from George Veszpremy, who is also a morn-



Radio
You ^{HD} Radio
BOSTON



George Veszpremy and Cindy Howes

ing show producer at WBOS.

"Cindy and I are working closely," said Veszpremy who serves as assistant program director for Radio You. "I'm working on the technical aspects while she works with the creative part. We're not too worried about the security issues of having so many non-station employees. There will be oversight and they will all know what the expectations are."

But building a station like this may not be trouble-free.

"On the positive side we'll sound great on the air," said Veszpremy. "On the neg-

ative side, it will be a new experience for all of us behind the scenes. It's a radically different idea."

HD2 it yourself

The programming of Radio You Boston will be eclectic.

"We'll have some documentary shows, comedy and video game shows," said Howes. "I'll co-host a midday show called 'Acoustic Break-Dance,' and there's going to be a rock block in the afternoon. It's a bottom-up format with most of the ideas coming from the people we find."

The approximately 37 amateur stars will pre-record their shows using the station's Broadcast Electronics AudioVault system, often at night or on the weekend. Greater Media personnel will oversee them and provide support.

"The air talent will pick the music," said Howes. "I just ask that what they play appeals to the 18-24 demographic and follows FCC regulations. For promotion we're going to be out there in the

We might find the
next big star.

— Buzz Knight

Boston community and rely heavily on MySpace and FaceBook as well as the alternative papers. We're going to start some noise underground and word will spread quickly. We're planning Radio You shows at parties, clubs and colleges."

Because listenership of HD Radio is limited, the Internet stream will be where most people find the station.

"We want to have a wicked cool Web site," she said.

Look ma, no commercials

The HD Digital Radio Alliance is an industry advocacy group that encourages the growth of this new medium.

"For the immediate future, none of the Alliance members will run commercials," said Buzz Knight, Greater Media Boston vice president of program development. "The motivation behind Radio You Boston is first to try to do something different with a demographic that radio often neglects. Secondly we'll try to infuse our demographic with interest for our business. We might find the next big star."

See RADIO YOU, page 41 ▶

DIGITAL AUDIO SWITCHING



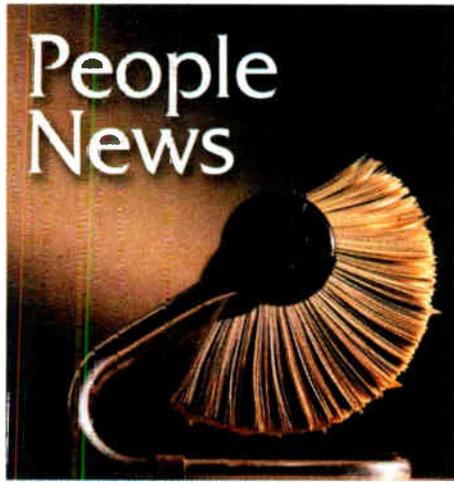
THE LOGICAL WAY 3-DRX

Automatically switches between two AES digital audio signals or a stereo analog signal. Analyzes digital signal errors (CRC, bit, framing, etc.) and checks for loss of audio on the digital signal. User programmable.

TITUS
TECHNOLOGICAL
LABORATORIES

800.806.8851

WWW.TITUSLABS.COM



People News
Tell us about your job change or new hire. We're particularly interested in hearing news about radio engineers and other managers. Send news and photos via e-mail to radioworld@imaspub.com or mail to Radio World People News, P.O. Box 1214, Falls Church, VA 22041.

Wheatstone added Kelly Parker as west coast systems engineer. He heads up the West Coast technical office located in Northern California. Before joining Wheatstone, Parker was employed by Network Minded, a consulting company made up of former Susquehanna Engineers, specializing in broadcast and IT solutions. Parker had served as chief engineer for the Susquehanna stations in San Francisco, later being promoted to senior systems engineer for Susquehanna Radio Corp.



Kelly Parker

Radial Engineering advanced Steve Hopia to the position of production manager. He has been with the company for eight years, and formerly served as Radial custom shop manager.

RCS hired Richard Rice as midwest regional sales manager. He comes to the company from his most recent position as western region sales manager for Broadcast Electronics.

Broadcast Networks appointed Tony Simpson general manager. He previously ran his own company, Audionics.

Focus360, which develops multi-platform marketing programs for advertisers, appointed Joan Gerberding president of LocalFocus, its division that delivers radio solutions outside of major markets. Gerberding has held top management positions at Nassau Broadcasting Partners, Arbitron and Access 1 Communications.

WFUV(FM) named Maria Watson development and major giving director. She previously worked as director of development for the Brooklyn Philharmonic and as director of marketing and communications at the Chamber Music Society of Lincoln Center.

Pro audio veteran Steve Kawasaki was named vice president of marketing for BSW. He joined the audio equipment supplier after five years with Loud Technologies where he served as director of sales for North America for the last three years.

The Radio-Television News Directors Association awarded the Rob Downey Citation to Noreen Welle, RTNDA's vice president of communications, marketing and membership who died in December at age 57. The honor, which recognizes exceptional service to the RTNDA board of directors, is given each year during the RTNDA@NAB convention in Las Vegas. Welle's husband, Tom, accepted the award on her behalf.

Jampro Antennas expanded its sales team with the addition of Steve Gordoni as domestic sales manager and John Buffalo to handle domestic sales. Gordoni's former positions include serving as North American sales manager for Audemat-Aztec and Orban/CRL, and area sales manager for Broadcast Electronics. Buffalo formerly served as engineering manager for Jefferson-Pilot (now Lincoln Financial) for 20 years.

Cavell, Mertz & Davis Inc. changed its name to Cavell, Mertz & Associates Inc., after Joseph M. Davis left to start his own solo practice. Davis' new firm is called Chesapeake RF Consultants LLC. Cavell Mertz is based in Manassas, Va., as is Chesapeake RF for now.

WAAF(AM-FM) personality/Music Director Mistress Carrie was presented with the Commander's Award for Public Service by Brig. Gen. Oliver Mason, Maj. Winfield Danielson and Sgt. Jamie Gaiten of the Massachusetts Army National Guard. In 2006,

WAAF(AM-FM) personality/Music Director Mistress Carrie was presented with the Commander's Award for Public Service by Brig. Gen. Oliver Mason, Maj. Winfield Danielson and Sgt. Jamie Gaiten of the Massachusetts Army National Guard. In 2006,

Mistress Carrie went to Iraq and Kuwait to interview soldiers from Massachusetts during a broadcast live from Baghdad marking the fifth anniversary of 9/11. She is credited with keeping her listeners informed about troop efforts overseas and boosting the morale of deployed military personnel.



Sgt. Jamie Gaiten, Brig. Gen. Oliver Mason and Maj. Winfield Danielson arrived at the studios to surprise Mistress Carrie on-air with the Commander's Award for Public Service.

RFS appointed Mick Bennett global product manager for broadcast and defense systems, replacing Mike Dallimore.

Digram added two digital media experts to its staff. Eric L. Richardson joined the company as director of strategic marketing, while James Ohana takes on the role of solutions integration manager. Richardson had held senior management positions at Fostex Research and Development Inc., InfoTech Inc. and Dalet Digital Media Systems Inc.; and he is president of Futurewave, an AV/IT consultancy. Ohana also is a former Dalet employee, having begun his career at Dalet's Paris office in 1996. During his time there, he managed customer deployments such as ABC, NPR, WorldSpace and XM Satellite Radio.

Eric L. Richardson joined the company as director of strategic marketing, while James Ohana takes on the role of solutions integration manager. Richardson had held senior management positions at Fostex Research and Development Inc., InfoTech Inc. and Dalet Digital Media Systems Inc.; and he is president of Futurewave, an AV/IT consultancy. Ohana also is a former Dalet employee, having begun his career at Dalet's Paris office in 1996. During his time there, he managed customer deployments such as ABC, NPR, WorldSpace and XM Satellite Radio.

Ohana also is a former Dalet employee, having begun his career at Dalet's Paris office in 1996. During his time there, he managed customer deployments such as ABC, NPR, WorldSpace and XM Satellite Radio.

COMPLETE MICROPHONE TO ANTENNA TECHNICAL SERVICES



Complete Systems Integration

Studio and RF Systems Installation, Test, & Documentation

HD Radio Transmission

Factory Authorized By Several Manufacturers For HD Installation & Certification

Plug & Play Transmitter Buildings

Solid Reinforced Concrete Shelters With All Equipment Installed, Tested, & Documented - Ready For Simplified Site Build



Custom Broadcast Studio Furniture

High Quality, Distinctive, & Rugged Studio Furnishings - Designed & Fabricated For The Specific Studio & Application



SystemsStore

Your Online Source for Cable, Connectors, Punchblocks, Racks, Wire Management, Test Equipment, Tools, & Problem Solvers To Complete Any Technical Installation.



BALSYS COMPANIES • 930 Carter Road #228-234, Winter Garden, FL 34787 USA
T: 407.656.3719 • F: 407-656-5474 • www.Balsys.com • www.SystemsStore.com

YES.com: What's Playing, Nationwide

by James Careless

Want to know what songs are playing on American radio in real time? Go to www.YES.com and click on the Map button. You are presented with an interactive map of the United States that displays the names of songs just starting to play right now, on a market-by-market basis.

Not all states are covered; Wyoming and the Dakotas, for instance, are missing at this writing. But populous states such as New York and California are represented, providing listeners with immediate information about 80 percent of the national U.S. market.

Go back to YES.com's main page, and you can see the top 20 songs for the day, as voted by YES.com's users. Not only does this page provide purchasing links to Amazon and iTunes, it also tells you which stations are playing these songs now; including those streaming them right now on the Web.

How YES works

Off-air monitoring is at the heart of YES.com, a small company with seven full-time employees.

"We use automated radio monitoring equipment in 150 U.S. markets, listening to over 2,500 AM and FM stations," says YES founder and CEO Daniel Goldscheider. Cofounder of a Swiss private equity company, Goldscheider established YES in 1999.

"Because each song is distinctive — essentially having a 'musical fingerprint'



This is what's starting to play on radio. Right now.'

that can be recorded and compared to other musical finger prints — we can quickly run it against our musical database to determine its identity."

This data is sent via the Internet to a central office in Philadelphia. From there, the data regarding the song's name, location and station is sent to the company's Web site. It is also kept in a seven-day database, which listeners can access.

"This database can also be searched by station," he said, "allowing a program director to see precisely what has been

With the feedback YES.com users can provide ... advertisers will be able to finally find out which half is being wasted.

— Daniel Goldscheider

played during the last week with the click of a button."

Free services

For members of the public, YES.com provides a free method for finding and buying their favorite music online. Through its chat rooms, they can discuss and vote on their favorite music. Listeners can also vote while driving by calling (888) YES-8888 and keying in the frequency of the station they are listening to. They can then access this infor-

and to bring together interested listeners and advertisers reliably and fast." Goldscheider estimates that YES.com will need millions of members before advertisers start using the service. After three months, it had 100,000 members signed up.

Premium services

For radio stations willing to pay, YES provides third-party song monitoring and logging via Mediaguide, a 50/50 joint See YES, page 42 ▶

STATION/STUDIO SERVICES

...like promotions that are *easy* to sell, a pleasure to air, and make you *lots of money*? We're all about that. Please take a moment to visit GRACEBROADCAST.COM and check out our :30- and :60-second "Sales Boosters." FREE demos, money-making sales helps, and *ridiculously healthy returns* await.

Neat Ideas. **GRACE BROADCAST SALES** Free Demos.
Sound Ideas for Building Business™ Questions? Call us toll-free (888) 472-2388. www.gracebroadcast.com

BIG SOUND • SMALL PRICE

WANT MORE SUMMER BILLING?

FARM SAFETY CAMPAIGN

RUN NOW THRU FALL!

20 :30-second spots (:20/:10)

Fully Produced • Just Tag & Sell! • \$159

GBS Sales Boosters Mean Business!

Inexpensive • Market Exclusive • Ready to Sell & Air!

FREE DEMOS & SALES TIPS!

GraceBroadcast.com

sell more ads 1-888-472-2388 make more money

IN CONGRESS JULY 4, 1776

"FOUNDERS OF OUR AMERICAN REPUBLIC"

20 :60-second features \$169

easy sell.

www.gracebroadcast.com

ATTENTION PROVIDERS!

Promote your services to **Radio World's** readers. Reach Radio Station owners/managers and engineers with your message.

For information on affordable advertising call **Claudia** at **1-703-998-7600, ext. 154.**

He Is the Egg Man

Noncom Christian radio Z88.3 participated in the Easter Egg Hunt staged by Family Christian Center in Clermont, Fla., where young people hunted for a total of 60,000 eggs. Scott Smith and Tyler McKenzie of the morning show broadcast live from the event; they're shown with an unidentified passerby. Separately, 5,500 people attended the annual Z88.3 Easter Sunrise Service in the Bayside Stadium at SeaWorld. Nonprofit broadcaster Central Florida Educational Foundation has four full-power stations, five translators and a Web presence and is multicasting 88.2 HD2 Y-Hot, "#1 for Positive Hip-Hop and R&B" and 88.3 HD3 The Rock.

PEJ Confirms Habits Are Changing

by Donna Halper

The Project for Excellence in Journalism has issued its annual report on the state of the media, and for radio, the results are mixed.

First the good news: Reports of radio's death have been greatly exaggerated. In some formats, notably news, talk and sports, radio remains not just alive but very successful.

And even with increased competition from other media, the size of the overall listening audience has remained stable. More than 93 percent of people 12+ listen to radio every week, a figure that has not changed much since 1998.

The report describes the many ways that new technologies like satellite and podcasting have changed radio listening, but 39 percent of respondents still say they listen to traditional radio at home and 37 percent listen in their car, whereas the most recent data says that 10.5 percent of respondents had listened to satellite radio.

Listening via the Internet showed impressive growth, as more stations began streaming their audio, and an increasing number of Internet-only stations came on the air. This resulted in a 40 percent increase in the number of people who reported to Arbitron that they had listened to radio via the Internet in the past month.

As for who is listening to traditional

(or terrestrial) radio, it varies by format.

News, talk and sports listeners tend to be college-educated (more than 43 percent of news and talk, and 48 percent of sports listeners); this is in sharp contrast

to some of the music formats, such as country where only 15 percent are college grads, or adult contemporary, with 27 percent. Listeners to National Public Radio tend to be the most educated of all, boasting over 71 percent college grads.

Contrary to the myth that only older people like talk radio, 36 percent of all listeners to this format are in the 25-44 demographic. The data also shows that listeners to news and talk tend to identify as Republicans — 36 percent compared to 27 percent Democrats and 26 percent independents.

Slipping

But while it's certainly nice to know

While it's certainly nice to know that many radio listeners are educated and politically involved, that leads us to the bad news: The amount of time they spend listening is down in nearly every format.

Radio You

► Continued from page 38

Greater Media also offers an all-Irish station in Boston, WTKK(FM)'s HD2 channel, among several other digital choices.

Peter Ferrara is president/CEO of the HD Digital Radio Alliance, and he believes the medium is poised for a growth spurt.

"We expect that over a million HD radios will be sold in 2007," he said. "About 81 percent of the U.S. is within

The demographics are changing too. Music formats are losing teens, who much prefer to get their favorite songs by downloading them to their iPod. Meanwhile, even the most successful news and talk stations are seeing their audience grow older.

Some of this was inevitable, given the aging of the baby boomers, but traditional radio is not attracting younger listeners the way it once did.

As for the promise of the new technologies, despite some initially encouraging signs, satellite's growth seems to have slowed. And HD Radio has yet to really catch on, although that may change when the price and availability of receivers improves.

And while there were individual successes and certain markets where radio did quite well, overall, advertising rev-

See MEDIA, page 43 ►

range of an HD signal. We know from recent research that consumer awareness is now over 70 percent. Just the same, converting awareness into demand takes time and we expect that sales will accelerate over the next 12 to 18 months."

In Boston, there are about 21 HD channels available on the dial.

"Greater Media is letting us take a chance," said Knight. "And it's fun to see someone like Cindy Howes, who is within our target demographic, take this on. 'Radio You Boston' is new territory and we'll just have to learn as we grow."

Ken R. Deutsch is a former radio personality and jingle studio owner. ●



DESIGN & FABRICATION & INSTALLATION

Ram Broadcast Systems builds studios for most of North America's major networks, group stations, and news organizations. Ram offers comprehensive studio design, fabrication, systems integration, and custom furniture. Put Ram's 35 years of experience to work for you!

RAM Broadcast Systems
www.ramsyscom.com
800.779.7575

YES

► Continued from page 40

venture owned by YES.com and ASCAP.

"Mediaguide runs the largest broadcast monitoring in the U.S. and identifies over 500,000 songs per day played by over 2,500 radio stations in the top 150 US markets," said Goldscheider. "In addition to ASCAP and YES, Mediaguide provides data to many record labels and radio stations. Mediaguide also tracks commercials so advertisers and stations can verify spots or track competitors."

So why would stations pay for such a service?

"In-station monitoring systems often miss songs that are played on syndicated programming, or sourced off CDs," Goldscheider said. "Because we use fingerprints, these songs are identified and included in our logs. This ensures that radio stations have all of their off-air content logged; not just what's in their own musical databases."

Mediaguide also provides detailed analysis of approximately 50 music formats on an ongoing basis, plus "more than 20 reports, including Playlists, Logs, Charts and other tools to track and analyze airplay for competitor, tastemaker and one's own stations," states the Mediaguide promotional material.

Will advertisers bite?

Currently, YES.com is being underwritten by Daniel Goldscheider and his partners, bolstered by revenues earned

through the Mediaguide partnership with ASCAP. Where do those revenues come from? "Mediaguide does not rely on a single revenue line to support its business," said Steve Lubin, Mediaguide's CEO. "By monitoring both music and advertisements, Mediaguide has multiple revenue lines to support and grow the business."

For his part, Goldscheider foresees a day when advertisers will pay to use the information generated by YES itself, once his user base is in the millions.

But will advertisers pay? They certainly didn't for ConfirMedia, Verance's broadcast monitoring service that closed down after five years in November. Despite the fact that Mediaguide is one of the largest players in the media monitoring market, a former ConfirMedia executive is skeptical that Goldscheider and ASCAP will make their money back.

"People weren't willing to pay for ConfirMedia, despite the sophistication of its service," the source says, speaking on condition of anonymity. "Why would they pay for Mediaguide or YES?"

Daniel Goldscheider is not daunted by such doubts.

"There's an old saying that half of the money spent on advertising is wasted, but nobody knows which half," he said. "Well, with the feedback YES.com users can provide to advertisers — both through their votes and requests for information — advertisers will be able to finally find out which half is being wasted. That's the real value proposition for our company, and why we're willing to support its efforts until it gets big enough." ●

Stations Make the Most of MySpace

by Ken R. Deutsch

Go to www.myspace.com and type WQOK into the search box. You'll discover the latest marketing tool radio stations are using to connect with their listeners and clients: the social networking page.

Here's how it works. On your station Web site is a box that says, "WXXX Listeners Network." Clicking on that takes the Web visitor to a MySpace page that explains how to become a "friend of WXXX." You spell out the benefits of joining and ask your listeners to become a part of your station. See the box on page 44 for

school pals), Doostang.com (for careers) and Flickr.com (for sharing photos) have gone from zero to 60 in about two years. Kids discovered them first, but a growing number of sites like Yelp.com address the interests of adults. You name the specialty and there is a community of people who share that passion.

Meeting listeners, meeting clients

"Stations connect with their audience in very personal ways," said Davis. "For instance, WQOK(FM), Raleigh has more North Carolina MySpace profiles



'Our van goes to a grocery store and gives out music or tickets,' says Travis Gales. 'We do the same thing on the social community networks.'

sample copy from www.surfside1640.com, another station with a large MySpace presence.

"You have the opportunity to send each of your listeners a birthday card on his/her birthday," said Rick Davis, director of research at Carolina Profile Online Research. "You can send out bulletin board entries to all your friends at the same time. Adding someone to your friends list and not communicating with them is a mistake because stations need to communicate to build loyalty."

Social networking sites like MySpace.com, Facebook.com, Classmates.com (for

tied to their station than anyone. These are people who were asked if they would be friends with the station and thought enough of that station to say 'yes.' At very minimum, the WQOK logo is on thousands of individual profiles within its coverage area."

But what does this do for the broadcaster?

"There are probably thousands of people 25-54 years old on MySpace in each market," he said. "Stations are missing the boat if they do not connect with these people who are active enough to establish

See MYSACE, page 44 ►

STATION SERVICES

Online Commercial Seminar Is Free

On May 24, Jeffrey Hedquist will conduct a free 60-minute teleseminar, "Stop Writing Commercials — And Start Getting Results for Your Clients."

He is a consultant and Radio World contributor; RW is not involved in the project.

The seminar is intended to help users create commercials that don't "sound like commercials."

"Letters, conversations, last wills and testaments, confessions, rants, poems, songs, play-by-play broadcasts, new stories, voice mail messages, airline announcements, wakeup calls and more are less expected than commercials and can be more effective," Hedquist stated.

"This teleseminar is for salespeople who want to get better results for their clients without having to spend all their selling time writing."

The online event is Thursday May 24 at 5:30 p.m. Pacific time (8:30 p.m. ET). Registration is limited. Go to <http://Teleseminar.Hedquist.com>.

VocalBooth.com
Complete Your Dream

New 14 Carat Diamond Series



**Modular Sound Reduction Systems
Broadcast, Voice Over, Studio Control,
Audio Post Production and Rehearsal**

541-330-6045

www.vocalbooth.com

information@vocalbooth.com

Media

► Continued from page 41

enue was flat during the past year, and salaries were also flat, with only sports anchors showing notable gains.

The main focus of the report was to examine the state of news, and among the more interesting findings was that in large markets, the total number of minutes of news per day continued to decline, down to about 37 minutes. Only three years ago, it had been as much as 90 minutes in some markets.

And except for the all-news format, those stations that broadcast news tended to do so mainly in morning drive, and offered little news the rest of the day. But this was not true in smaller markets, where providing news throughout the day was common. And the total amount of news and information in small markets increased, averaging 42 minutes a day, up 7 minutes from the previous year.

Another interesting finding was about Web sites. Most stations now have them (87 percent according to one survey), but as for developing content, only 1.1 percent of them devoted a full-time employee to maintaining and developing material for the site.

The problem is the same one that troubles newspaper Web sites: how to make them profitable. As a result, while most stations do have a site, it often relies on a wire service for news and has a staff member doing the updates as time permits. This is more the case in smaller markets, but even in the larger ones, the researchers found few stations making shows available via podcast or archiving special features.

On demand

Tom Rosenstiel is the director of the Project for Excellence in Journalism. Having evaluated this past year's data, he sees that people's listening habits are changing.

For one thing, the new technologies permit them to choose the topics they want to hear more about. This especially applies to the younger demographics.

"Young people are interested in news," he says, "but they want it on demand." And even older listeners are seeking out station Web sites or listening online in an effort to stay informed.

"Internet radio has really picked up, after years of going nowhere. People have become much more comfortable with listening online."

While the PEJ report concentrated on changes in how news is being delivered, Rosenstiel also speaks about the challenges facing music stations.

"When I was growing up, it was the DJ who introduced the new music. But today, young listeners are accustomed to choosing their own music. The DJ has become irrelevant. Thanks to the iPod and downloading music, they can be their own DJ."

Michael C. Keith agrees. He is an associate professor of communication at Boston College and the author of many textbooks on broadcasting.

"I take casual surveys in my classes," he says, "and young people are not listening to radio for music the way they once did. They still listen for sports, but not for music." Interestingly, he finds that young adults still think college radio is cool, but commercial radio has all sorts

of negative connotations. "They perceive it as bad. It plays too many commercials and none of their favorite songs."

Rosenstiel observes that talk radio, while still popular, is seeing increased fragmentation. Conservative icons like Rush Limbaugh remain dominant, but their ratings are declining. However, he is not certain progressive or liberal talk will make a dent in the overwhelmingly right-wing format, and he expects the competition for listeners will become more intense. "I believe we'll see talk [radio] becoming more polemical and more shrill as the audience continues to fragment."

Janet Robert, owner and general manager of Minneapolis progressive talker KTNF(AM), "Air America Minnesota," is optimistic about the future of liberal talk.

"We just had big gains in the 25-54 demographic," she says, "and Stephanie Miller [syndicated by Jones Radio] is bringing in females and younger listeners. But it takes time for people's habits to change. Conservative talk was doing [the format] for years, but now, gradually, more people are trying us, and our ratings show that."

But in the end, whether radio continues to thrive and whether it can attract a new generation of listeners will depend on how essential it is to people's lives. Mike Brandt is general manager at a small market FM in Corinth, Miss., WYDL(FM), where he also does an air shift.

"Many stations have themselves to blame for losing audience," he says. "Too many of them stopped having any personality. Stations that are live and

local and part of the community will still win. Our listeners tell us they appreciate that when they call to make a request, they get a live human. And they know we are there for them."

Does he agree that the DJ has become irrelevant? "No. People still want to hear somebody who is friendly and interesting."

And that seems to be the key. Radio is in a time of transition, and those stations that carve out a unique niche, those stations that incorporate the benefits of technology and still address the needs of the listeners will still be successful. "People have predicted radio's death for years," notes Keith. "In some markets, it may be on life support, but it's not dead yet."

The PEJ report is online at www.stateofthemediamedia.org/2007/.

**Do One Thing.
Do It Well.**

It's What Sets ENCO Apart.

Success comes from knowing what you do best, and then doing it. At ENCO, we know broadcast software, and that's what we do. DAD, from ENCO, is reliable, powerful audio playout and automation that's easy to use...and affordable to purchase. Since 1992, ENCO has provided mission critical systems to small, medium and large markets as well as major radio networks and groups. Your business depends on the audio you play, and you can rely on DAD.

Playing your audio. It's what we do. It's all we do. And we do it well. Call us today for the ultimate upgrade to your existing automation system and experience what sets ENCO apart.

ENCO. When Playing Audio Really Matters.

**(800) ENCO-SYS
(248) 827-4440
www.enco.com**



MySpace

► Continued from page 42

their own Web presence. Each one of those profiles merits tons of free logo impressions for the station. However, these people are not going to have a profile full of radio logos; stations will have to beat the competition there.”

The Internet account coordinator of hip-hop/R&B formatted WQOK is Travis Gales, who spends at least two hours each day working online.

“I get up at 6 a.m. and check the stats and follow up on correspondence,” he said. “Before I go to bed I take another hour to post. Keeping everything fresh is important.”

The programming department oversees the main Web site of WQOK (www.k975.com). Gales creates Web marketing programs for advertisers. He then assists the other account managers in executing the programs online. The goal is to connect site visitors with the advertiser by using network portals.

“I posted our station on Google, Yahoo and MySpace, anywhere I could find an online audience,” he said. “My background is multimedia, direct e-mail campaigns and PhotoShop, so I do most of the Web design myself. I’m the next step up from a Web master because what I am responsible for is generating traffic to our site, and to our advertisers.”

Gales likened his online presence to the station’s remote van.

“Our van goes to a grocery store and

gives out music or tickets,” he said. “We do the same thing on the social community networks. We tell them what the station is doing and offer free passes to movies, concerts and shows. It’s a sales promotion thing, not a programming thing.”

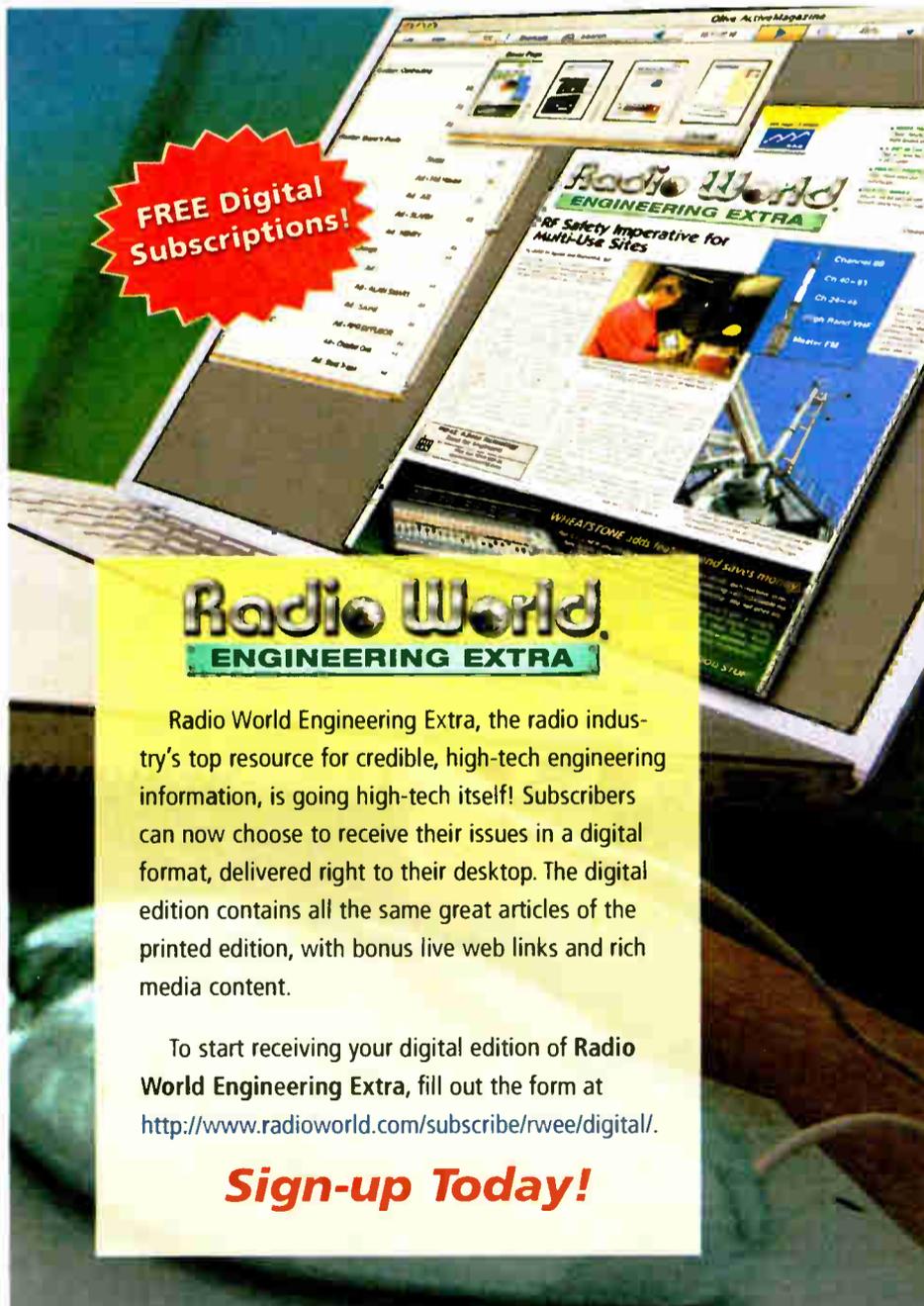
There are probably thousands of people 25–54 years old on MySpace in each market.

— Rick Davis

“Using these online communities allows us to ‘niche it down’ to a very specific target demographic, more specifically than our radio station can. The online profiles can be searched by Zip code, age, race, income and education. Type in a few key words and pull up only Tar Heel fans if you like.”

Rick Davis said that social networking sites are like a database of listeners that is waiting for a radio station with which to connect.

“It’s free grassroots promotion,” he said. “But people are going to get more hesitant to add businesses, including radio stations. Connect with them now or miss them forever.”



FREE Digital Subscriptions!

Radio World ENGINEERING EXTRA

Radio World Engineering Extra, the radio industry’s top resource for credible, high-tech engineering information, is going high-tech itself! Subscribers can now choose to receive their issues in a digital format, delivered right to their desktop. The digital edition contains all the same great articles of the printed edition, with bonus live web links and rich media content.

To start receiving your digital edition of Radio World Engineering Extra, fill out the form at <http://www.radioworld.com/subscribe/rwee/digital/>.

Sign-up Today!

Joining a Station’s MySpace Page

The site www.surfside1640.com is an interesting hybrid. President/Chief Programmer Dave Solomon of Solomon Radio Partners — “professional Internet radio for North and South Carolina” — describes the operation as an AM network of synchronized Part 15 transmitters, multiple Internet streams of different bandwidths and a cell phone streaming network. It does not use call letters to promote itself. The online Surfside “coverage map” is a picture of the globe.

Here is a portion of the MySpace instructions at the Web site, reprinted with permission.

Sign Up at MySpace and Join Now!

Add a friend to your profile who:

- plays fun & free contests.
- provides great free music for your profile if you wish.
- only networks with the best of the Carolinas.
- will always remember your birthday.
- is already on your friends pages ... thousands of people add us.

The Surfside 1640 MySpace Listeners’ Network is a great way to network with people in both North & South Carolina in a fun & safe environment. Our goal is to minimize spam, fake promotions and potentially unsafe profiles from your surfing experience. At the same time we want our network to be fun and our benefits to be large. Our members are more than just a list of people to us. Our members are our friends.



FAQ: I was asked to be a friend of the Surfside 1640 MySpace Listeners’ Network. Can you tell me about it?

When you are asked to be a friend of Surfside 1640 on MySpace, you can be sure that:

1- We have read and approved your profile. We have strict membership guidelines in place to protect our friends. We will not just accept anyone. These are in place to keep our network fun, spam-free & safe. You have been asked to join our network because you are real and seem like a great person.

2- We never use “auto-adder” software and am not a member of any “MySpace Circles” of people who only wish to add names to their profile. There are too many scammers on MySpace. We are only trying to create a network of friends who are real people who enjoy a safe and fun MySpace environment. We refuse to add hundreds of promoters, spammers and other questionable profiles each week.

3- We are the only radio station targeting both Carolinas and our profile is our official profile. Don’t be fooled by multi-level “global networks” or stations who have networks full of musicians, spammers or promoters. Check out who their friends are *before you add them to your friends list*. It will save you an endless amount of spam- your “inbox” will thank you.

4- We do not accept comments or invitations from spammers.

Our listeners’ network is one of the Web’s most scrutinized. We continuously are working to keep it safe and enjoyable.

I discovered a questionable profile in the network, how do I report it?

We make every effort to only add the good people of the Carolinas; however, often a spammer may mask himself/herself in a seemingly safe profile. When we discover these profiles, we eliminate them immediately. We also eliminate sexually based profiles, musicians from outside our area and vulgar profiles. Sure, we hate censorship and scrutinize harshly before moving forward on a deletion. However, we also are serious about our high-quality friends and do our part to minimize the dangers of Web networking in our network. If you have discovered a questionable profile, please send us an e-mail by clicking here.

What are some of the benefits to being a member of the Surfside 1640 MySpace Friends Network?

We have a safe networking platform for Carolina people. In other words, we have developed a safer way for Carolina people to network and socialize with other Carolina people. While we make no warranty about our network, rest assured that it is our utmost intention to only have members who reach a certain quality criteria. If you’ve been asked to join our network, you should feel special!

Products & Services SHOWCASE

OPTILATOR™

T1-OPELATOR NOW AVAILABLE!



Fiber Optic Modem Protection

Lightning Protection that keeps on working!

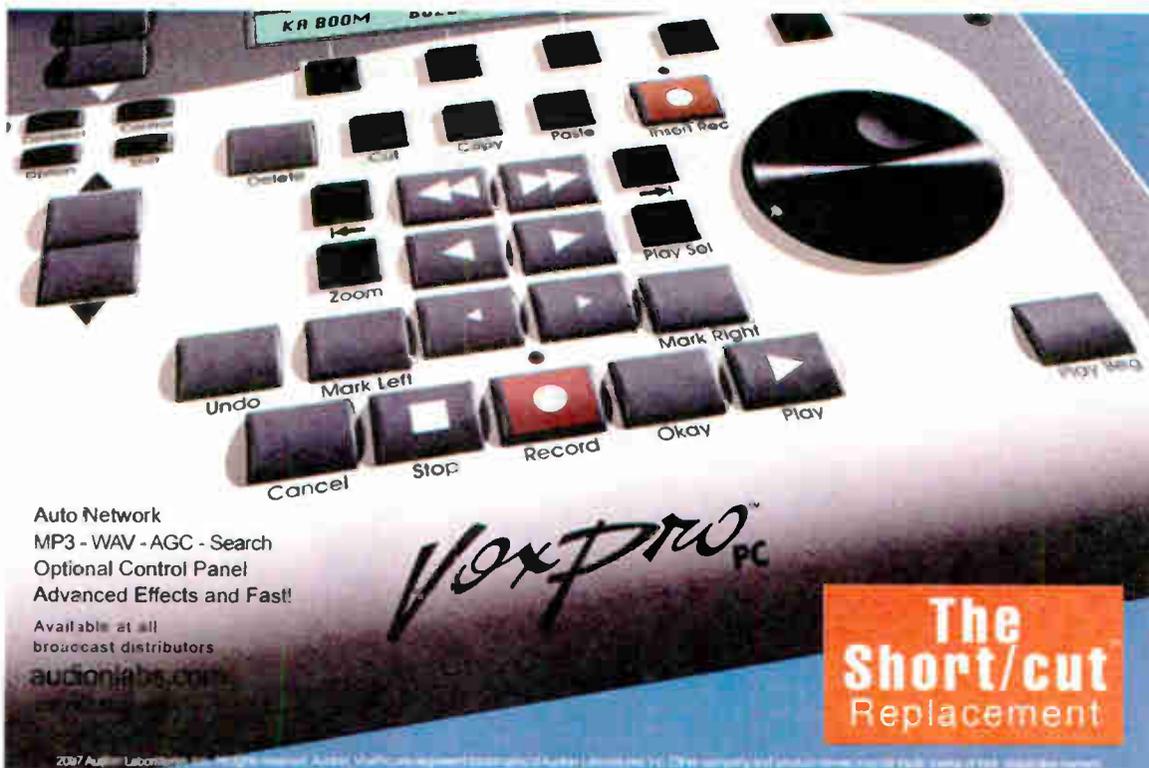
Fiber optic protection impervious to Lightning.

It is now a recognized name brand in the RF Industry.

For more technical information call toll free 888-471-1038, Ph: 727-823-6100, Fax: 727-823-6044. For pricing and sales call: Harris, Broadcast General Store, Broadcastworks, Broadcast Richardson, RF Specialists, Crouse-Kimzey, EuroExchange Brokers Inc., S.C.M.S., or your local distributor.

See our web page: www.opticsshield.com It is for real!

The Ultimate Lightning Protection!



Auto Network
MP3 - WAV - AGC - Search
Optional Control Panel
Advanced Effects and Fast!

Available at all
broadcast distributors

audionabs.com

VoxPro^{PC}

The Short/cut Replacement

Internet & Talking Remote Control

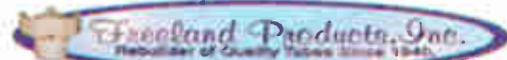


Introducing the First Totally New Talking Remote Control Design in Over a Decade!!

- Voice recordable technology
- Onboard Web Server
- 8 channels metering, status, & control
- Expandable up to 32 channels
- 2 heavy-duty SPDT relays per channel
- Self-calibrating, auto-ranging meters
- Up to 3 alarms per channel
- Cell-phone interface
- Audio pass-through
- Free GUI software to monitor your site & program the Sicon-8
- X-10 capability for additional control

Learn more & test-drive the Sicon-8 web server at www.circuitwerkes.com

CircuitWerkes, Inc. - 2805 NW 6th Street, Gainesville, Florida 32609, USA 352-335-6555



75412 Highway 25 • Covington, LA • 70435
800-624-7626 • 985-893-1243
Fax 985-892-7323 • www.freeland-inc.com
Email freeland.inc.com@freeland-inc.com

IF YOU'RE LOOKING TO CUT YOUR BUDGET, STEP INTO THE 21ST CENTURY AND LET OUR NEW GENERATION OF OWNERS AND OUR ON STAFF ENGINEER HELP YOU REDUCE YOUR ENGINEERING COSTS WITH REBUILT TUBES! WE OFFER A GREAT WARRANTY, QUICK SERVICE AND MONEY SAVING PRICE!!!

WE HAVE A LARGE STOCK OF COMMONLY USED TUBES READY TO SHIP IF YOU'RE IN A HURRY. CALL TODAY FOR MORE INFORMATION.



OMNIRAX The Engineer's Choice!

BROADCAST FURNITURE

WHAT PEOPLE ARE SAYING ABOUT OMNIRAX...

"Within a short amount of time Omnirax was able to come up with a beautiful concept for our new studios."



"The Omnirax design makes these studios incredible for talent and operators on both sides of the console."

"Our furniture from you not only fit into our budget and timeline, it was very well constructed and looked beautiful. I expect to be outfitting many more facilities with Omnirax..."

"I wholeheartedly recommend Omnirax to everyone."



P. O. Box 1792 Sausalito, CA 94966
800.332.3393 415.332.3392
www.omnirax.com info@omnirax.com

Buy simplicity, reliability and service

EAS

Price \$1750.00

Equipment is in stock for immediate delivery!

GORMAN-REDLICH MFG. CO.
257 W. Union St. Athens, Ohio 45701

Phone 740-593-3150
FAX 740-592-3898

New available with optional DTMF control via a phone line.



- 5 two-way RS-232 inputs/outputs for computer, remote signboard & character generator
- 6 audio inputs on standard models. All audio inputs & outputs are transformer isolated from encoder-decoder board
- Automatic interruption of program audio for unattended operation
- 4 line 40 character LCD display with LED backlighting
- 20 key keypad to program unit, set modulation level, set input levels
- Will handshake with automation equipment jimg@gorman-redlich.com Web Site: www.gorman-redlich.com
- 2 year warranty
- 2 minutes of digital audio storage
- 25 pin parallel printer port for external printer
- 52 terminals on the rear to interface with other equipment by removable plugs
- BNC fitting with 600ohm balanced audio out for second transmitter

Also available weather radios, antennas for weather radios, crystal controlled synthesized FM digitally tuned radios, remote signboards, cables for interconnection, character generators

NAB 2007

Richardson Electronics reached back into technological history for this clock, made with 'Nixie' display tubes, that was on display at its NAB booth and offered to a lucky visitor at the end of the show.



Photo by Scott Fybush



Photo by Bob Kovacs

Larry Wilkins, a regional engineer for Cumulus Media, discusses FCC inspections at a company engineering meeting.



Photo by Jim Peck

Dick Burden at the SBE members' reception.

Crystal Award

Winners. Back: Mike Boen, WJY(FM), David Bestler, KSTP(FM), Lee Larson, KOA(AM). Middle: Jeff Zukauckas, WTAM(AM), Mary Campbell, KBHP(FM), Ric Morgan, WFYR(FM). Front: Eileen Woodbury, KHHT(FM), Erik Hellum, KTAR(AM), Laura Olson, KLGR(AM)



Photo ©NAB



Photo ©NAB

A quarter of NAB attendance now comes from beyond U.S. borders. Organizers estimated international attendance at a record 26,824.

Photo by Jim Peck

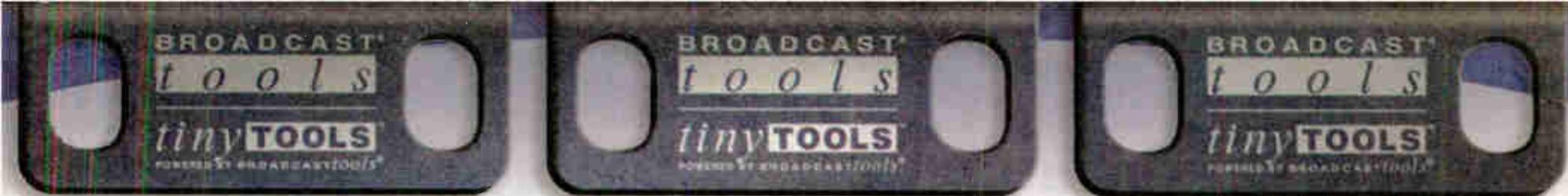


Steve Heminover of Aura Technologies gets a demonstration of the Zaxcom ZFR800 handheld digital audio recorder from Colleen Goodsir of Zaxcom.

Photo by Bob Kovacs



Michael Hutchens and Tony Peterle discuss the Audemat-Aztec Silver 6B on-air audio Processor, one of several introduced by the company.



ProMix 12

Full-Featured 12 Input Audio Mixing Console



Description

The Broadcast Tools® ProMix 12 is a feature-packed broadcast audio mixing console that is ideal for broadcast and audio production facilities needing an affordable compact solution. The ProMix 12 comes in a small package, but is loaded with useful features including a mix-minus output, an announce booth output with full duplex talkback, a monaural output, selectable metering, and remote starts on all line level stereo input channels. Whether you need a compact console for your on-air applications, or a mixer for post-production or fieldwork, the ProMix 12 is the right console at the right price. We're confident that the Broadcast Tools® ProMix 12 will provide many years of trouble-free operation.



www.broadcasttools.com

BROADCAST
t o o l s
support@broadcasttools.com



INNOVATIVE PROBLEM SOLVING TOOLS FOR BROADCAST
 World Radio History

How to Hit Your Web Site Budget



A friend of mine is an Internet sales manager for a TV station and recently asked me to keep my ears open for job opportunities for him.

Naturally, I figured he was unhappy for some reason. "Not at all," he responded, "I love it here." He cut to the chase by telling me that his team of three sellers wasn't going to hit the required numbers for the next quarter and therefore he was likely to be shown the door.

"Was the budget realistic?" I inquired. "Well," he said, looking at me intently, "I wasn't really sure when I accepted the position nine months ago. The general manager had told me that while the number was aggressive, he felt that someone with my talent would be able to hit it with no sweat. I fell for the flattery, took the job and here I am."

Envy

I wish his tale about an aggressive Web budget for a broadcast outlet were unique but I've heard it repeated so often during the last two years that I'd like to urge GMs and GSMs to take time for a sales budget reality check.

Many radio station Web sites have been started, stopped and re-built several times. One of the major companies even

hired an entire national sales division before the product was finished — prior to having acceptable metrics available for potential advertisers.

Several of the groups have turned their streams on, only to turn them off when the bandwidth and licensing fees blew past the expected revenue.

Meanwhile, radio is envious of the way several newspaper sites are putting up big numbers — in terms of both page views and sales. Truth is, the newspaper industry has two things that much of the radio biz lacks: deep, compelling content and a stand-alone, trained sales staff that is well compensated.

Lesson Number One: Before setting a budget — or for that matter, even before hiring a sales staff — make certain your Web site is built out to attract a large audience.

If the content isn't updated daily, either because you have nobody in-house or because you lack relevant content providers, you're not ready. If your main features like streaming and podcasting are "coming soon," you're not ready.

And I step out on a limb a bit by saying this, but for most station Web sites, if your program director is the sole person

in charge of driving content, you're not ready.

Why? Because a typical PD rightfully is concerned with driving ratings for his radio station, his or her success handsomely compensated. The Web site will always come a very distant second. Plus, most PDs have no magic connection for content. They likely have no idea where to find stories, pictures, videos or anything else that they can use without permission or payment.

Lesson Number Two: Don't pick a budget number based on how much you need to add to your overall cash flow demands. In all likelihood, you will guess way too aggressively.

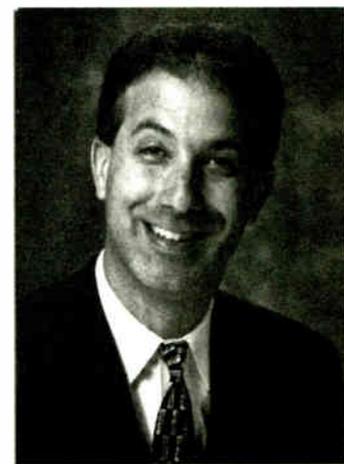
GMs and GSMs should take time for a sales budget reality check.

Find out what other media outlets (radio, TV, newspapers) in your market are charging in cost per thousand for banner ads; audio insertion in streams; gate ads; and integrated programs.

Some sites generate money from selling items (half-price sales, etc). How much do such retail sales account for the budget? Count your available inventory. Amateurs may mislead you by saying your inventory is unlimited because of the quantity of pages on your Web site. This is incorrect; only a small portion of pages drive the most page views.

Lesson Number Three: Combine your broadcast and Web sales staffs at your

Promo Power



by Mark Lapidus

own peril.

Radio sales staffs will gravitate toward the path of least resistance to generate the most money possible. By itself there's nothing wrong with this as it brings in the lion's share of station revenue. And if she can sell a spots for \$350 a pop and banner ads at \$3 cost per thousand, guess what she's interested in selling?

When you hire a stand-alone Web sales staff, there's only one way it can succeed. They must sell your Web site to survive.

Lesson Number Four: Don't hire only rookies to sell Web sites. Sites have been around for years now and believe it or not, there are veterans who can be wooed to work with you. You need veterans on your Web staff who can reinforce the training your rookies should be receiving.

Lesson Number Five: Don't accept a position as an Internet sales manager without doing your own homework. Great Internet sales managers are hard to find, but even the best are not miracle workers.

The author is president of Lapidus Media. Contact him at mlapidus@cox.net.

SH SHOWCASE SE

MATCHING AMPLIFIERS...

Redbox RB-UL1
Single Stereo Unbalanced to Balanced Converter

- Converts 2 x RCA unbalanced inputs to 2 x XLR balanced outputs.
- Rack-mount available.

Redbox RB-UL4
Quad Stereo Unbalanced to Balanced Converter

- Converts 8 x RCA unbalanced inputs to 8 x XLR balanced outputs.
- 1U rack unit can be surface mounted.
- Ideal for balancing domestic outputs for surround sound applications.

Redbox RB-UL2
Dual Stereo Unbalanced to Balanced Converter

- Converts 4 x RCA unbalanced inputs to 4 x XLR balanced outputs.
- Can be surface mounted and optionally front or rear rack-mounted.

Redbox RB-LU4
Quad Stereo Balanced to Unbalanced Converter

- Converts 8 x XLR balanced inputs to 8 x RCA unbalanced outputs.
- 1U rack unit can be surface mounted.

INDEPENDENT AUDIO

T: 207 773 2424
E: info@independentaudio.com
www.independentaudio.com

Visit our website for details:
www.sonifex.co.uk

CALL FOR NEW CATALOGUE

Make Your Move.

Advertise!

For more information contact
Claudia Van Veen at
703-998-7600 ext. 154
or cvanveen@imaspub.com

BROADCAST EQUIPMENT EXCHANGE

"Broadcast Equipment Exchange" accepts no responsibility for the condition of the equipment listed or for the specifics of transactions made between buyers and sellers.

ACOUSTICS

WANT TO SELL



Full product line for sound control & noise elimination.

www.acousticsfirst.com

ANTENNAS/TOWERS/CABLES

WANT TO SELL



Reliable, On-time Installation
Quality Workmanship
Ground System Evaluation
and Repair

www.amgroundsystems.com

1-877-766-2999

AMPLIFIERS

WANT TO SELL

Five (5) Belar RF amplifiers good condition will let go "as is" for \$185.00 each. Please contact mralej@bbnradio.org or call (704) 523-5555 for pictures or information

McMartin MS-25B Amplifier - \$25.00. e-mail mralej@bbnradio.org for information or call (704) 523-5555

AUDIO PROCESSING (INCLUDES ON-AIR)

WANT TO SELL

Aphex Model 300 Compellor with manual in good condition. \$275.00 or best offer. rswaffer@nctc.com

Behringer Ultra-Dyne Pro DSP9024 Digital 24-Bit Audio Processor. Excellent condition with manual in original box. \$100.00 - rswaffer@nctc.com

CRL SEC-800 Spectral Energy Compressor, recently re-capped and serviced with printed copy of the manual. Excellent condition. \$400 - rswaffer@nctc.com

Dorough Model 310 Discriminate Audio Processor, excellent condition, with manual. \$500.00 - rswaffer@nctc.com

RTS Model 416 DA. Will let go for \$75.00 plus S7H. Please e-mail mralej@bbnradio.org for pictures and information.

WANT TO SELL

Urban 8000A in good working condition. KOM Broadcasting 619-602-4639

Now available, radio automation for the Linux operating system. Schedule music, voice track, create shells, auto or announcer assist mode, set intro and ending cues, hit the vocal every time with your voice tracks, execute exact time events, join networks, and more. The software is free, there is a small duplication fee. For more info call 406.665.1832.

AUTOMATION EQUIPMENT

WANT TO SELL

Audisk Chassis (2) available for Parts or use. (Many spare drives available) - \$500.00 each. Call Mark Bonach 740-653-4373

CD PLAYERS

WANT TO SELL

Sony MD JE 320 MD player. Good condition. Will sell "as is" for \$75.00 plus S&H. E-mail mralej@bbnradio.org or call mralej@bbnradio.org for information.

CERTIFICATION

Are your engineers Certified?

SBE Certification
The Industry Benchmark
www.sbc.org
(317) 846-9000

COMPLETE FACILITIES

WANT TO SELL

NEW OR USED COMPLETE PACKAGES

STUDIO/STL/TRANSMITTER /ANTENNA OR ANY COMBINATION OF ABOVE.
-LEASE OPTIONS-
-EMERGENCY RENTALS-
-REMOTE BROADCAST RENTALS-

SCMS, Inc. (800) 438-6040
"You Know We Know Radio"

CONSOLES/MIXERS

WANT TO SELL

Audio Arts A-50 audio console - Good condition used in light production work. Will include second power supply for free. Sell "as is" for \$900.00 plus shipping and handling. Please contact mralej@bbnradio.org for pictures and information or call (704) 523-5555.

LPB Blue 5c consoles - We've got about ten of them in good condition. We will let them go "as is" for \$575.00 each plus S&H. Contact Mike Raley at (704) 523-5555 or e-mail mralej@bbnradio.org for pictures.

Arrakis 10,000 - 18 channel Console in very good condition. Some Spare parts. Call for details. Currently in service. \$2500.00 - Call Mark Bonach 740-653-4373

CONSULTANTS

NEED TO HIRE?

NEED EXPERT CONTRACT WORK FOR INSTALLATIONS or wiring, documentation projects, routine maintenance? Experienced Engineer looking for part-time work -NY City, Philadelphia, and NJ areas. Email Joe at: jstack@ieee.org.

LIMITERS/AUDIO PROCESSING

WANT TO BUY

Teletronix LA-2A's, UREI LA-3A's & LA-4's, Fairchild 660's & 670's, any Pultec EQ's & any other old tube compressor/limiters, call after 3PM CST, 972-271-7625.

MICROPHONES

WANT TO BUY

RCA 77-DX's & 44-BX's, any other RCA ribbon mics, on-air lights, call after 3PM CST, 972-271-7625.

MISCELLANEOUS

ROBON BLOWERS AND FLARE BLOWERS, new & rebuilt for Elcom, Harris, CCA, CSI, McMartin, Goodrich Ent. 11435 Monderson St. Omaha, NE 68164 402 493 1886 FAX 402 493 6821

WANT TO SELL

Symetrix 610 stereo delay, Rane HC-6, Rolls RA-62, & Furman HA-6 HP amps, Comrex Hotline & Nexus, Omnia FM Jr., Orban 9200, Bird 43 & elements, UREI 1178 silver, KOM Broadcasting 619-602-4639

Seven (7) bulk demagnetizers and Four (4) wand demagnetizers. Sell for \$10.00 each. E-mail mralej@bbnradio.org

WANT TO BUY

Collector want to buy: old vintage pro gears, compressor/limiter, microphone, mixing consoles, amplifiers, mic preamps, speakers, turntables, EQ working or not, working transformers (UTC Western Electric), Fairchild, Wesern Electric, Langevin, RCA, Gates, Urei, Altec, Pultec, Collins. Cash - pick up 773-339-9035

Equipment Wanted: old, obsolete, or unused signal processing, recording, and playback equipment. Limiters, preamps, EQ, mixing desks, microphones, tape machines (cassette and reel), etc. Donations gladly accepted; asking prices considered. 443-854-0725 or ajkivi@gmail.com

I'm looking for San Francisco radio recordings from the 1920's through the 1980's. For example newscast, talk shows, music shows, live band remotes, etc. Stations like KGO, KFRC, KSFO, KTAB, KDIA, KWBR, KSFY, KOBV, KCBS, KQW, KRE, KTIM, KYA, etc... Feel free to call me at 415-383-6216 or you can email me at ronwtamm@yahoo.com.

DONATIONS NEEDED

All Volunteer, Non-profit Low Power community radios stations need Equipment. Will offer tax deduction letter, You determine donation value, We will pay shipping. Equipment shared between three Wisconsin stations. Looking for Mics, Mixers, field equipment, etc. You name it. Email: Dan@WIECradio.org

MONITORS

WANT TO SELL

WE RENT FOR LESS

Blueboxes FM Exciters
Zephyrs FM Power Amps
POTS Codecs STLs
RF/Audio Gear Test Equipment

If we don't have it, we will get it!
SCMS, INC. (800) 438-6040
"You Know We Know Radio"

Three (3) sets of Belar RF amplifiers, Stereo and Modulation Monitors will sell "as is" for \$500.00 each. Please contact mralej@bbnradio.org or call (704) 523-5555 for pictures and information.

REMOTE & MICROWAVE

WANT TO SELL

Cellcast RBS 400 Cellular remote broadcast console. Uses cell service to link to studio for remote broadcasts. Serial # 1900. Comes with case, antenna, power supply, headphones with boom mic, instructions. Used - in working condition. \$50.00 obo plus shipping. Call Bob Rivkin 760-320-4550

Five (5) Sensaphone 1100 Alarm and remote monitoring units. \$100.00 each plus S&H. E-mail mralej@bbnradio.org or call (704) 523-5555 for information

REMOTES & MICROWAVES

WANT TO SELL

Complete Marti STL-10 System on 949.975 Mhz. Consists of one STL 10 transmitter and one R-10 Receiver. Good condition. \$1800.00 - Call Mark Bonach 740-653-4373

Marti RPU 30 remote transmitter - VHF 161.70 and 161.76 and a CR10 Receiver 161.73 and 161.76 - Good condition. \$1500.00 - Call Mark Bonach 740-653-4373

SATELLITE EQUIPMENT

WANT TO SELL

Wegener Communications/Jones Digital Audio Network Receiver; Model # DR96Q-10-001-002; Serial Number 001442; Excellent condition. \$50.00 obo plus shipping. Call Bob Rivkin: 760-320-4550

Satellite Horn. California Amplifier; part number 31846; "Digi-ready phase locked LNB antenna horn"; input 3.7-4.2 GHz/output 950-1450 MHz. Used in working condition. \$25.00 obo plus shipping. Call Bob Rivkin 760-320-4550

SPEAKERS AND HEADPHONES

WANT TO BUY

Collector wants to buy old vintage speaker & amplifier, McIntosh, Marantz, Electro Voice, Jensen, Altec, Tannoy, Fisher, Dynaco, Cash- pick up 773-339-9035

STATIONS

WANT TO SELL

OWN YOUR OWN!! Exclusive Cash Cow Combo less than 100 miles from Atlanta with One of A Kind Revenue Stream. Hurry! This one won't last long! RETIRE DOWN SOUTH-CALL DAVE HEDRICK-256-613-2630

U.S. 25KW FM STATION-Major border crossing area, Red Sox affiliate, profitable, huge upside. Price \$595K Inquiries 781-848-4201 E-Mail: salesgroup@beld.net Web: www.RadioStationsForSale.net

START LIVING YOUR DREAMS! Buy our FM Radio Station - 60 miles from Houston - Only \$490,000 gartand@radiobroker.com 713-921-9603

Three Stations for Sale!
1. Summerville-Trion, GA 5000 watts WZQZ combined with cable casting into local cable service Comcast.
2. Valley Head-Fort Payne, AL 10,000 watts day timer WQRX
3. WTHP, Gibson, GA 94.3, on air 6 months. Contact: C T Barinowski 706-309-9610 or ctbarinowski@comcast.net

STEREO GENERATORS

WANT TO BUY

ORBAN 8218 Stereo generator. Contact Jim Stitt 513-621-9292 or engineering@wyso.org.

STUDIO ACCESSORIES/SUPPORT

WANT TO SELL

Audio Arts Model PS 6040 power supplies (Audio Arts R-60). Will let go for \$300.00. Please contact mralej@bbnradio.org or call (704) 523-5555 for information.

Four (4) Audio Arts R-60 manuals for \$35.00 each (price includes shipping). E-mail mralej@bbnradio.org or call (704) 523-5555 for more information.

TAPES/CARTS/REELS/CDs

WANT TO BUY

Large or small collections of 16" transcriptions or 12" transcriptions, not commercial LPs. Bill Cook, 719-687-6357.

V-DISCs - 12 in. 78 RPM discs. Bill Cook, 719-687-6357

TRANSMITTERS/EXCITERS/TRANSLATORS

WANT TO SELL

Rest Assured! FCC Certified FM Stereo Transmitter

- ✓ 50W RF output, continuous duty!
- ✓ Auto protect with auto soft fail & auto restore!
- ✓ Automatic battery backup!
- ✓ Digital display of all parameters
- ✓ Perfect for LPFM, Translators, as well as stand-alone exciters

www.ramseyelectronics.com

800-446-2295
ramsey In Our 33rd Year!

OFF THE AIR? Emergency Back-up Rentals

FM Exciters - STLs -
FM Pwr Amps - Antennas -
Studio & Test Equipment

SCMS Inc (800) 438-6040
"You Know We Know Radio"

Harris FM 5KI- new in 1987. Tuned to 96.7 - in service and operating until removed from service Dec 2006. Reason for removal: upgrade to HD Radic. \$11,000 obo- Contact Paul Knies 812-634-9232

Harris MX15 in excellent on-air condition when removed from service on order to change to HD. \$4000.00 obo - Contact Paul Knies 812-634-9232

Peter Dahl Plate Transformer, Single Phase Plate Transformer - Can handle up to 25kw Transmitter. New - never used! \$995.00 obo - Carl Haynes 601-573-2445

QEI FM 500w transmitter tuned to 88.7FM. It is about 15 years old with serial number T500107. Please e-mail mralej@bbnradio.org for pictures of the unit.

QEI FMQ 10000 in fair condition. This is a three phase transmitter with a bad IFA and combiner that will make about 95% power with QEI 600w amplifier 58A 05B Willing to let this 12 year old transmitter go for \$3595.00 but buyer must arrange pick up and shipping from Charlotte, NC. Contact Mike Raley at (704) 523-5555 or e-mail mralej@bbnradio.org for more information. Serial number is ST10KW054.

FM Translator at 104.5 - Manchester, KY Call Joey Kesler 606-843-9999

BAY COUNTRY BROADCAST EQUIPMENT

BUY - SELL - TRADE

Your #1 Source

For Quality Used Radio Broadcast Equipment

View The Latest List Online at: <http://www.baycountry.com>
Or call and we will fax it to you.

7117 Olivia Rd., Baltimore MD 21220

Toll Free: 877-722-1031 • FAX 443-596-0212 • E-mail: sales@baycountry.com

Consultants

**Consulting Communications Engineers
EMC Test Lab**

- FCC Applications and Field Engineering
- Frequency Searches and Coordination
- AM-FM-CATV-ITFS-LPTV
- EMC Test Lab-FCC and European (IEC)

OWL ENGINEERING, INC.
E-mail: info@owleng.com **651-784-7445** Fax (651) 784-7541
5844 Hamline Ave. N., Shoreview, MN 55126 *Member AFCEE*

The Coverage Map Store

REALcoverage.com

High Performance Engineering
for Maximum Coverage

DISTRIBUTOR DIRECTORY

The following distributors serving the broadcast industry would be glad to help you with any of your requirements.

**CORNELL-DUBILIER
MICA CAPACITORS**

FROM STOCK

**JENNINGS VACUUM
CAPACITORS**

FROM STOCK

**JENNINGS VACUUM
RELAYS**

SURCOM ASSOCIATES
2215 Faraday Ave., Suite A
Carlsbad, California 92008
(760) 438-4420 Fax: (760) 438-4759
e-mail: link@surcom.com web: www.surcom.com

NOW AVAILABLE

**KMA PUBLIC &
NONCOMMERCIAL
STATION
DIRECTORY**

The definitive guide to
American noncom radio

Kenmillsagency.com

GRAHAM BROCK, INC.

BROADCAST TECHNICAL CONSULTANTS

Full Service From Allocation to
Operation AM/FM/TV/AUX Services:
Field Work: Antenna and
Facilities Design

Over 45 years engineering
and consulting experience

912-638-8028
202-393-5133
www.grahambrock.com

COMMUNICATIONS TECHNOLOGIES, INC.

RADIO FREQUENCY BROADCAST ENGINEERING CONSULTANTS

- AM, FM, TV coverage & Upgrades
- Broadcast transmission facility design
- FCC applications preparation - construction permit and license engineering

Clarence M. Beverage • Laura M. Mizrahi
P.O. Box 1130 Tel: (856) 985-0077
Marlton, NJ 08053 Fax: (856) 985-8124
www.commtechrf.com

**FASTER...
MORE ACCURATE RADIO COVERAGE**

- Real Time 3-D Displays
- Interference calculations
- Cost effective mapping
- Fully integrated databases
- Used by the FCC
- Latest standards built-in

**RADIO
SOFT**

Visit us on the web at www.radiosoft.com
101 Democrat St., #6, Danvers, MA 01923-2725

Doug Vernier
Telecommunication Consultants

Broadcast Engineering Consulting
AM/FM/TV/LPTV/DTV
Custom mapping service
Frequency searches
Propagation prediction
FCC application preparation

Vsoft
Software for your PC

(800) 743-3684
www.v-soft.com

Serving Broadcasters
Since 1948

9049 Shady Grove Court
Gaithersburg, MD 20877
(301) 921-0115
Fax (301) 590-9757
mullaney@mullengr.com

**Mullaney
Engineering, Inc.**
Member AFCEE

NCE - FM

Channel Searches
30-mile radius
88.1 MHz to 91.9 MHz
\$350

Signal Upgrade Studies
www.radiodataservices.com
(305) 234-9309
Radio Data Services

**R. MORGAN BURROW, P.E.
& ASSOCIATES, P.C.**

ALLOCATION STUDIES
(AM, FM, TV, LPTV) New facilities,
site relocation, FM upgrade, duplex

FIELD WORK A SPECIALTY

- AM Directional antenna adjustment & other measurements
- FM & TV field intensity & other measurements
- RADHAZ measurements - RADHAZ HAZard evaluation
- Facility inspections for purchase/insurance purposes
- CATV Leakage Testing

**ELECTROACOUSTICS
OSHA measurements**

304-258-7921 • Fax 304-258-7927

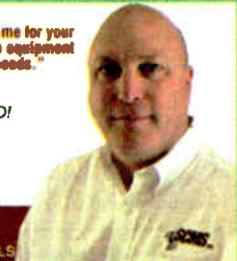
SCMS INC.

YOU KNOW WE KNOW RADIO!

John Lackness
Sales

210-775-2725
P.O. Box 932 • Cibola, TX 78108
johnl@scmsinc.com
BROADCAST EQUIPMENT SALES AND RENTALS

"Call me for your studio equipment needs."



**MEDIA
TECH INC.**

704-799-2245
jpierce@mediatechusa.com

High-quality Internet Streaming
For Broadcasters!

Give us a call to "hear" the difference!
Streaming Equipment available

**SPACE IS
AVAILABLE!**

To advertise, call Claudia
at 703-998-7600,
ext. 154.

TRANSMITTERS/ EXCITERS/ TRANSLATORS, cont.

WANT TO BUY

67 kHz (SCA Channel 1) Used or
repairable (with manuals if
available) - call John 517-316-5307

AM Phasors, Phasor Parts,
Phase Monitors, Rf Switches,
AM Transmitters. Continental
Communications 314-664-4497,
Contcomm@Sbcglobal.Net

**PROMOTE YOUR
BUSINESS!**

e-mail
cvanveen@imaspub.com

BEXT

FROM THE TALL
TO THE SMALL

www.bext.com
619-239-8462

Transmitters
and Antennas



BESCO World Leader
in
AM - FM
Transmitters

"Now in our 34th year"

**AM & FM Pre-Owned
Units In Stock**

All Powers • Manufactures • Instruction Books
• Spares & All Complete

Visit our Website:
www.besco-int.com

Or Call Rob Malany, National/Int'l Sales
at 321-960-4001

Radio World.

5827 Columbia Pike, 3rd Floor Falls Church, VA 22041
PHONE: 703-998-7600 • FAX: 703-671-7409

**Classified Advertising Rates Effective
January 1, 2007**

	1x	6x	13x	26x	32x
1-9 col inch (per inch)	\$110	105	100	95	90
10-19 col inch (per inch)	\$95	85	75	65	60
Distributor Directory	\$135	130	125	120	115
Professional Card	\$105	100	95	90	85
Station/Studio Services	\$200	170	145	123	105
Classified Line Ad	\$2/word				
radioworld.com Line ad	\$2/word				
Blind Box Ad	\$16 additional				

Call Claudia Van Veen, at 703-998-7600 ext. 154 or e-mail:
cvanveen@imaspub.com to reserve space in the next issue.

Use your credit card to pay, we now accept VISA,
MASTERCARD and American Express.

www.radioworld.com

TRANSCOM CORPORATION

Serving the Broadcast Industry Since 1978

Transmitters and Broadcast Equipment for Radio & Television

<p>Used FM Transmitters</p> <p>250 W 2007 Crown 250E 1 KW 2007 Crown FM1000E 1.5 KW 1983 BE FM 1.5A 2 KW 2007 Crown FM2000E 3.5 KW 1986 Harris HT 3.5 5 KW 1987 Harris FM5K1 7+ KW Digital 2005 Harris Z16 HDS IBOC 7+ KW 2002 Harris Z16 IBOC 10 KW 2001 Henry 10,000D-95 20 KW 1985 Harris FM20K 20 KW 1989 QEI FMQ 20,000B 30 KW 1989 BE FM30A 30 KW 2006 Harris HT30CD 50 KW 1982 Harris Combiner w/auto exciter-transmitter switcher</p>	<p>Used AM Transmitters</p> <p>5 KW 1996 Continental 315D 5 KW 1974 Continental 315F 5 KW 1982 Harris MW5A 5 KW 1987 Harris MW5B 10 KW 1985 Continental 316F 50 KW 1985 Continental 317C2</p>	<p>Exciters</p> <p>Used 2004 Harris DIGIT 2nd Generation *New* 20w & 30W Synthesized exciters</p> <p>New TV Transmitters - Analog and Digital OMB & Technalogix VHF and UHF TV Antennas (10 W to 10 KW) TV STL</p> <p>Used TV Transmitters</p> <p>1 KW UHF Axcerra 832A, CH 28 55 KW UHF GE TT59B, CH 25 55 KW UHF RCA TTU-55</p>
--	--	--

Used Misc. Equipment

Altronics 20KW Air Cooled Load
Denon 720R cassette NEW
Sola Voltage Reg. 60hz 1 KVA s-phase

Please visit our website for current listings.

800-441-8454 • 215-938-7304 • FAX: +1-215-938-7361
www.fmamtv.com • E-mail: transcom@fmamtv.com
RETUNING & TESTING AVAILABLE • CALL US FOR A QUOTE!



POWER TUBES
REBUILT

1/2 THE COST
OF NEW!

ECONCO

TEL: 800-532-6626
INTL: +1-530-662-7553
FAX: +1-530-666-7760
www.econco.com
SE HABLA ESPAÑOL



TUBES & COMPONENTS

ISO 9001 Certified
The Choice of Successful Broadcasters Since 1934

NEW POWER TUBES
Triodes
Tetrodes
Pentodes

NEW SOCKETS & REPLACEMENT PARTS

Worldwide Availability

Made in U.S.A.

CALL 800-414-8823
Int'l (650) 592-1221
Fax (650) 592-9988

Visit our Web Site at
www.eimac.com

D And C Electronics
An International Distributor of RF Components
Tubes
NEW & REBUILT

TRANSMITTERS, STUDIO EQUIPMENT, STLs, ANTENNAS
RADIO DATA SYSTEM (FOR CAR RADIO DISPLAY)
EXCITERS-TRANSMITTERS, TRANSLATORS, MIXERS-CONSOLES, RADIO LINK
RPU, MOSFETS, VACUUM CAPACITORS, SOCKETS

BEST PRICES To Order: 1-800-881-2374
FROM OUR STOCK Outside U.S. (352) 688-2374
Se Habla Español

3089 Deltona Blvd. Spring Hill, FL 34609
BEST SERVICE 352-688-2374
Fax 352-683-9595
Website: www.dandcelectronics.com

RF PARTS CO.
Se Habla Español We Export

EIMAC • TAYLOR • SVETLANA
New & Rebuilt Tubes - Same Day Shipping

Motorola • Toshiba • SGS • Thomson & Mitsubishi Semiconductors

800-737-2787 760-744-0700
rfp@rfparts.com www.rfparts.com

FOR THE BEST PRICE
& 24 Hr service on transmitting tubes & sockets/parts, new & rebuilt call Goodrich Ent. at 402-493-1886 day or night, www.goodrichenterprises.com.

Reach Broadcast Professionals!
To advertise e-mail cvanveen@imaspub.com

Richardson Electronics
Your Authorized Source for Tubes and Capacitors

Turn to Richardson Electronics for all your vacuum tube and capacitor needs

- \$7 million in broadcast inventory
- New and rebuilt product
- Same day shipment
- Full manufacturers warranty
- Technical support

Call today, receive your product tomorrow...
800-348-5580

Authorized source for leading brands such as:

Visit www.rell.com/locations.asp for a complete listing of our 70 worldwide locations.
www.rell.com • 630-208-2200 • broadcast@rell.com

EMPLOYMENT

HELP WANTED

GROUP ENGINEER OPPORTUNITY

Our company owns and/or operates 15 radio stations in 6 small markets all located within an hour's drive of company headquarters in Toccoa, Georgia (90 minutes northeast of Atlanta and 60 minutes west of Greenville, SC in the foothills of the Appalachian Mountains). We're creating a full time position of Group Engineer who will oversee the maintenance of our stations; 8 AMs and 7 FMs. All AMs are non-directional except one with has a two tower nighttime array. All FMs are class As. Upcoming projects will include the construction of two Class A FMs this year. Stations have been well maintained. Light IT work. Mostly audio and transmitter work. Company is very community radio focused. Person would answer to the corporate CEO and COO and work directly with station managers. Pay based on experience. Benefits provided include insurance, retirement, travel, training and transportation. For more information or to send resume, contact Art Sutton, President/CEO, Georgia-Carolina Radiocasting, P O Drawer E, Toccoa, GA 30577. sutton@gacaradio.com. www.gacaradio.com. EEO.

WNIR/WJMP Radio and WAX-CH 35/WAOH-CH 29 in Akron, Ohio has an opening for Chief Engineer. Position requires Transmitter, Studio and IT equipment background. Contact Bill Klaus: 330-673-2323 or billklaus@wnir.com. Media-Com and Media-Com Television are Equal Opportunity Employers.

NORTHWESTERN PENNSYLVANIA Engineer Needed For 13 Station Cluster. FOREVER BROADCASTING has an engineering team opening for a self-motivated individual with several years experience at its Meadville, Franklin, and New Castle facilities. Transmitter, studio, and computer experience required. EOE. Please submit resume to Ldeppen@aol.com.

RADIO CHIEF ENGINEER/IT ASSISTANT. Manage daily engineering of WMFE-FM; assist with IT management; assist in construction of new equipment or modifications; perform repairs and adjustments. Go to www.wmfe.org for complete job description or call 407/273-2300 x147. Resume to: WMFE, 11510 E. Colonial Drive, Orlando, FL 32817; or fax to 407/206-2791; or e-mail to: jobs@wmfe.org. Deadline: 6/6/07. EOE & DFW.

Saga Communications seeks a Chief Engineer in Charlottesville, Virginia. We require that you have a minimum of 5 years experience in Broadcast Engineering AF, RF, and IT in order to manage and care for our 3 FM and 2 AM stations. FCC and SBE certifications a plus; **Resume, salary requirements and references for consideration to Renee Quesenberry, General Manager - Charlottesville Radio Group, 1140 Rose Hill Drive, Charlottesville, VA 22903.**

Saga Communications, Inc. is an Equal Opportunity Employer.

POSITIONS WANTED

Are you a small market station needing a good nuts & bolts engineer in the New York/New Jersey area? I will make your station shine! CET, fully FCC Licensed. Available for Full/Part-time/Contract work. Available immediately. Contact Mitchell Rakoff, 917-864-7718. mitchellrakoff@yahoo.com

Dedicated professional broadcaster: ambitious, driven with good on-air delivery, production/copy, and prep skills! Communicates well, with energy and charisma! Terry Whitmer 682-323-9831 whitmer_terry@yahoo.com.

Experience in club promotional events, ercree, well organized, thorough and meets deadlines, loves new challenges, very creative copy writing skills. Jonathan Hester djomeo0321@yahoo.com 214-879-9795.

C.E. position wanted: Experienced with computers, transmitters, H.D. transmitters, automations, digital studios. Robert King, Call: (915) 581-2979.

IDEAL personality, WHEREVER needed! Pure creative energy, matches enthusiasm, making a DYNAMO of magnificent proportion! Well spoken, and loves radio! Chance Carpenter (682) 559-9953 Email: chanciticus@hotmail.com

Vibrant female with smooth, relaxed, conversational voice presence. Loves being on-air, commercial production, news delivery etc. Call Alexandria Evans at 214-881-6859 or email onesmcothelady@yahoo.com

Reach Broadcast Professionals!
For more information, including rates & deadlines, call Claudia Van Veen at 1-703-996-7600 ext. 154.

Advertise today!

www.radioworld.com
www.radioworld.com
www.radioworld.com

ADVERTISER INDEX

This listing is provided for the convenience of our readers. Radio World assumes no liability for inaccuracy.

PAGE	ADVERTISER	WEB SITE URL
22	Armstrong Transmitter Co.	www.armstrongtx.com
45	Audion Labs	www.audionlabs.com
28-29	Axia - A Telos Company	www.axiaaudio.com
39	Balsys Technology Group	www.balsys.com
20	Bradley Broadcast	www.bradleybroadcast.com
15	Broadcast Electronics	www.bdcast.com
47	Broadcast Tools, Inc	www.broadcasttools.com
23	BSI	www.bsiusa.com
3	BSW	www.bswusa.com
45	Circuit Werkes	www.circuitwerkes.com
8	Comet North America	www.cometna.com
7	Comrex Corporation	www.comrex.com
10	Digigram Inc.	www.digigram.com
4	Electronics Research, Inc.	www.eriinc.com
43	Enco	www.enco.com
34	ESE	www.es-web.com
45	Freeland Products, Inc.	www.freelandproducts.com
33	Google Inc.	www.google.com/ads/asaudio
45	Gorman Redlich Mfg	www.gorman-redlich.com
40	Grace Broadcast Sales	www.gracebroadcast.com
19	Harris Corporation	www.broadcast.harris.com
35	Henry Engineering	www.henryeng.com
18	Inovonics Inc	www.inovon.com
25	JK Audio	www.jkaudio.com
31	LBA Technology, Inc.	www.lbagroup.com
6	Logitek	www.logitekaudio.com
21	Moseley	www.moseley.com
27	Moseley Associates	www.moseleysb.com
36	Mouser Electronics	www.mouser.com
17	Musicam - USA	www.musicamusa.com
13	Omnia - A Telos Company	www.omniaaudio.com
45	Omnirax	www.omnirax.com
19	Orban	www.orban.com
14	Prophet Systems Innovations/RCS	www.prophetsys.com, www.rcs.com
5	Radio Systems Inc	www.radiosystems.com
41	Ram Broadcast Systems	www.ramsyscom.com
21	SCMS	www.scmsinc.com
26	Sine Systems	www.sinesystems.com
48	Sonifex Ltd.	www.sonifex.co.uk
45	Stormin Protection Products	www.opticshield.com
32	Superior Electric	www.superiorelectric.com
9	Telos Systems - TLS Corp.	www.telos-systems.com
11	Tieline Technology	www.tieline.com
38	Titus Labs	www.tituslabs.com
37	TransLanTech Sound, LLC	www.translantech.com
12	ViaRadio Corp	www.viaradio.com
42	VocalBooth.Com, Inc	www.vocalbooth.com
56	Vorsis	www.vorsis.com
1	Wheatstone Corporation	www.wheatstone.com
2	Wheatstone Corporation	www.wheatstone.com
55	Wheatstone Corporation	www.wheatstone.com

◆ READER'S FORUM ◆

Merger Mania

Paul, I'm glad you seem to have an open mind ("Merger? Two Words: Get Real," March 28).

It appears there is a good possibility that if XM and Sirius are not allowed to merge, both companies will go belly up sooner or later.

Assuming this occurs, who will benefit? Who will lose?

1. The consumers like myself: I've paid in full for five years service for three radios, plus purchased the equipment for four radios, plus installation of the radios. My cost: probably \$2,000. Obviously I will not benefit.
2. Terrestrial broadcasters: They will instantly have a big piece of the 15 million customers who will be left without service. That is a big benefit.
3. iPods: They'll get a piece of #2 also. That is a big benefit.
4. Internet radio: It appears there will be mobile devices available to access Internet radio soon. They'll get a piece of #2. That is a big benefit.
5. CD manufacturers such as EMI, Sony, Apple Music, etc.: They will sell more CDs as a result. That is a big benefit.

You say you are "in favor of satellite radio (against the wishes of many broadcasters) as it was licensed." I am saying that the situation has changed; that the costs to operate this business are much more than originally calculated; and the least expensive way in which to continue service is to allow XM and Sirius to merge.

If satellite radio continues to operate as it was licensed originally, it will probably go bankrupt. Would this be in the best interests of the public at large, or rather terrestrial radio, iPod, Internet radio and CD manufacturers?

Do you believe that Mel Karmazin has more power than 15 million subscribers? That we are being led by him like sheep to the slaughter? We vote with our dollars, and if we don't like how he operates the radio we are paying for, we will (by our dollars) kick his ass out, period. He is employed by us, and serves at our pleasure.

Furthermore, if cable television is so bad for consumers, then why do we continue to pay for it? There is no CEO in charge of us or how we spend our money. If we pay for cable television, it is because it is a better value than free TV, which has always been available from broadcasters.

Satellite radio has to be allowed to change in order to survive and continue to serve its customers. That is clear. Ralph Waldo Emerson said, "A foolish consistency is the hobgoblin of little minds, adored by little statesmen and philosophers and divines. With consistency a great soul has simply nothing to do."

Why should satellite radio be held to a standard of "a foolish consistency"?

Lee W. Tabor
Victorville, Calif.

I think you're overlooking some key factors about satellite radio.

Martine Rothblatt, the key inventor of the transmission and satellite design that facilitates this system's operation, said

Merger? Two Words: Get Real



The original intention was to have one provider for the entire 25 MHz of C band spectrum.

The FCC, in its infinite wisdom, decided it was best to divide this spectrum for two companies to "compete," despite the fact that you cannot access the other's service with one receiver. You can, however, still listen to all other audio products (there are several versions of MP3 players, AM/FM radios, etc.) without much effort.

Further, satellite would not even be a factor if CBS Radio and other companies hadn't signed the consent decrees with the FCC.

For CBS, this was the harbinger for Howard Stern to quit, or pursue his living elsewhere. Why did it take Fox to pick up the ball and fight the FCC on matters of

It's okay to eat your own people with consolidation, but what happens when the blood is thin? People stop listening.

content? The large radio companies have huge gate-keeping capabilities and editorial control at their fingertips. They could have made content regulation their bailiwick. But they didn't. They chose capitulation.

And now, two satellite companies — that should have been one to begin with — that want to improve their debt structure and programming are being fought by terrestrial radio and NAB.

Apparently, there is no sense of irony for the terrestrial operators, considering what's been happening to radio since 1996.

Clear Channel does or did own whole markets at one point. Is that not a monopoly? Is that good for consumers? A service that requires a subscription and special equipment, and has to be sought out by the people who subscribe, is clearly not a monopoly, no matter if it's just one or several companies bringing the service. Monopoly in this case means you own all forms of audio delivery. Sirius and XM own two similar and mutually exclusive forms of delivery. Terrestrial broadcasting, podcasting, MP3 CDs and other playback formats own the remainder.

As long as you're requesting that companies give back spectrum, why not have the radio companies that own multiple stations in markets undeserving the local community donate the facilities to local community groups? There is a lot of redundancy out there; how about some local service?

Frank Bellina
Philadelphia



Radio World

The Newspaper for Radio Managers and Engineers

Our readers have something to say

“Of probably a dozen trade publications, plus the New York Times, the only periodical I read from cover to cover — one might say ‘devour’ — is Radio World.”

F. Keith Trantow
Rawhide Communications Ltd.
Tucson, Ariz.



Shown: Heil CLASSIC PRO offers a retro look of the '40s with the dynamic sound of today.

GUEST COMMENTARY

Embrace Internet Radio; It's Here to Stay

In an Open Letter to the Radio Industry, Barnabas Encourages Broadcasters to Get Online

by Paul Gathard

Isn't it good to learn Internet radio is not beyond the financial reach of most non-commercial radio simulcasters subject to the new CRB copyright rates? Isn't it good to know interesting survival techniques exist for commercial radio simulcasters in spite of the new CRB copyright rates?

The March 2, 2007 Copyright Royalty Board decision gave most non-commercial simulcasters a pass on the high rates imposed on their commercial counterparts ... at least up to 159,140 ATH (hours) per month.

The truth is that most non-commercial simulcasters never even come close to streaming the threshold limit hours per month. Sure, some metro-market non-comms may exceed this CRB imposed threshold, but these same radio stations generally have large budgets and listener support that will allow them to keep their Internet streams going.

Our radio-industry-focused streaming media company, Barnabas Road, has primarily non-commercial and news, talk and sports radio stations. Consequently, we have had little impact to our business. Other streaming media services, specializing in commercial radio stations, should find ways to help their stations increase advertising revenue or these same stations will have to take other more dramatic actions. None of the actions are pleasant or involve a continued simulcast.

Barnabas Road Media has some commercial simulcasters as clients, but most of our commercial stations are medium- to small-market stations and there is literally no rehabilitation of their online advertising program that could change their financial picture from getting out of the now (post-CRB ruling) deeper red.

Most of these stations previously could not make a profit at the lower

copyright fees. I cannot fathom how the CRB judges could impute some wildly increased online advertising revenue to any radio station except the largest metro-market stations having hundreds of thousands if not millions of daily online listeners. The same economics do not flow down to commercial simulcasters, who often have fewer than 10,000 listeners in an entire month.

As president of BRM, and for the benefit of our existing and potential customers, I have tried to come up with ideas for medium and small commercial simulcasters to survive. We have two ideas.

For your consideration

The first is for a commercial Webcaster or simulcaster to view his online production as simply content, and then to sell the simulcast rights of that content to a third party. If that third party happens to be a 501 (c)(3) tax-exempt organization, that third party becomes a non-commercial Webcaster, picking up the much lower copyright fees.

The radio station would continue to pay the ASCAP, SESAC and BMI copyright fees as usual, and the third party buying the online rights would pay the SoundExchange performance royalties. The third party could pay the radio station for each time a media player opens (starting with a third party opening wrapper message); or it also could pay for spots inserted in the stream promoting its organization's goals and fundraising activities. In fact, many commercial radio stations would see their first positive online cash flow from such a rights transfer arrangement.

We view this idea as being a bit radical, but some stations may already have a strong association with a charitable organization that spends money on advertising and that would jump at the chance to have its own online radio channel. The economics could be rewarding for both parties. We call this a Third Party Simulcast Rights Agreement (TPSRA). BRM has a non-legal write up on the concept. Just send us an e-mail asking for a copy of the concept. It is free.

The second idea may seem just as radical as the TPSRA and far from the business model most radio stations operate under currently, but offering a "subscription-based service" instead of closing down the simulcast may be the alternative that makes the most sense.

BRM just released a new subscription service plan using our Digital Rights Management software to manage the subscriptions and a per-subscription monthly streaming fee that allows the station to unitize its streaming media and copyright fees on a per-subscription basis.

A 64 kbps stream would cost the station \$1.00 per month per subscriber, and under the current CRB ruling the royalty would equal \$2.13 per month based upon an estimated 20 hours of listening per subscriber per week. Satellite radio numbers currently are only 11 hours of listening per week. So for \$3.13 per month per subscriber, a station's non-operational expenses can be known and incorporated

into the subscription price.

You could charge \$4, \$5, \$6 or maybe even \$8 per month and possibly even plan for a profit. Once the minimum annual fees are overcome with 80 to 100 subscriptions, simulcast expenses are proportionate directly to the revenue generated by the subscription fees.

Think about the possibilities in having your on-air broadcast promoting (selling) the subscription service plan. What an advantage broadcast radio has in this regard.

However, you might have to make your online subscription service special with online-only content, promotions, interviews, concerts, etc. We think radio stations would find their daytime online office listeners still want to hear their local news weather, sports and favorite shows if they were somehow available — even if it did have a cost associated with its use. Place your high-school sports on the online version. Invite churches to have their worship services online at a reduced rate. In short, be creative.

The proof of the reality of Internet radio is evidenced by the decision of the CRB and the position of the RIAA. Internet radio is big business and will continue to get bigger and bigger.

Think of the other ways you could use your online subscription service. Give your large advertisers a subscription and make it a special promotional giveaway. Sure, there is a cost but the copyright cost is only realized if that person actually listens to the online broadcast.

Broadcast radio may not be ready for a business model where the listener pays for what he or she hears, but many have come to expect to be able to hear their favorite radio station over the Internet. If your online broadcast goes away, so may that listener from your radio station totally. Your loyal listener may replace your station with another local radio station that has found a way to remain online.

Think of the survival of your online broadcast in terms of what you have already invested in building an online audience. Think of the loyal listeners you could lose if you close the simulcast down, and think of the unrealized potential that has driven the RIAA to try and force you away from the Internet. They see the projected growth in Internet radio listenership, and having to share 210 million listeners per month with every small radio station is something they just don't want to happen.

Stay the course

The last time the copyright threat surfaced, many radio stations abandoned their online audience. They gave up and some other online music provider quickly snatched away an easy new customer. Don't let everything you have invested in building an online audience be flushed down the toilet without a fight. The future of radio indicates that the record labels are playing a land-grab game. If they can run you off of your claim now,

they win in the long run — or so they think.

The truth is that even the record labels don't really understand how they will make money in the future in this new digital world. But they are willing to drive their stake in the ground today and fight for market domination.

Now you may be thinking, "I'm not in the Internet radio business. I am an over-the-air radio broadcaster and this Internet thing is just a fluke and of little importance to my broadcast operation." If so, you are in denial and have grounded your beliefs in history, not in the reality of the future. The proof of the reality of Internet radio is evidenced by the decision of the Copyright Royalty Board itself and the position of the RIAA. Internet radio is big business now and it will continue to get bigger and bigger.

Here is the bottom line for commercial radio: We may get some marginal relief from the CRB decision, but most of that relief will come in the form of easier reporting methods and possibly a cap on the number of channel minimum fees. We will see little rate reduction if any.

Consequently, you have to learn how to make money producing online radio in

order to survive, even as an over-the-air radio broadcaster. You will slowly become irrelevant in the marketplace if you do not find a way to survive online right now.

Broadcast radio has always been a tough business. It has survived many potential threats not because radio broadcasters have been brilliant and creative, but because radio met the needs of the public and it was where they expected to find it.

HD Radio is plenty of the same old radio only in a digital format. There are hundreds of millions of devices already capable of receiving Internet radio and many more hundreds of millions will be produced and sold before even the first million HD Radio receivers reach the retailer's shelf.

Currently, I can listen to our customers' online radio broadcasts on my PC, laptop or cell phone. I do not have to be within the radio station transmitter's reach. I can be anywhere in the world; I just have to have access to the Internet.

You may feel you don't have much choice in terms of going to HD, but I would argue you have less choice in getting on and staying on the Internet. If you retreat from any distribution channel, your advertisers and supporters will dry up and go where they can find a more robust and varied audience.

Your broadcast has to be where people expect to find it whether you like it or not. The laws of supply and demand have not changed. They have just gone digital on the Internet for everyone on Planet Earth including broadcast radio.

Paul Gathard is president of Barnabas Road Media Inc. Contact him at pgathard@barnabasroad.com.

How to ...

Send a letter to the editor:

E-mail radioworld@imaspub.com with "Letter to the Editor" in the subject field.

Change your mailing address:

Visit www.radioworld.com, click on Subscribe to RW and follow instructions to change a subscription address.

Contribute freelance articles:

E-mail radioworld@imaspub.com and request our Writer's Guidelines.

Get information about advertising:

Download a media kit including editorial calendar at www.imaspub.com.

Run a Help Wanted ad:

E-mail Claudia Van Veen at cvanveen@imaspub.com or call 703-998-7600 x154 for print and online rates.

Purchase reprints of articles:

E-mail Emmily Wilson at ewilson@imaspub.com.

◆ READER'S FORUM ◆

**EAS Questions
For FCC**

The following was sent to the FCC and copied to RW:

Dear Commissioner Adelstein,

With regard to the recent disaster in Blacksburg, Va., when I attended summer session there, I was the summer chief engineer for the college's radio station, WUVT(FM).

My question to you involves the specific and overall viability of the Emergency Alert System, both in academic institutions and in general.

The media has detailed the use of an emergency e-mail notification system in the school, as well as the prevalence of public address systems in the school buildings. The idea of an e-mail system supplanting a radio station equipped with an EAS system is of serious concern to me.

The fact that the public address systems in these buildings are not available to this licensee's own Emergency Alert System is hard to believe. The fact that the EAS system appears to have gone unused in this matter compounds this tragedy. If the EAS system could have alerted one student, what a difference it would have made.

I urge you and your fellow commissioners to immediately begin hearings and investigations into how this situation of EAS system failure can be mitigated in the future. Please continue to protect the public interest, convenience and necessity.

Paul Flint
Broadcast System Security Analyst
Barre, Vt.

**Hams Do Provide
Public Service**

After reading Burt Fisher's letter "Vast Wasteland of Ham Radio" (March 28), I was reminded, amazingly enough, that some people still have too much time on their hands and are focused in the wrong direction.

Why choose to utilize Radio World to carry out a personal vendetta against the benign hobby of amateur radio? Yes, it is a hobby. While there is a strong percent-

age of us who are active in public service through amateur radio emergency communications and health and welfare traffic, it is first and foremost a hobby.

As such, I do agree with Mr. Fisher that if a community chooses to ban tall structures I should not use the "guise" of public service to demand exemption from that ban. Of course, it should not and cannot be retroactive and require existing structures to be removed.

The ban also should be equally applied to other communication towers such as cell phone, wireless Internet, broadcast and structures such as church buildings and signage. In fact, the only arguable exemption to the ban would be communications used for the public safety.

**Hurricanes Katrina
and Rita proved
how fragile our
public safety
communications
infrastructure
could be. The aid
provided by public
service volunteers
such as amateur
radio operators
was tremendous.**

But wait. Isn't the broadcast media required to deliver messages of public safety to the community? If I am using the Internet to deliver critical messages of health and welfare to a hurricane-stricken area, is that public service? If civil authorities are attempting to contact additional law enforcement or volunteers via cell phone, is that a public service? Most law enforcement is issued a cell phone while on duty now.

Mr. Fisher, to say that 99 percent of amateur radio operators do not provide a public service is false. I do not believe the American Red Cross, FEMA and several other federal agencies, many other relief and charitable groups as well as law enforcement, would agree with your

perspective. Hurricanes Katrina and Rita proved just how fragile our commercial and public safety communications infrastructure could be. The aid provided by public service volunteers such as amateur radio operators was tremendous.

Why someone would carry on against amateur radio as you do is made only more mysterious by the fact that you maintain your amateur license, helped your daughter get licensed and have posted a bizarre rant with your bio at www.qrz.com.

Like many broadcast engineers, I have been a licensed amateur operator since I was 16, and was in fact the second youngest emergency coordinator for the Amateur Radio Emergency Service in the

SBE's DRB Is OK

When you hear the word "importer," do you conjure a trans-national corporation that traffics in foreign cars, beers and cheap watches?

If so you're probably not yet a candidate for the newest specialist certification of the SBE. If however you hear the word "importer" and picture a device in the HD Radio air chain that contains hardware and software that deliver Advanced Application Service data to an Exporter/Exciter, you may be qualified to put the initials DRB after your name.

The SBE has moved quickly to create a Digital Radio Broadcast certification "following recent changes in the FCC rules recognizing the viability of digital radio and the official endorsement of multicasting," as it stated in April.

We commend the engineering society's National Certification Committee for this move, which recognizes the skill sets required to manage our industry's quickly changing technical infrastructure. There are those in the community of radio engineers who resist change of any kind and particularly any change that implies acceptance of digital radio as it is being adopted in the United States. They will find something to criticize in SBE's move. But the rest of us — unsentimental pragmatists as well as digital optimists — will acknowledge this move as a valuable one.

No doubt sensitive to the politics among its membership, SBE does not mention HD Radio by name in its announcement: "Digital audio broadcasting (DAB) enhances a broadcast licensee's ability to not only better serve the public, but to provide means of additional revenue in this highly competitive industry. ... With this specialist certification, the engineer or technician carries the credentials needed for successful installation of digital radio transmission systems. The specialist certification will focus on the current in-band, on-channel transmission system being deployed in the U.S., and will be called the SBE Digital Radio Broadcasting Specialist."

That wording leaves the door open to certifying engineers in any digital radio format, should trends change. However it's clear that this step was taken in direct response to the radio industry's ongoing adoption of HD Radio. We interpret this as SBE's tacit acknowledgement that the HD Radio format is the most important technical shift happening in the industry here and that — whether you are a huge HD Radio fan or somewhat of a reluctant participant — the transition cannot be ignored.

SBE will introduce the certification officially at its national meeting in October in Monroeville, Pa., near Pittsburgh. Specialists will have "knowledge of importers, exporters, the various methods of combining analog and digital transmitters to antenna systems, delivery of digital audio signals and data to transmitter sites, transmitter emission mask measurements, AM and FM FCC rules, monitoring of digital signals and bandwidth requirements for AM antenna systems."

The society correctly states that digital audio broadcasting is different than traditional analog services. "An individual's ability to certify his or her knowledge of the entire system rather than just a single part will bring confidence to both the individual and station management." We commend the certification committee for this decision.

— RW

country many years ago. Public service was one of the main reasons I originally became licensed.

I wish all readers of Radio World who are not familiar with amateur radio to know that Mr. Fisher's comments are not representative of most radio amateurs.

In any case, it will only be a matter of time before the FCC starts to push the amateurs off the bands so they can auction off the frequencies for millions in revenue, much as they are doing with the analog TV band ... that other vast wasteland.

Allan A. Augustyn, WD8CSZ
Engineer
Radio Results Network
Escanaba, Mich.

—EDITORIAL STAFF—

Paul J. McLane	ext. 117	Editor in Chief, U.S.
Leslie Stimson	ext. 129	News Editor/Wash. Bureau Chief
Kelly Brooks	ext. 136	Associate Editor, RW & Production Editor, RWEE
Thomas R. McGinley	—	Technical Adviser
Michael LeClair	—	Technical Editor, RWEE
John Bisset	—	Contributing Editor
Skip Pizzi	—	Contributing Editor
Marguerite Clark	—	Editor (International), Milan
Rogelio Ocampo	ext. 121	Latin America Editor in Chief
Karina Gerardi	ext. 137	Latin America Editor
Brett Moss	ext. 143	Managing Editor (International)
Brian Smith	ext. 140	Managing Editor, Web
Peter Finch	—	Editorial Assistant, Milan

—EDITORIAL CONTRIBUTORS—

W.C. Alexander, Steve Callahan, James Careless, Harry Cole, Mark Durenberger, Charles Fitch, Ty Ford, Scott Fybush, Frank Grundstein, Harold Hallikainen, Craig Johnston, Paul Kaminski, Peter King, Mark Lapidus, Daniel Mansergh, Sharon Rae Pettigrew, Carl Lindemann, Ted Nahil, Tom Osenkowsky, Ken R., Rich Rarey, Tom Ray, Randy Stine, James G. Withers, Travis the VIO Guy, Barry Umarsky, Tom Vernon.

Radio World

Vol. 31, No. 13 May 23, 2007

Telephone: (703) 998-7600 • Business Fax: (703) 998-2966 • Editorial Fax: (703) 820-3245
E-mail: radioworld@imaspub.com • Web site: www.radioworld.com

—ADVERTISING SALES REPRESENTATIVES—

US East & Latin America: John Casey	330-342-8361	Fax: 330-342-8362	e-mail: jcasey@imaspub.com
US West & Canada: Dale Tucker	916-721-3410	Fax: 916-729-0810	e-mail: dtucker@imaspub.com
Classified & Product Showcase: Claudia Van Veen	703-998-7600 x154	Fax: 703-671-7409	e-mail: cvanveen@imaspub.com
European Sales Mgr., Africa, Middle East: Raffaella Calabrese	+39-02-7030-0310	Fax: +39-02-7030-0211	e-mail: rcalabrese@imaspub@tin.it
Japan: Eiji Yoshikawa	+81-3-3327-5759	Fax: +81-3-3322-7933	e-mail: callems@world.odn.ne.jp
Asia/Pacific: Wengong Wang	+86-755-5785161	Fax: +86-755-5785160	e-mail: wvw@imaschina.com

NEXT ISSUE OF RADIO WORLD JUNE 6, 2007

NEXT ISSUE OF ENGINEERING EXTRA JUNE 13, 2007

For address changes and subscription renewal, please visit www.radioworld.com and click on "Subscribe to RW." To submit letters or story proposals, to request writer's guidelines, or for other editorial matters, e-mail the editor at radioworld@imaspub.com.

—ADMINISTRATION & PRODUCTION—

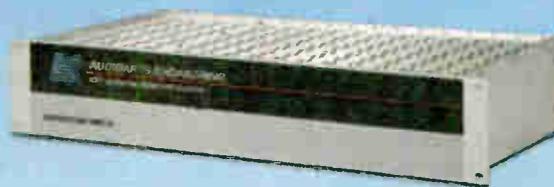
Steven B. Dana	President
Carmel King	Chief Executive Officer
John Casey	Publisher
Marlene Lane	Chief Operating Officer
Chuck Inderrieden	Chief Financial Officer
Eric Trabb	Vice President, Sales
T. Carter Ross	Editorial Director
Davis White	Production Director
Karen Lee	Production Publication Coordinator
Lori Behr	Ad Traffic Manager
Linda Sultan	Classified/Product Showcase Layout
Robert Green	Circulation Manager



Radio World (ISSN: 0274-8541) is published bi-weekly with additional issues in February, April, June, August, October and December by IMAS Publishing (USA), Inc., P.O. Box 1214, Falls Church, VA 22041. Phone: (703) 998-7600, Fax: (703) 998-2966. Periodicals postage rates are paid at Falls Church, VA 22046 and additional mailing offices. POSTMASTER: Send address changes to Radio World, P.O. Box 1214, Falls Church, VA 22041. REPRINTS: For reprints call or write Emrnily Wilson, P.O. Box 1214, Falls Church, VA 22041; (703) 998-7600; Fax: (703) 998-2966. Copyright 2007 by IMAS Publishing (USA), Inc. All rights reserved.

—Printed in the USA—

Networked



Independent



This D-75N Console is BOTH

OUR DIGITAL D-75N is a full-featured standalone mixing console that can also be seamlessly integrated into the AUDIOARTS DISTRIBUTED NETWORK along with other D-75N consoles. Designed specifically for the broadcast industry, the D-75N is intended for on-air and production applications that demand a lot of function and performance. It's got all the features you need: four stereo program busses, dual caller Superphone module, line selector modules, control room and studio modules, plus additional accessory positions.

The **D-75N** gives you the benefits of both standalone and networked architectures—the console has both independent faders for “local sources” and six networked faders capable of accessing designated sources and mixes throughout your system. Single CAT-5 cables connect all studios to your central rackroom, eliminating the need for costly multi-pair wiring between rooms and making installation and expansion fast and easy.

SHARE RESOURCES and MIXES from studio-to-studio or throughout your entire facility. In addition to your networked consoles, you can also link up multiple IOC INPUT & OUTPUT CENTERS and further expand your Audioarts network to accommodate existing and *future* sources and format changes.

With the AUDIOARTS D-75N and the AUDIOARTS DISTRIBUTED NETWORK there's a new easy way to link your studios together—and still stay within budget. Visit our website and learn more today!



AUDIOARTS ENGINEERING

Condition your Signal

with the New Vorsis® HD-P3

What Is It?

A four band parametric equalizer feeding a three-band limiter with adjustable crossover points, AGC and selectable filters for FM, AM or streaming audio formats. The HD-P3 includes a variable de-esser, an expander and dual digital outputs (one with user selectable HD latency FM delay), plus high pass, low pass and notch filters, and a signal de-correlator to optimize bass content. All this controlled by an ethernet protocol computer interface that lets you run one or many HD-P3s from your office or internet based locations.

What It's For:

Processing for your new HD signal, improving your existing FM or AM signal chain, preprocessing streaming audio-over-internet, a standalone HD processor or a realtime DJ monitor feed—and finally—a KILLER studio production tool.

What's It Like?

“PERFORMANCE WITH *OVERDRIVE*”



VORSIS®

It's What's Next in Processing

a division of Wheatstone
World Radio History

Copyright © 2007 by Wheatstone Corporation