

THE RADIO WORLD "COOL STUFF" AWARDS

*****AUTO***3-DIGIT 604
 S103723 D08 0506
 THOMAS E BRAXTON 158
 PRESIDENT
 BRAXTON EMC CONSULTING LTD
 201 BULI LN
 BOLINGBROOK IL 60490 1520

The Wireless Telephone

Ed Perry ponders why Reginald Fessenden missed the point so completely.

Page 52

Up and Coming

At age 23, he's already a seven-year radio veteran and a CBNT.

Page 24



Radio World

\$2.50

The Newspaper for Radio Managers and Engineers

June 21, 2006

Expanded-Band Sunset Rule Appealed

'Don't Make Us Choose,' Say AM Owners Seeking Relief From Deadline

by Randy J. Stine

WASHINGTON Should they stay on their original frequencies or keep their expanded-band locations? It's a choice some owners feel they shouldn't have to make.

The AM expanded band was created in 1997 with hopes of easing interference among existing stations. The FCC has allowed migrating stations to operate on dual frequencies for five years. This year is the deadline for most stations to decide which frequencies to keep and which to relinquish.

However, some of these broadcasters, faced with surrendering one of their dual licenses, are pushing a plan they say will increase ownership diversity and save spectrum at the same time. The plan would allow current owners that qualify as small businesses to keep both licenses and also allow them to sell one instead of surrendering it. Meanwhile, the petitioners have asked for a one-year extension of the deadline.

Eleven broadcasters and four other organizations have asked the FCC to waive its policy requiring the return of one of the two allotments. The issue has brought together public interest entities and broadcasters, two groups often at odds over the direction of the industry.

Why choose?

Owners of expanded-band stations want to be allowed to keep their channels permanently, or at least be allowed to profit from them by selling to small business broadcasters, something not envisioned in

See EXPANDED, page 18 ▶



Simplicity – Cost Efficiency – Options

You CAN have your HD Radio™ cake and eat it too!

Harris is your only HD Radio partner who has a long track record for multiple proven solutions with reliability and flexibility. Harris leadership includes the first HD Radio transmitters, the first Engine platform, and the co-inventor (with NPR & Kenwood USA) of multicasting (Tomorrow Radio).

With the exclusive Harris Split Level Combining system you can now enjoy the most cost effective HD Radio solution with unrivaled simplicity. The power of the award winning FlexStar™ FM/HD exciter eliminates all outboard signal splitting components. Only Split Level combining provides:

- Low Operating cost
- Simple set up and operation
- Built in analog back up
- Analog Transmitter reuse
- Improved performance

Call 800-622-0022 today and put the power of Harris to work for you.



HD Radio is a trade mark of iBiquity Digital Corp

HARRIS assuredcommunications™
 Broadcast • Microwave • RF • Government Systems www.harris.com

 Sign Up For
NewsBytes
 Weekly Digest at
www.rwonline.com

◆ NEWSWATCH ◆

FCC Back at Full Strength

WASHINGTON The confirmation of Robert McDowell, a former telco executive and a Bush administration loyalist, returns the FCC to full strength.

The Senate approved his nomination before breaking for the Memorial Day holiday. The confirmation of the Republican means the party has a 3-2 majority at the agency.

Chairman Kevin Martin should now find it easier to push changes on several issues, such as media ownership and digi-

tal radio. An FCC official told the Washington Post in late May that the chairman's office had circulated a draft notice on media ownership.

"He has a wealth of knowledge and expertise in the communications arena, and we will rely on his insight," Martin said of McDowell. "I am anxious to have him on board and look forward to working with a full complement of commissioners to address the important issues before us."

McDowell was senior vice president and assistant general counsel with CompTel, which represents many telco competitors, including Internet phone providers.

Like Martin, McDowell has worked for the Bush administration. He served as counsel to the Bush-Cheney Florida Recount Team in 2000 and led advance teams for President and Mrs. Bush in 2004.

NAB said in a statement, "His background and extensive knowledge of communications issues will serve Mr. McDowell well in his new position."

CBS, Stern Settle Lawsuit

NEW YORK Howard Stern now owns

20 years' worth of master tapes from his shows on CBS Radio. The cache is part of a lawsuit settlement reached between Stern, Sirius Satellite Radio, Stern's agent Don Buchwald and CBS Radio.

CBS Radio filed the suit after Stern moved to Sirius; it claimed Stern breached his contract by using the last 14 months at CBS to promote his move to the satellite company.

As part of the agreement, Stern now owns the tapes of his CBS shows and Sirius agreed to pay CBS \$2 million, according to both sides.

The remaining terms and conditions of the settlement are confidential, according to the parties, although the Washington Post reported that CBS will receive more than the \$2 million figure.

Sirius in 2004 announced it had hired Stern in a five-year deal valued at \$500 million.

PPM Competitors Determined Despite CBS Deal

NEW YORK CBS Radio committed to buying Arbitron Portable People Meter system for audience research. The seven-year agreement is for 35 CBS Radio markets.

Spanish Broadcasting System and Beasley Broadcasting have also committed to PPM.

The PPM is one of three finalists in a selection process operated by various broadcast groups, including CBS. The Media Audit and Mediamark are the other finalists.

See NEWSWATCH, page 6 ▶

THIS IS THE NEXT BIG THING:



WHEATNET™ — FUTURE PROOF!

WHEATNET LETS YOU ROUTE THOUSANDS of bi-directional signals at ONCE in just 60 microseconds—all secure, virus-proof and in just 2 rackspaces! WHEATNET leaps way ahead of conventional stacked router or IP-based designs, interconnecting up to 48 studios (each with its own independent mix engines and I/O resources) using just one CAT-5 wire per studio, plus providing systemwide X-Y control from one central location. You can even meter and monitor (in stereo) any signal systemwide.

REDUNDANCY? We've got that covered too: just add a second WHEATNET and CAT-5 link from each studio and have an AUTOMATIC standby interconnect for the ENTIRE system!

WHEATSTONE has a proven track record for digital networking; benefit from our experience!



48 CAT-5 PORTS with 128 audio channels (plus embedded control data) per port. THAT'S 6144 TRAFFIC CHANNELS IN JUST TWO RACK SPACES!



tel 252-638-7000 / sales@wheatstone.com

GET THE POWER!

copyright © 2005 by Wheatstone Corporation

Index

NEWS	
Expanded-Band Sunset Rule Appealed	1
NewsWatch	2
HD Radio for Seniors in Sight?	3
Cool Stuff Throughout These Pages	4
Don't Go to the Site Alone	8
Allow Local Programs on Translators	10
Lengthy N.Y. Tower Dispute Ends	12
'Capable' or 'Ready' For Digital?	14
Euro Regulators Seek DMB Accord	16
FEATURES	
Students Create War News Radio	21
We Can Really Here You Now	22
Brannan Learns the Ropes in Georgia	24
Overcome ITSM Stage Fright	26
Who's Buying What?	29
For Many, NAB Is About the Shopping	30
Stuck in the Middle With UGC	32
Workbench: Take Notes to Protect Yourself	34
GM JOURNAL	
Salem Takes Talk Into Blogosphere	39
Hanley's Three Rules	41
The Art of the Live Radio Spot	42
Radio Listener: You Are In My Power	44
A Prayer for the Future of HD Radio	46
People News	48
OPINION	
Was Fessenden's 1906 Broadcast Accidental?	52
Lessons From Hurricane Katrina	53
Reader's Forum	54
Digital Standards: Possible or Practical?	54

HD Radio for Seniors in Sight?

Help Seen for Aging Boomers and Other Sight- and Hearing-Impaired

by Leslie Stimson

We're all getting older. For that reason, among others, some IBOC proponents want to make HD Radios accessible to those with poor vision or hearing before baby boomers start to retire around 2010.

To do so, they reason, would be to bring radio services to more people; it's also good business. For example, Dave Noble, a member of the technology committee for the International Association of Audio Information Services, which represents radio reading services, said conservative estimates put the number of visually impaired Americans at 10 million.

closer to success following an on-air demo in May.

Four-digital channel demo

Proponents hope by next year's NAB to demonstrate "conditional access capability" for HD Radio. This would enable a hearing or visually impaired person to use "accessible" features.

At NAB2006, NPR Labs demonstrated one aspect of the concept, synchronous audio and text captioning, in the booths of Harris and Broadcast Electronics. The closed-circuit demo featured four HD Radio channels running through an exciter. The throughput rates and formats

Using the extended hybrid carriers potentially could give a station about an extra 49 kbps of throughput, or a potential 144 kbps total, said NPR Vice President and Chief Technology Officer Mike Starling, who's also executive director of NPR Labs.

A "handful" of stations, said Starling, have received experimental authorization from the FCC to use the extended hybrid carriers.

Starling and others interviewed for this article said Ibiqity is working on optimizing its HDC codec to improve performance at 12 kbps. "We asked them to improve the performance at 12 kilobits so that it would be substantially better than the quality you could get through an analog SCA," said Starling.

"One of the things that we wanted to

at age 7, agrees that the proposed services are important. She is executive director of the Northern Virginia Resource Center, an outreach group; she challenged station representatives attending the Public Radio Engineering Conference this spring.

"All the emergency evacuation kits say you should bring a portable radio. How does this help me? You guys have to help me."

Starling assured her that captioned radio could be a reality within two to three years.

Mike Duke, government affairs chair for the IAAIS and manager of the Mississippi Public Broadcasting Radio Reading Service, said electronics have become very "screen dependent." Audible commands would be helpful to the blind and visually impaired, he said.

The IAAIS believes about 1 million people listen to radio reading services, 10 percent of the visually impaired U.S.



From left: Richard Cassidy and John Holt of WAMU(FM) in Washington; Dan Mansergh, KOED(FM), San Francisco; Terry Denbrook, KUOW(FM), Seattle and John Kean of NPR Labs share a laugh at NAB2006. NPR Labs was demonstrating the accessible HD Radio concept.

IAAIS President Heather Lusignan drives home the point that visually and hearing-impaired consumers "do all the same things we do," including purchasing radios and goods advertised on radio.

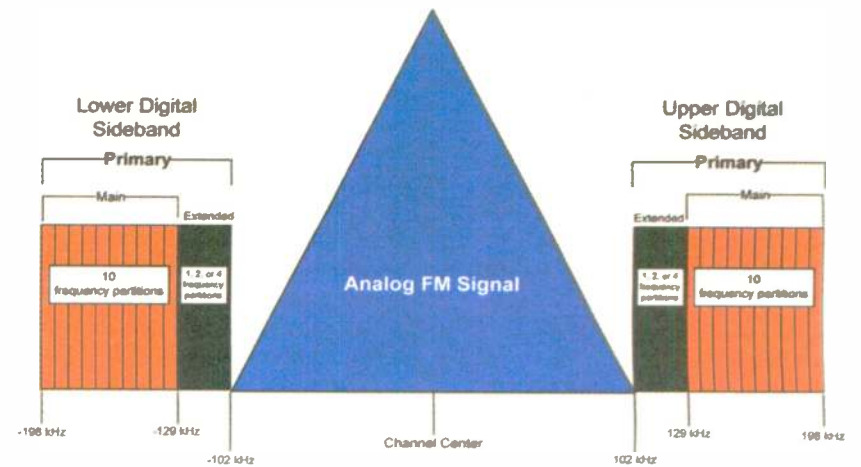
Radio World has reported on IAAIS efforts to have radio reading services included on the IBOC platform. Reading services could be one of several types of data services included on a station's HD Radio digital stream, proponents say.

The association believes its effort is

for the channels were: news at 48 kilobits per second, classical at 36 kbps, electronic music at 24 kbps and a radio reading service at 12 kbps, for a total of 120 kbps.

The throughput rate was higher than the usual 96 kbps for FM because the digital signals were transmitted using both the currently FCC-authorized digital sideband carriers plus the "extended hybrid mode," the digital sideband carriers closer to the analog center channel in the Ibiqity Digital system.

FM Extended Hybrid System



MP2-MP4 – Extended Hybrid waveform (not yet authorized) up to 148 kbps, +1, +2, or +4 extended partitions, 101-199 kHz.

demonstrate here was even first-generation HD Radios will pick up extended hybrid mode all the way out to 120 kilobits. Our vision for the future is that you'll be able to add a captioned radio service."

The concept is that on certain HD Radios, both the display screen and the captioned text would be large. Such captioning could be sponsored, Starling noted.

Synchronizing the audio to the text is key. It's more difficult for hearing-impaired listeners to follow text and audio separately.

'Help me'

Cheryl Heppner, who lost her hearing

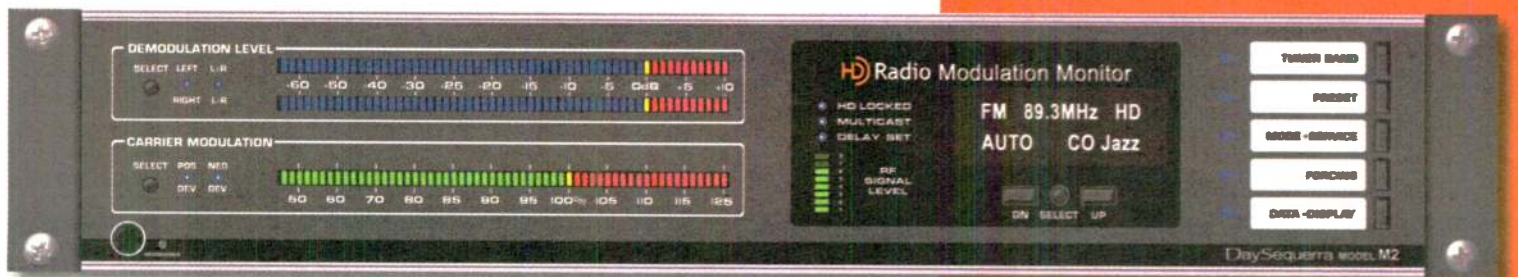
population. "Lots of people can still see, but can't read anymore," said Duke. "Sometimes disabilities like dyslexia or a stroke affects reading ability. Failing eyesight is the number one reason for loss of independence."

The expense of new technologies also limits reading. Given the lack of accessible capabilities in today's radios, this makes adding features to the HD Radio platform urgent, he said.

Radio reading services began operating using SCAs, or FM subcarriers, in Minneapolis in 1969. Now more than 100 such services exist, according to the

See ACCESSIBLE, page 5

M2 HD Radio Modulation Monitor



- AM-FM AND HD RADIO™ MULTICAST MODULATION MONITOR IN 2RU SPACE
- INTUITIVE, EASY-TO-USE FRONT PANEL INTERFACE - GET YOUR STATIONS STATUS AT A GLANCE!
- BRIGHT, ACCURATE LEVEL METERS AND FULL-FEATURED DATA DISPLAY
- ANALOG SCA LEVEL (M2.1) AND ETHERNET REMOTE CONTROL-ALARM-LOGGING (M2.2) OPTIONS

Designed and Manufactured in the USA

DaySequerra

For all the facts, visit www.daysequerra.com or call 856-719-9900

Cool Stuff Throughout These Pages

Congratulations to the winners of the 2006 Radio World "Cool Stuff" Award, radio's most prestigious technology honor. You'll find winning products described in boxes throughout the issue, starting on page 5.

The award means a product was selected by a panel of veteran engineers and experts as notable for its design, features, cost efficiency and performance in serving broadcast radio users.

The judges this year include prominent engineers from several of the largest commercial radio groups and a large public broadcast entity, as well as production and voice-work experts. They have experience in markets big and small, at stations public and private, in management locally and at the group level.

They will receive little thanks other than my nod to them here. Gentlemen, I salute you for your commitment to a fair and well-reasoned selection process.

★★★

My favorite product at NAB was the iPod Radio Remote from Apple. It "combines the convenience of a wired remote control with new FM radio capabilities for the iPod nano and fifth-generation iPod." You could see it in booths including those of BE and Audemat-Aztec.

The remote lets you skip tracks and adjust the volume of your iPod even if the player is tucked away; and you can listen to FM while displaying station and song information — delivered by RDS — on the iPod screen. It comes with headphones with a shortened cable and costs \$49 retail.

We should be clamoring for more smart products that allow listeners to enjoy radio via popular new media platforms.

★★★

Linda Baun is leaving the Society of Broadcast Engineers. You may know her

as certification director and Ennes assistant secretary. She is taking a position as vice president of the Wisconsin Broadcasters Association.

Baun told me she worked at WHMB(TV) before joining SBE in 1991. "One of my numerous bosses was Doug Garlinger, CPBE 8VSB CBNT," she said in an e-mail (always sure to include those important certification letters). Garlinger was director of engineering for LeSea Broadcasting.

"One evening I noticed one of the engineers folding a newsletter and sat down to talk to him. Larry Fawbush explained there was this organization that believed in engineers called the Society of Broadcast Engineers."

Fawbush told Baun he held the certification of CPBE. "He went on to reiterate that his certification was the only industry recognition for what he did and [he] was very proud of it. Larry had no family and noted that the SBE was his family. He stated that Doug cared enough about his engineers that he would take the leftover copper from the station and turn it into cash to pay for membership and help with certification expenses for his engineers."

"Later that year Doug told me about an opening at SBE," Baun continued. "Just a few months after my start, Larry was killed accidentally at the shortwave station."

At SBE Linda Baun learned much from Jim Wulliman. Under him, "I realized where the source of this dedication to this organization is generated. The SBE Board of Directors, National Certification Committee and the Local Chapter Certification Chairs and the Ennes Educational Foundation Trust go beyond the call of 'volunteer' work and dedicate numerous hours to do whatever it takes to help promote their colleagues in their profession. The SBE staff uses



Linda Baun

that same dedication to implement their direction."

Baun also thanked chapter certification chairs, Executive Director John Poray and recent national certification chairs Wulliman, David Carr, Terry Baun, Chriss Scherer and Jim Bernier. Suffice it to say, those guys all have some pretty impressive letters after their names as well.

I have no doubt they'll miss Linda Baun.

★★★

I haven't had a chance to tell you of a change in Radio World's U.S. staffing. Kelly Brooks adds the title of editor of the Buyer's Guide section to her duties as associate editor for Studio Sessions and Opinion and production editor for RW Engineering Extra. She resumes Buyer's Guide duties she handled in the past.

Timothy Kimble has left Radio World to become technical operator for ABC station WMAL(AM) in Washington, overseeing broadcast technicians including board ops, call screeners and satellite operators.

Keith Tate assumes Kimble's duties as listings coordinator for the NAB Daily News and the Radio World Source Book & Directory, answering to Editorial Director Carter Ross.

★★★

Last, I recently complimented Ken R. on turning a story assignment around quickly.

He replied: "What I lack in greatness I make up for in speed! This reminds me of a vocal session I once had with my jingle singers. After a bad take on their part, I made some suggestions and one singer said, 'What do you want, speed or perfect pitch?' To which I replied, 'Well, I'd like to have at least *one!*'"

From the Editor



Paul J. McLane

One More Look Back

Here's one more look at last year's winners:

25-Seven Systems Audio Time Manager
AEQ DR-100 Portable Digital Recorder
Aphex 230 Master Voice Channel Processor
Belar FMHD-1 HD IBOC Monitor
Broadcast Electronics 4MX 50 AM Transmitter
Broadcast Electronics Now Playing/Now Playing Plus
Broadcast Tools ADMS 44.22 Switcher
Burk G-Link G-Bus Expansion Series
Comrex Access Studio Codec
Continental Electronics 816HD Transmitter
Harris RMX Digital Audio Console
Heil PR 40 Microphone
Henry MultiPhones Distributed Headphones Systems
Linear Acoustic Aeromax-HDFM Multichannel Digital Processor
Marantz Professional PMD660 Recorder
Nautel Digital Adaptive Precorrection
Orban Optimod-FM 8500 Processor
Potomac Instruments PI-4100 Medium-Wave Field Strength Meter
Waves MaxxBCL Processor
Wheatstone Vorsis AP3 Digital Signal Processor

Also last year, NPR, Harris, Kenwood, Broadcast Electronics and Ibiquity received recognition for innovation in the development of multicasting. Telos/Omnia/Fraunhofer, Neural Audio and SRS Labs and their development partners were honored for advocacy of radio surround sound.

Your Best Move!

Make ERI part of your broadcast strategy.

HD Radio™ Solutions

HD Radio™ is trademark of Ibiquity Digital Corporation.

Antennas



Broadcast Towers and Structural Products

Transmission Line



ELECTRONICS RESEARCH, INC. **ERI** Call Toll-free at 877 ERI-LINE • Visit Online at www.eriinc.com • Your Single Source for Broadcast Solutions™

Accessible

► Continued from page 3
IAAIS.

Lusignan says there's no exact number for how many people listen on SCA receivers because many of the special radios are used in hospitals or senior facilities.

Delivering the special radios to listeners and keeping track of the units takes a lot of time; and the cost of up to \$100 per SCA receiver is a drain on community groups serving the blind and visually impaired, industry sources said. They believe a reading service on a digital signal will sound much better and that adding radio reading services via HD Radio will enable more of those who need the services to get them. This assumes, they add, that HD Radios eventually will be at or below the same price point as SCA receivers.

"Reading services have put up with

poor quality audio since we started, and the listening audience doesn't have a choice of stations," said Noble.

While most people associate radio reading services with the blind or vision-impaired, such services also serve those with paraplegia, tremors or allergies to newsprint, said Noble.

Lusignan said options to help the blind and visually impaired could include tactile and audible tuning controls.

Although RDS radios have been considered as a platform for live captioning, previous NPR tests on receivers found insufficient throughput to achieve such captioning; also, the network has not been able to find RDS receivers that support multi-line displays or variable font sizes, Starling said.

"Accessible," however, does not mean universal. Not everyone can have access to a radio reading service. An authorized group must deem listeners eligible. Congress has established a copyright exemption for the reading of print information to the blind and visually impaired.

In order to maintain the exemption, reading services must ensure that only authorized people can hear the service, in which newspaper and other media articles are read verbatim over the air.

HD Radios have the potential to be addressable, however transmission hardware, software and new receivers would need to be developed to make conditional access — called encryption by some — a reality on any supplemental audio channel, including those in the extended hybrid mode. The idea is that once someone buys an HD Radio and is deemed eli-

gible to receive a reading service, the listener gives the serial number of the radio to the reading service and the service is activated, in much the same way satellite radio services handle subscriptions and premium channels.

Ibiquity has contracted with NDS, a company that specializes in conditional access technology for TV, to develop such capability for HD Radio, a spokeswoman confirmed. Proponents hope the company will be able to demo a conditional access concept by next year's

See ACCESSIBLE, page 6 ►

12 Kilobit Reading Service Demoted at IAAIS Conference

In May, attendees of the IAAIS national convention heard an over-the-air demo of a radio reading service on KPBS(FM) in San Diego. Two receivers were used: an SCA receiver and a Boston Acoustics Receptor HD.

The station simulcast its HD Radio signal on the 67 kHz subcarrier. The approximately 100 attendees at the IAAIS annual convention heard the same programming on both radios.

The digital broadcast used the extended hybrid mode at a throughput of 12 kilobits per second.

Kneller said the most likely interference would be to the host analog signal because the extended hybrid carriers are so close to it; in this demo no such interference was observed, he said.

Lusignan said the quality difference

between the subcarrier and digital signal was "incredible. You could have heard a pin drop" in the room.

While there have been other on-air demos of the extended hybrid mode, this was the first over-the-air demo of a radio reading service to operate in HD-R and the first on the extended hybrid mode, participants said.

Kneller said there had been skepticism from some IAAIS members about what HD Radio audio would sound like at 12 kbps; some believed it would sound like audio streaming over the Internet. "To the average person who's not a trained listener, this sounded like FM," rather than typical SCA receiver audio, he said.

— Leslie Stimson

COOL STUFF 2006 AWARD WINNER



Product: HSC & HSD Headset Series
Company: AKG Acoustics

These are a combo of the company's line of premium headphones and microphones. They feature a swiveling mic arm for left- or right-hand use, as well as independent auto-mute functions.

The headsets are based on the K 271 and K 171 headphone and are available in supra-aural — the HSC 171 and HSD 171 — and circum-aural — HSC 271 and HSD 271 — versions; they can be fitted with dynamic or condenser microphones.

A transducer shock mount suppresses unwanted handling noise; an intelligent switching function automatically mutes the mic as the arm is moved up; the 271 models also have an auto-mute function that silences the headphones when the set is removed. The ability to mute both appealed to the judges. One wrote: "What a great combo."

Price: \$449–\$549

Info: (615) 620-3800 or www.akg.com



COOL STUFF 2006 AWARD WINNER



Product: TRX-HD Series Digital FM Translators
Company: Armstrong Transmitter Corp.

"A timely product filling an important industry need," one judge wrote. The translators use Armstrong's new FM receive section to pick up the programming a station is broadcasting including analog and HD Radio components. The signal stays in IF and is heterodyned up and retransmitted on the assigned translator frequency.



Since the received signal does not revert to baseband audio there's no need to re-encode the HD signal at the translator; this, Armstrong says, keeps the station within its Ibiquity licensing agreement and avoids the cost of an HD exciter at each translator location.

The TRX HD series is available with hybrid powers of 10, 50 and 100 watts; you reach higher powers by adding an Armstrong Linear Amp.

Shipping in summer.

Designer: Sinan Mimaroglu

Price: \$5,300–\$9,300

Info: (315) 673-1269 or e-mail ernie@armstrongtx.com.

Livewire On Board!

Now Radio Systems' Millennium digital consoles are available with six channels of Livewire connectivity.

Use your Millennium console as a standalone work surface AND network it throughout your facility to any Livewire-ready digital delivery system, Windows® Media Player or Axia analog or digital audio node.

It's the best of both worlds with standalone functionality and network flexibility using the Livewire IP audio standard.



radio SYSTEMS

Radio Systems, Inc.

601 Heron Drive, Logan Township, NJ 08085

phone: 856 467-8000 Fax: 856 467-3044 www.radiosystems.com

Accessible

► Continued from page 5
spring NAB.

The FCC would need to approve both the use of the extended hybrid mode and conditional access.

'Huge' potential

Harris believes the concepts of the extended hybrid mode and conditional access are "huge," according to Hal Kneller, chair of the tech committee of IAAIS and the Harris sales rep for non-com stations. Conditional access could be used for a host of station data services in addition to radio reading services, he said. Most often described in this vein for public radio is a so-called "pledge free"

channel for big donors.

Commercial stations would no doubt be interested in conditional access as well

**Failing eyesight is
the number one
reason for loss of
independence.**

— Mike Duke

for reading services and subscription channels, he said.

NPR and the WGBH National Center for Accessible Media have applied for

federal grant money so they and Ibiquity and other technology partners, can develop, field test and assess accessible services for HD Radio. Grant awards will be announced in the fall.

Harris has committed funding toward the second and third years of the program.

Among the questions NPR wants to study are interference consequences of using the extended hybrid mode.

In the meantime, proponents need to work with receiver makers on the concept in the design phase for future HD Radios. "Our work over the next year and a half is talking with receiver manufacturers about shaping buttons certain ways," including tuning discussions and how the accessibility features would be displayed on the radio, Noble said. The IAAIS also is discussing whether to lend its name and a logo to accessible HD Radios. ●

Newswatch

► Continued from page 2

Some other radio groups were surprised CBS make the deal when the selection process hadn't ended. After the CBS announcement, The Media Audit and Mediamark said they intend to see the selection process through.

Arbitron plans to launch the PPM system as its radio ratings service to the top 50 markets, beginning with Houston in July, pending Media Rating Council accreditation.

CBS Chairman/CEO Joel Hollander said he was confident the PPM would be supported throughout the industry.

XM Will Fight Labels

WASHINGTON XM said it will "vigorously" fight allegations brought against it by the record industry.

Labels are suing XM Satellite Radio for copyright infringement over XM's new portable Pioneer Inno XM2go radio, which allows subscribers to record and store 50 hours of music. In the lawsuit, filed in New York, a coalition of labels claims that XM's portable is really a "new digital download subscription service."

The lawsuit seeks \$150,000 in damages for every song copied by XM customers using the devices.

Both XM and Sirius testified during a congressional hearing in May that they pay music licensing fees to ASCAP and BMI. But the labels believe satcasters should pay more because new devices allow customers to store music in any order they wish, rather than the order in which it is aired, for future use.

The satcasters argue music stays on these portables and cannot be transferred to computers or the Internet.

XM and the Consumer Electronics Association, in congressional hearings on the so-called audio broadcast flag, have argued that the labels want to limit consumers' legal right to record material aired on the radio for personal use.

"These are legal devices that allow consumers to listen to and record radio, just as the law has allowed for decades," said XM spokesman Chance Patterson. "The music labels are trying to stifle innovation, limit consumer choice and roll back consumers' rights to record content for their personal use."

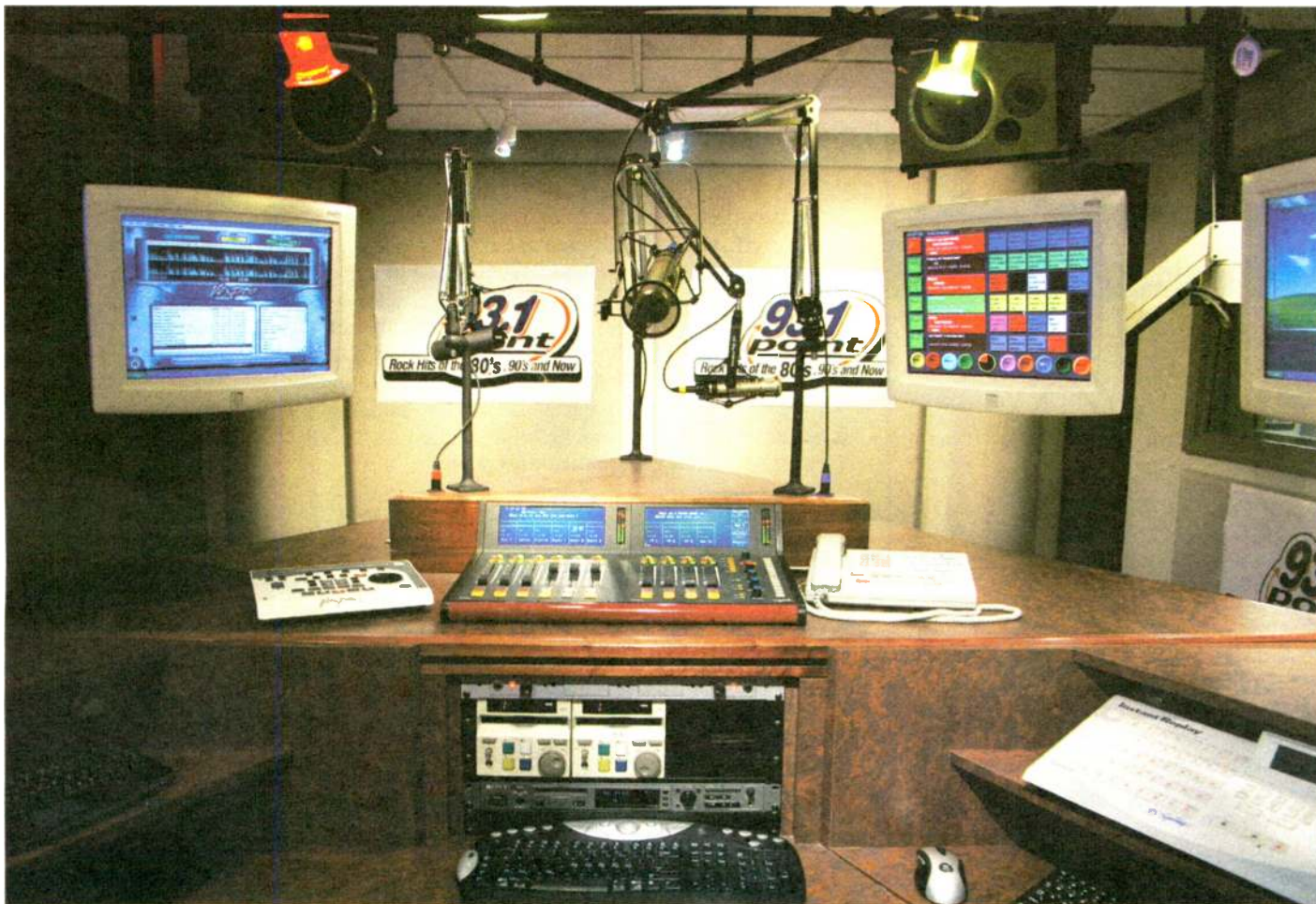
Sirius recently settled with the record labels in similar discussions regarding its new S50, as reported here.

CEA Stands By XM

ARLINGTON, Va. The Consumer Electronics Association blasted the lawsuit filed by several labels against XM (see above).

Vice President of Government Affairs Michael Petricone said, "The record industry is returning to the courts in their

See NEWSWATCH, page 10 ►



"Tomorrow arrived today!"

"I've built many, many studios all across the Midwest over the years, but our Knoxville Logitek installation was the cleanest, neatest and most advanced layout you can imagine! Almost everything is located in a centralized controlled-environment rack area. The control surface, mics, phone stuff and CD player backups are about the only things left in the studio outside of all the computer controls. The majority of the audio chain takes place within about five feet inside of one equipment rack for each station.

"My biggest problem today isn't how to set up for daily on-air operations, it's how to sell off all the old equipment like distribution amps that I don't need anymore. The Logitek system makes audio 'patching' just as easy as plugging in patch cables for everything. You don't even have to change the type of cable if you change from analog to digital—just re-plug a jumper into an appropriate engine input!

"I'd always dreamed of a studio that worked better for the jock, looked more like what the public thinks a radio star 'cockpit' should look like and yet was easy to take care of. The Logitek system made it possible to build it."

Mark Lucas, Chief Engineer
Journal Broadcast Group, Knoxville TN

Logitek
Console Router Systems

Logitek Electronic Systems, Inc.
5622 Edgemoor • Houston, TX 77081
1.800.231.5870 713.664.4470
info@logitekaudio.com www.logitekaudio.com

© 2006 Logitek Electronic Systems, Inc.



**This is how you feel when you find out
the remote is this afternoon.**

ACCESS IP Codec is how you cope.

ACCESS uses BRIC technology on the **public Internet** to deliver wideband mono or stereo audio on an IP network. Use it on DSL, cable, WiFi, satellite, 3G cellular, or pretty much whatever you've got. It can even operate as a POTS codec, delivering wideband mono or stereo audio over a single POTS line.

Read all about BRIC technology in the IP Audio Coding brochure. Want a copy? Contact us at 800-237-1776 or check our website at www.comrex.com/ip



Your Pass to Amazing Audio From Anywhere

Put Comrex On The Line.

Toll Free: 800-237-1776 • www.comrex.com • e-mail: info@comrex.com
19 Pine Road, Devens, MA 01434 USA • Tel: +1-978-784-1776 • Fax: +1-978-784-1717

COMREX

World Radio History

Don't Go to the Site Alone

While station security isn't always sexy, it's necessary. "Security is a hassle," hears Rich Parker, the director of engineering for Vermont Public Radio. "Users believe security hinders work until they see the threats."

E-mail viruses, file sharing, laptops that "travel" — all pose threats, he said during a session at the NPR Public

Radio Engineering Conference in April.

As far as security at a physical plant, roofs and windows often are overlooked and could be exploited by trespassers.

Decide which things you can not operate without, such as power, a transmitter and antenna tower and the

STL, and provide ways of maintaining those resources first, said Parker. Offsite backups of data and audio, alternative servers and a generator or Alternate Mains Feed should be considered.

Stations were encouraged by panelists to call their local sheriff's office or the Federal Bureau of Investigation

know who was behind them.

Many of the sites had only a chain and lock as security, he said.

Calling law enforcement to accompany an engineer to the transmitter site when there's an alarm is vital. In one of the 2004 Houston robberies, robbers were still at the site when the engineer arrived, and they beat him, said Schrom.

Broadcasters can develop a response plan, educate employees and report suspicious activity, he said. For exam-

Too much security can also be bad

- If passwords are changed too often, users write them on Post-it Notes — and put them over door jambs, under keyboards, etc.
- When security is not reasonably simple, users become 'helpful' to other users — opens a door for social engineering attacks from outsiders posing as employees or contractors
- Doors and gates are sometimes left propped open, or keys are left in 'easy to find' places
- General non-compliance with policies results in less security instead of more — no one benefits

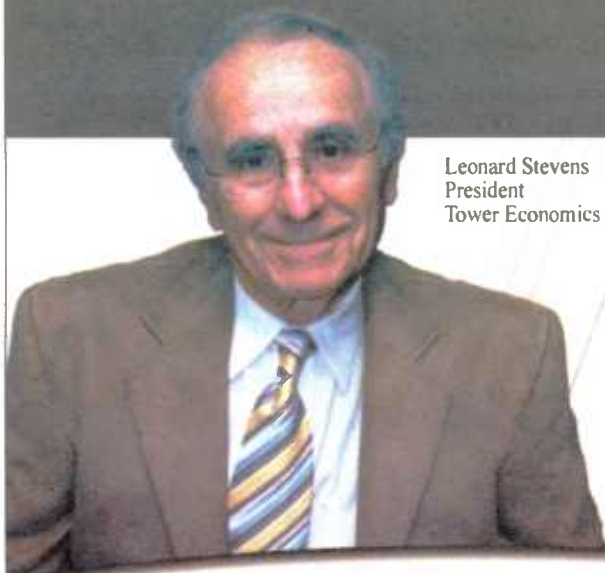
Source: Rich Parker, VPR

Determine those things you can't operate without

- Electrical Power
- Transmitter and antenna (tower)
- STL and/or remote control systems
- Studio (locally produced source material)
- Downlink (network source material)
- Staff (access and personal safety)
- Computer Audio Automation System
- Telephones and Internet access

"Accountability is indispensable to us

when putting up a new tower. That's why we deal exclusively with Sabre for our broadcast towers. Their people have been in the industry for years, and have a broad-based knowledge on all types of towers. Their construction department handles turnkey projects with ease, eliminating the need to hire subcontractors and worry about who is taking responsibility. We choose Sabre because we like the people, the product and the pricing."



Leonard Stevens
President
Tower Economics



800-369-6690 • www.sabrecom.com
e-mail: broadcast@sabrecom.com

2101 Murray Street • PO Box 658 • Sioux City, IA 51102

if there's a break-in.

David Schrom, a special agent with the Las Vegas FBI office who received his college education in broadcasting, said the bureau is investigating transmitter site break-ins in regards to domestic terrorism, foreign intelligence operations and cybercrime.

"We've learned there's a direct link between economic interests and attacks on the U.S.," he said.

Referring to transmitter site break-ins in the Houston area in 2004, he said the FBI didn't learn about those incidents right away "because no one thought to call them." The bureau was looking for a pattern to the robberies, and still doesn't

ple, many computer attacks are generated by company employees "paid to do stuff they shouldn't do."

He encouraged broadcasters to sign up for the InfraGard program, in which the FBI and companies exchange security-related information. The Web site is www.infragard.net.

But he encouraged broadcasters to have fun at the spring convention and quipped that despite the adage "What happens in Vegas stays in Vegas," local law enforcement wanted to make sure "you don't stay in Vegas an extra six to 12 months."

— Leslie Stimson

COOL STUFF 2006 AWARD WINNER



Product: Goldeneagle HD AM FM AM/FM
Company: Audemat-Aztec Inc.

The Goldeneagle HD is an HD receiver designed for off-air monitoring with optional remote control capabilities. It can be installed at the studio or transmitter or any reception area.



The system monitors in real time the quality and continuity of several FM and/or AM and HD programs and notifies you or another manager of any problem by sending an alarm. Features include a spectrum analyzer, audio streaming and recording, automatic scanning, measurement analysis and storage as well as remote control. Shipping now.

"Few manufacturers have been as prolific with timely products designed for the evolving needs of this industry," said one panelist.

Designers: Nicolas Boulay and team

Price: \$5,215

Info: (805) 497-4685, (305) 249-3110 or www.goldeneagle-hd.com

“We were building brand-new studios. Why use the same old tech?”

“Our company bought a station in San Diego, and we had to move the studios. Since the station would be a part of our Southern California network, we needed equipment

that could quickly re-route multiple audio signals – from satellite, T-1, ISDN and remote vehicles – to different destinations.



“With Axia, setting up new routing configurations is easy; you just save new routes in software and recall them when you need them. SmartSurface makes controlling our many different audio sources and destinations very straightforward and uncomplicated; our air staff loves it!



“I knew how expensive routing equipment was. I also knew we’d regret buying a system with fewer capabilities just to save money.



“More than anything, we wanted to avoid limiting our operations with the use of conventional

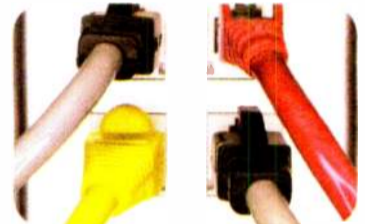
routers. Most of those systems force you to plan, during installation, for every signal routing configuration you might ever possibly need. If your needs change, you either have

to re-wire or settle for operational compromises. Not very user-friendly! Making sure that the system was easy for non-technical air talent to understand and operate was critical, too.



“And expanding the network couldn’t be simpler. Just plug in more audio nodes and boom! you’ve got more inputs.

“I’ve worked with lots of equipment in the past 30 years, and Axia is by far the easiest system to install and get up to speed with. There are just a few cables instead of hundreds; the entire installation – with testing – took just *one week*.



“Here’s the kicker: Axia cost about half what we would have paid for a conventional router. We’re very pleased, and plan to expand the network to our second control room. My advice? Get Axia. You won’t be disappointed.”



“Axia addressed all these concerns.

— Rudy Agus, Chief Engineer, Hi-Favor Broadcasting
Los Angeles, California



www.AxiaAudio.com

GUEST COMMENTARY

Allow Local Programs on Translators

Petitioner Says FM Translators Offer Another Way to Communicate With Listeners Locally

by Randal J. Miller

I have filed a petition with the FCC to allow locally originated programming on FM translators. The co-petitioners — Miller Communications Inc., Kaskaskia Broadcasting Inc. and Virden Broadcasting Corp. — make up the Miller Media Group that I own.

For my 34 years in the radio business, I have believed that anything that provides locally originated programming to a community, no matter how it's delivered, is a good thing.

My petition comes from my purchasing an FM translator construction permit in Taylorville, Ill., last fall from a religious broadcaster. While my main reason to purchase and build this translator was from a defensive standpoint, I began to think about how this FM translator could provide additional service to my listeners in Taylorville.

Current FCC rules state I have to re-broadcast a station so that the translator's 60 dBu contour would be inside the 60 dBu coverage area of the full-power station.

I already have a full-power FM radio

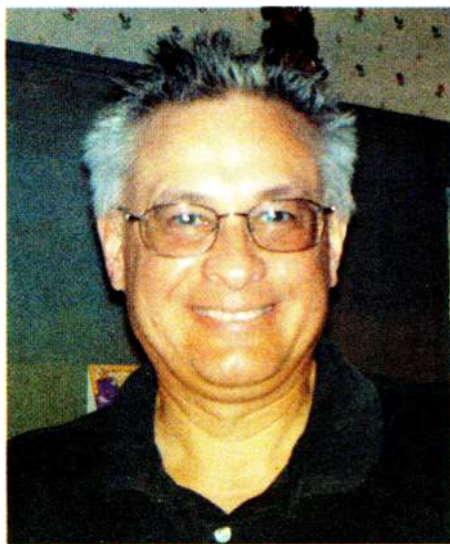
programming to its local community. That's how I developed the idea of petitioning the commission to allow locally originated programming on FM translators.

The crux of my argument is the fact that in 1982, the FCC allowed television translators to begin locally originated programming, because the commission has always put local service at the top of its priority list. That decision had no demonstrable adverse effect, public interest or otherwise, on television broadcasting.

That's what I'm asking the commission to do: make local service to local communities as a continued service priority.

A terrestrial FM translator could transmit local programming such as live coverage of city council meetings, additional high-school sports play-by-play broadcasts, additional church services and other music formats within the approximately five-mile radius of listeners in the Taylorville city limits. Putting this kind of programming on my Taylorville full-power FM would not be practical, as it wouldn't apply to listeners outside the Taylorville city limits.

The petition calls for terrestrial FM



Randal J. Miller

ity to receive additional locally originated programming from FM translators.

The long-range view

A means of delivering locally originated programming exists now with FM translators. This would be a commercially supported service, unlike LPFM, which is non-commercial (though it has underwriting).

While the purposes of LPFM and local origination on FM translators may cross in some respects — just as non-commercial full-service broadcasting crosses in

some areas with commercial full-power broadcasting — the commercially supported nature of local origination on FM translators would allow much locally originated programming to be carried on translators. This programming would *not* be financially viable carried on a listener-supported station such as LPFM.

Broadcasters need to take the long-range view that additional outlets for local programming, if they can be owned by broadcasters, will strengthen our industry, rather than viewing my petition narrowly as potentially creating added competition.

On May 10, the commission assigned my petition a rulemaking number, RM-11331. Please write, call or e-mail the FCC in support of this petition, copying Chairman Kevin Martin, Media Bureau Chief Donna Gregg, Senior Deputy Bureau Chief Roy Stewart and Audio Division Chief Peter Doyle.

Comments may also be filed online at www.fcc.gov/cgb/ecfs. Click on "Submit a Filing" on the right-hand side and file comments under the proceeding number listed above. Comments may be uploaded, or scroll down the page to enter comments in text directly as "Brief Comments."

I'm hoping that both commercial and non-commercial broadcasters will get behind my petition, because in my mind, anything that provides locally originated programming to a community, no matter how it's delivered, is a good thing.

The author is president of the seven-station Miller Media Group, Taylorville, Ill.

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

Every FM radio has the ability to receive additional locally originated programming from FM translators.

station licensed to Taylorville, WTIM(FM) "Newstalk 97.3." It operates with a cluster of two other stations licensed to Pana and Tower Hill, Ill., from our Taylorville studios.

TV can do it

I consulted with my Washington FCC legal counsel, John Garziglia of Womble Carlyle, about options to try to get the FCC and the industry to consider ideas about how FM translators could provide pro-

gramming to its local community. That's how I developed the idea of petitioning the commission to allow locally originated programming on FM translators.

To compete with all the new content delivery methods, broadcasters must look to the FCC to be given the advantage of as many different means of delivering locally originated programming as possible.

HD multicasting is coming, and at this point there are few receivers that have the ability to receive multicasting. Conversely, every FM radio has the abil-

response to an FCC probe.

The commission said its testing showed the FM modulator wireless transmitter for the Audiovox Xpress Model XMCK10 and Delphi XM SKYFi2 was not in compliance with the agency's operating bandwidth specifications or permissible emission limits.

Other XM-capable receivers, specifically the Sports Caster and Rody XT, might also be affected by a suspension, an XM spokesman told the Associated Press.

RW has reported that some public stations received complaints from listeners who occasionally can't hear terrestrial radio stations due to interference from satellite radio devices containing FM modulators.

In an SEC filing in May, XM said, "We are implementing a series of actions involving various radios to bring them into compliance, including requesting our manufacturers to suspend shipments to retail of radios or accessories that may require changes to operating or installation instructions, or modifications to software or hardware, such as small attachments that reduce emissions through the antenna or cigarette lighter adapter. We will seek new equipment authorizations where appropriate, and expect to provide additional information to the FCC shortly, including test results for several XM radios, as modified, showing compliance with the in-vehicle testing criteria."

Banc of America Securities research analyst Jonathan Jacoby wrote in a research note, "We believe that XM and Sirius could temporarily suspend retail shipments of certain radios, but the fix would be relatively quick and inexpensive and likely would not lead to stock-outs at retail."

See NEWSWATCH, page 12 ►

Newswatch

► Continued from page 6

non-stop efforts to stop new technology, neuter existing products, frustrate consumers and make illegal long-standing consumer home recording activities."

Petricone called the suit a "brazen effort by the labels to strong-arm more money from a successful technology industry startup. XM Radio already is the largest single payer of digital music broadcast royalties," he continued. "More, the record labels receive royalties on every XM recording device sold as provided by Congress under the Audio Home Recording Act."

CEA says it will support XM in its defense.

The lawsuit comes as RIAA, CEA, receiver makers and broadcasters are trying to work out the audio flag issue. Several bills have been introduced in Congress to do that, although their chances at passage are seen by insiders as slim as the legislative calendar grows shorter in this election year.

Lawmakers prefer that the industry work out the issue. NAB recently testified before a congressional committee that those talks are going well.

CEA says the suit now undermines that effort.

Audiovox, Delphi Suspend XM Shipments

WASHINGTON Audiovox and Delphi each have stopped shipments to retailers of one model of an XM Satellite Radio in

COOL STUFF 2006 AWARD WINNER



Product: AT2020 Cardioid Condenser Microphone
Company: Audio-Technica U.S. Inc.

Audio-Technica's AT2020 is an affordable side-address cardioid condenser for production and air studios as well as podcasting and remote broadcast applications. One "Cool Stuff" judge said, "A-T has beaten the low-end mic importers at their own game with better QC and a better-sounding mic."

A low-mass diaphragm provides extended frequency response and superior transient response. The microphone features high SPL handling capability (144 dB) and a wide dynamic range (124 dB).

Designers: Audio-Technica Engineering Group, Japan
Price: \$169
Info: (330) 686-2600 or www.audio-technica.com



Remote Broadcasting over the Internet

CELL PHONE
WIRELESS
FREE Demo
BROADCAST



The remote from Mexico 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**



Read the full story and get a **FREE** IP demo
www.tieline.com/ip

800-750-7950

Tieline 
www.tieline.com

Lengthy N.Y. Tower Dispute Ends

by Randy J. Stine

NEW YORK A controversial tower that stood, partially built, overlooking New York's Botanical Garden is finally down after being stuck in legal limbo for more than a dozen years.

The FCC officially renewed the broadcast license of Fordham University's WFUV(FM) in March, enabling the station to begin broadcasting at 50 kW from a new transmitter site several miles from campus atop Montefiore Medical Center in the Bronx.

The on-campus tower of the noncommercial station was the subject of much legal wrangling, as reported here previously. The project started in 1994 and halted days later after the Garden notified the New York City Department of Buildings about alleged inaccuracies in the school's construction-permit application.

So the partially built tower sat for more than a decade, 150 feet from the property line of the 250-acre National Historical Landmark. WFUV moved its antenna to the incomplete structure in 2000 and broadcast using special temporary authority from the FCC, operating at half of its permitted ERP.



WFUV's Main Studio

appease its neighbor with concessions. One such offer was to lower the height of the structure from the planned 480 feet to 380 feet to better suit the aesthetic nature of the area.

The FCC even mediated a series of

said Ralph Jennings, WFUV general manager.

The school immediately began broadcasting from its Montefiore site in March and started dismantling the controversial tower. The Botanical Garden confirmed the structure was completely down by the end of April.

"We have worked diligently with WFUV to reach this resolution. We are satisfied with the outcome and look forward to our continued relationship as neighbors," said Dennis O'Connor, chief legal counsel for the Botanical Garden. He confirmed that the Botanical Garden contributed financially to WFUV to help resolve the tower dispute but declined to give the dollar amount.

"We contributed to the move, to the removal and helping with lease payments at the new location in the Bronx," O'Connor said.

As a result of the tower trouble, WFUV added a booster to improve its signal performance in January 2004. The

600-watt booster — WFUV-FM2, atop the 392-foot bell tower of Riverside Church in Manhattan — extended the coverage area of the station into Manhattan and in parts of nearby Queens and Brooklyn.

Though now broadcasting at the allotted 50 kW of effective radiated power, WFUV officials said they have no plans to abandon the booster. In fact, the school has requested a power increase from 600 W to 2,500 W.

"The booster helps make the new location of the WFUV antenna possible by continuing to address interference the WFUV signal experiences within its licensed broadcast area," the school said in a statement. "An increase in power to more adequately address this interference has been requested of the FCC."

Montefiore Medical Center officials say the new location, an antenna mast atop their 28-story staff housing building, allows the center to be a good corporate citizen while resolving the long-running tower dispute.

"This seems like a winning proposition for all parties involved. We are proud to be the link that could bring about a resolution satisfactory to both parties in a true spirit of cooperation," said Spencer Foreman, president of the medical center.

The FCC license renewal brings a happy conclusion to the 13-year impasse with the New York Botanical Garden.

— Ralph Jennings, WFUV

Botanical Garden officials maintained that the partially constructed tower, which rose to 260 feet and was visible from most areas of the nature area, caused "significant economic harm" by lessening its beauty.

The school made several attempts to

public hearings to hear public comment on the matter in 2002. The sometimes-contentious forums included testimony from backers of both sides.

"The FCC license renewal brings a happy conclusion to the 13-year impasse with the New York Botanical Garden,"

Newswatch

► Continued from page 10

While as of the beginning of June the FCC inquiries were limited to the two models, Jacoby believes that other XM devices and those of Sirius could have compliance issues. According to the analyst, the FCC compliance could be attained with the addition of a 25-cent part to the radio, and a new product could begin shipping again within 30 to 60 days.

News Roundup

XM/WCS: NAB expressed pleasure that XM had called off its planned acquisition of WCS Wireless. "We have long been concerned that the two satellite radio companies are circumventing their commitment to provide national service with local program initiatives," said NAB spokesman Dennis Wharton.

XM had said the acquisition would give it an opportunity to expand its business with multimedia subscription offerings, including video and data, transmitted over the new frequencies.

CPB: The CPB's board responded to its Inspector General's report recommending reforms in the wake of controversy over former Board Chair Kenneth Tomlinson. Current Chair Cheryl Halpern stated that, for the first time in its 40-year history, the CPB initiated a top-to-bottom review of its operations and procedures. The board adopted several procedures for internal reform.

XM SUIT: XM Satellite says a lawsuit filed in federal court in Washington is without merit. The law firm of Schatz & Nobel said the suit alleges XM executives violated securities laws by selling their company stock while making misleading claims about the satcaster's ability to cut expenses. News of the lawsuit came on the heels of SEC filings by XM stating that it is fielding inquiries from the FTC about XM's marketing practices.

Worried about Translator Hijacking?

The recent flood of cheap FM repeaters for Satellite radio and MP3 players has raised the risk of someone overpowering your distant translator source with inappropriate content.

With our RBDS encoder at your station and an RD10 RBDS Receiver/Decoder at each translator, you can automatically mute the translator if the received signal has been hijacked or overcome through atmospheric skip.

The RD10 is available now for only \$395 for the Serial version, \$475 for the USB version.

Visit www.viaRadio.com or call us at (321) 242-0001 for more information.



viaRadio
Radio Data Systems

ViaRadio Corporation tel (321)242 0001
760 North Drive, Ste B, Melbourne, FL 32934 www.viaradio.com
Specializing in RBDS solutions

MPR doubles size: 20 new Axia studios in Twin Cities

Imagine that you're a major broadcaster with hundreds of employees and 20 studios in a single location, and that you produce programming not only for your own radio stations, but syndicated and round-the-clock satellite content heard on hundreds of other stations.

Imagine, too, that you've outgrown your studios. Management floats an ambitious plan to double the size of your facilities, adding *another 20 studios*. Of course, this scenario comes complete with all the usual pressure points: equipment costs, labor costs, and a move-in date that's firmer than a truckful of green tomatoes.

Now throw a wild card into the mix: all your research tells you, unbelievably, that the way to master this Herculean project on schedule and within budget is to employ technology so new, so untried, that most of your peers have never heard of it.

Imagine yourself living on a diet of Tums®.

That's the scenario faced by Ethan Torrey, Chief of Research & Development at Minnesota Public Radio. One of America's largest suppliers of content to public radio stations, MPR had an awful lot riding on whatever technology they chose to build and interconnect

their new studios.

"It's a big decision. It's not like you're just buying a console, or just buying an audio router," he says. "This is the basket that you're going to put all your company's eggs in!"

"We looked at Axia from every angle we could imagine," says Torrey. "Is this a strong company? Will they be around in five or 10 years? Is it a strong company in terms of its creative thinking, its capacity to keep up with technology?"

Torrey and his crew applied this criteria to all of the companies they might do business with, and they found a critical difference between Axia and the others: Axia's

Continued on Page 4



Top Left: 28-position Element console with telephone interface module in MPR's news control center. Center Left: A rack of Axia StudioEngines mixing audio. Bottom Left: Ethan Torrey demonstrates touch-screen switching with Axia PathfinderPC software in Master Control.

INSIDE

The Minnesota Public Radio story

Axia, live in Bangkok

World's newest Element discovered

Would you like Livewire with that?

...plus other assorted musings

Clark's Corner.

As Catfish mentions elsewhere in these pages, a lot has happened here in the last year. As Axia's resident marketing chef, I have the happy duty of meeting lots of folks in lots of places. In light of that, I thought that for our second issue of The Axis I might toss out a few random things I've learned during my travels.

— It is best not to wear tennis shoes when travelling to Minnesota in the snowy months.

— Aimee Mann and Donald Fagen on an iPod make excellent travelling companions.



— Those new resistance soldering irons work great on circuit boards, but using them to build XLR patch cables will make you feel less clever real fast.

— If you arrive on Concourse A at Sky Harbor Airport and your connecting flight leaves 30 minutes later on Concourse C, you do not have time for a "quick burger."

— If you've spent over half an hour trying to get your laptop to talk to someone else's network with zero results, check to make sure you're not using a crossover cable.

— Finally, cursing at your Windows 2000 server will not cause it to work, although dancing and shaking chicken bones in the light of the full moon might.

I look forward to meeting more of you this year! ☺

— Clark Novak, Axia Marketing

Would you like Livewire™ with that?

A networked audio system doesn't just replace traditional consoles and routers — it improves upon them, by providing complete integration with broadcast peripherals and PC-based audio delivery systems. Leading companies in our industry have realized the advantages of tightly integrated systems, and are making new products that reap those benefits.

Some cool new hardware products include the new Telos Nx12 Talkshow System pic-



— tured to the left. This twelve-line broadcast phone system is equipped with a Livewire network jack that enables you to connect it to your Axia network with just a single Ethernet cable, eliminating



the multiple audio pairs, control cables and external mix-minuses normally required. The new Omnia ONE audio processor also features a Livewire jack, making it simple to choose and process audio streams directly from the IP-Audio network. The industry-standard Telos Zephyr ISDN Codec now speaks Livewire as well. To the left, you'll see the newest broadcast console from Radio Systems, the Millennium Livewire — one

click and it's connected to your Axia network. And look for the new satellite receiver incorporating Livewire, coming soon from International Datacasting. The companies shown on this page are just a few of our partners. Check AxiaAudio.com/partners/ to find out who else is making Livewire-compatible products, and ask your favorite supplier about becoming an Axia partner. ☺





E-mail: Inquiry@AxiaAudio.com

Web: www.AxiaAudio.com

Tel: +1.216.241.7225

Axia Audio, A Telos Company • 2101 Superior Avenue • Cleveland, Ohio, USA

©2006 T.L.S. Corp. All rights reserved.

Axia, FiveWinc, Element, SmartQ, Telos and Omnia are trademarks of T.L.S. Corp. All other trademarks are property of their respective owners.

The Minnesota Public Radio story *continued* by Clark Novak

use of IP-Audio routing technology.

“There’s a lot of good reasons to use IP... a lot of advantages,” says Torrey. Historically, he notes, broad-



casting has leveraged technology from the telephone field.

“But that’s not

where technology’s being developed these days. Now, it’s being developed around IT networking.” Because Axia rides a platform of switched Ethernet, Torrey says, “we’ve leveraged the R&D efforts focused on IT networking to our advantage by using IP.”

“Frankly, we just couldn’t see paying a company to develop an expensive, custom hardware solution – switching – when we could pay another company that builds a lot more switching devices a lot less money to get a product that’s used by a lot more people.”

The switching devices Torrey refers to, of course, are Ethernet switches, which form the backbone of each Axia IP-Audio network.

“The simplicity of the architecture is a huge advantage. This is a 20-room build that we’ve done. We’ve got another eight or ten rooms in the old south wing of the building that we’ll interconnect. And with multi-casting, who knows what future needs will be?”

“With IP-Audio, expansion is mind-bogglingly simple. If you need more capacity, you plug in another

edge switch; if you need more audio ins and outs, you buy more nodes, you plug them in, you give them IP addresses – game over. You don’t have to re-think a whole TDM architecture, which frame is reserved for who: you just plug it in and let Ethernet technology sort it out for you.”

Cost was another factor in MPR’s decision. “There are two pieces to the leveraging of Ethernet for broadcast audio,” says Torrey. “One is that you have this big pool of R&D people out there who are focusing on

“The technology is flexible, scalable, adaptable, and it’s the least expensive way to go.”

making better Ethernet switches, for example. But the other advantage is that because that market’s bigger, the cost for that product is lower.”

“We saved a substantial amount of money using the IP approach. Compared to the nearest-priced competitor, we saved something on the order of 30 percent. And we sort of had to pare back the capacity of that other vendor’s product in order to even get it within our budget. If we were comparing apples to apples, identical functionality, Axia would have saved even more, perhaps as much as 50 percent.”

“So we saw a lot in Axia and made the decision to go this route – no pun intended! And we haven’t looked back since.”

MPR chose Element control surfaces for its new studios. “A major factor in Axia’s favor was the fact that every Element surface would be fully functional, with no additional cost for EQ, dynamics processing or other features,” says Torrey.

Air talent likes the consoles and learned how to use them very quickly, according to MPR’s Director of Operations, Perry Carter. “The board has proven to be very intuitive... my people picked up on it real quick.”

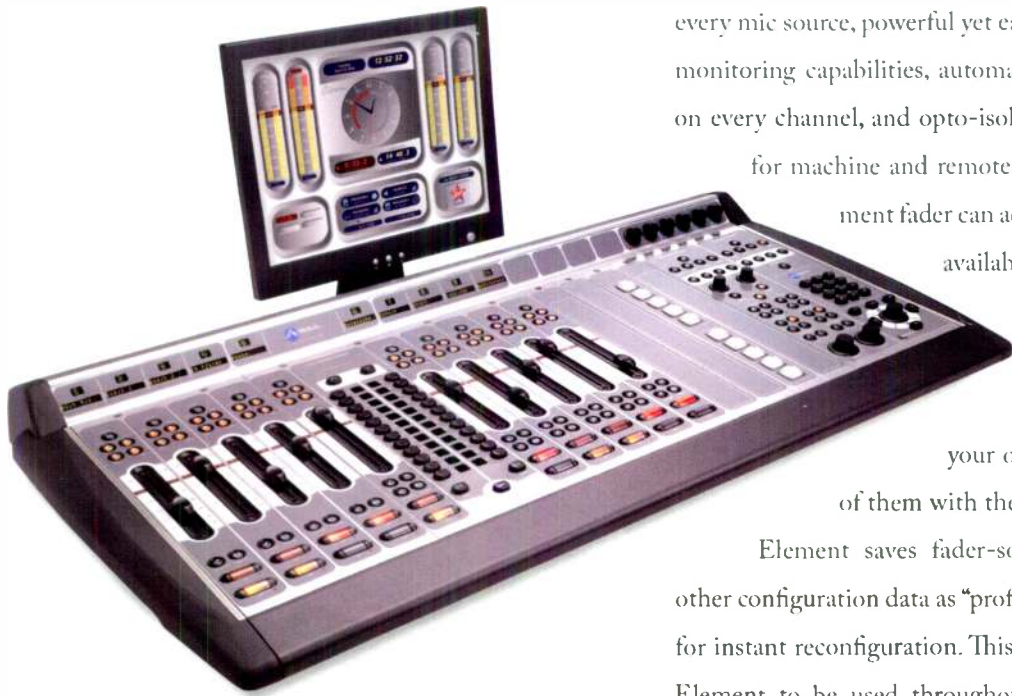
Carter especially likes the Show Profiles feature that allows users to set, save and recall favorite board configurations. “The ability to go in and hit a button, and know that everything you’re gonna need for that show is right there — it’s a great tool.”

At the time of this writing, MPR’s Axia IP-Audio network has been on the air for several months, and Torrey is pleased. “It’s a new application of a very well tested and used



technology. The technology is flexible, it’s scalable, it’s adaptable, and it’s the least expensive way to go. How often do you get to have your cake and eat it too? I can’t imagine that we would have gone any other way.”

Element: modular, intuitive control for your Axia network.



Meet Element, the modular broadcast control surface from Axia Audio. With configurations as small as 4 faders and as large as 40, Element is versatile enough for all your air, production, news and editing applications. Element can even be configured in split-surface configurations.

Element is the ideal blend of advanced features and intuitive controls, with flexibility and features not found in control surfaces costing three times as much. Like advanced integration with Telos phone and codec products, four Program output buses, four auxiliary sends and two returns, three-band SmartQ™ equalization on every channel, Omnia dynamics processing on

every mic source, powerful yet easy-to-use talkback and monitoring capabilities, automatic mix-minus outputs on every channel, and opto-isolated GPIO logic ports for machine and remote control. And each Element fader can accommodate any source available on the network. In large facilities, there might be hundreds of sources — and your operators can access any of them with the push of a button.

Element saves fader-source assignments and other configuration data as “profiles” that can be recalled for instant reconfiguration. This ability enables a single Element to be used throughout the day to perform different, specialized air or production tasks, without any downtime. Breakaway segments, in-studio performances or interviews requiring different sources can be loaded instantly. The morning team likes the mics on the left and the phones on the right? Let them lay out the board just the way they want it. Mid-day talent wants a completely different layout? No problem.

And here’s something else traditional consoles could never do: because Axia networks are intelligent computer based routing systems, machine logic always follows source audio. As sources are moved from one fader to another — or one studio to another — no logic reconfiguration is necessary! Simply load a source on any fader,

and that fader’s controls are immediately communicating with the source. When a profile is loaded Element can even automatically change the lines on your Telos 2101 phone system.

Element is ready for radio’s future, too. Thanks to an advanced DSP engine architecture, Element’s four program outputs can be configured to mix in either stereo or surround (5.1+2). And Element’s on-screen status display is the most comprehensive anywhere, with all meter, timing and options information presented in a friendly, instantly-accessible format using a standard LCD computer monitor. Configuration and management can be done remotely from any PC browser — even from off-site.

There are already over 100 Element control surfaces in radio stations worldwide. Maybe Element is right for you, too? 🎧



You can easily configure Element to fit your station's unique operational needs. This happy board operator shows off a 24-position, 18-fader split-frame Element at Algoa FM in Port Elizabeth, South Africa.

The Catfish Speaks.

The past year has been terrific for Axia Audio. We've grown like crazy as hundreds of broadcast studios around the world upgraded to Axia. We've expanded our team in R&D, support and manufacturing, and we have a lot more changes in the works.

Recently, we developed and launched our newest control surface, Element. Element is modular, easy to use, packed with innovative features, and can mix in stereo or surround on each of its four program outputs, making it the first broadcast console designed to meet the challenges of the HD future.



Our Livewire partners have been busy too. We welcome Broadcast Electronics, D.A.V.I.D. Systems, IDC and Netia as our newest Livewire partners, all of

whom are offering or will soon offer products with IP-Audio capabilities. Our parent company, Telos, just introduced a phone system and a codec with Livewire; the new audio processor from Omnia has Livewire too. One of our partners is even offering a console for stations with tighter budgets who want to get started with IP-Audio.

We look forward to another year filled with new challenges, products and ideas. Most of all, we look forward to working with our great clients. We are thankful for each and every one of you. We succeed only when our clients succeed. Here's to our mutual success!" 🐟

— Michael "Catfish" Doseb, President, Axia Audio

Radio Free Axia *by Clark Novak*

Located in the center of mainland South East Asia, Thailand's capital city of Bangkok is the region's political and cultural center, hosting over 9 million residents — and the South East Asian bureau of Radio Free Asia, a nonprofit corporation that broadcasts news and information in nine native Asian languages.

When it came time to update the Bangkok bureau's 10-year-old digital consoles, RFA wanted more than just to replace old gear — they wanted to be able to share audio resources throughout their facility's five studios.



Their technology search brought them to Axia.

"We knew that the new technology utilizing shared network resources on the consoles was what we wanted," says David Baden, RFA's Chief Technology Officer, "but I had always been reluctant because of the de-centralized wiring point of the switch-type hub — where everything was tethered. I always felt that a hybrid console should exist where local wiring could be kept local rather than run outside the room to a central location."

"The Axia system addressed those concerns and gives us the best of both worlds," Baden relates. "It's configurable, we can put all the wiring points in the places where they're most needed, the system is easy to expand, and it provides network switchability, where all points are accessible from anywhere on the network."

According to Senior Technician John Penovich, talent loves working with the Axia system. "Both the SmartSurfaces and the Elements have worked out really well for us," says Penovich. "In reality, there was no learning curve. It took us about 45 minutes to train each broadcaster on the use of the system — and that included powering the system up, loading their individual profiles, and actually using the Elements." Penovich himself likes the remote administration capabilities: "System configuration via the web interface is fantastic because you can do it from any location. At some point, we may offer remote administration of the Bangkok system from Washington."



RFA likes Axia so well that they're planning on upgrading more facilities. Says Baden, "Here in Washington, we have a total of 30 studios and a master control operation. When we replace these consoles, we'll be looking to Axia to handle our requirements...we'd also like to upgrade our other facilities throughout Asia with Axia." To other broadcasters considering IP-Audio networking, Penovich adds "Jump in, the water's fine!" 🐟

Conserves AU.



HD Multicast, HD Surround, conventional stereo — Element handles them all. Upgrade your studios with confidence; you're ready for anything.



Technology can save you money.

Consider: computers, VoIP phone systems and bandwidth cost less and deliver more every year. Wouldn't it be great if broadcast gear did, too? Thanks to Axia, it can.

Axia saves you money by using open Ethernet technology to replace expensive proprietary mainframe routers. Not only is Ethernet less expensive, it's simpler and more reliable — perfect for critical 24/7 operations. The Axia IP-Audio solution eliminates sound cards, DAs, punch blocks and cumbersome cables, so it reduces installation and maintenance costs.

And now, Axia has a cool new modular control surface: Element. Scalable from four to forty faders, you can build the ideal surface for every studio. Element's abundant outputs and flexible architecture can be switched between stereo and surround mixing. Its info-rich user display, built-in router control, and integrated phone and codec support simplify the most complex shows. You'll never outgrow it.

Like all Axia products, Element does more and costs about half what others try to charge for their "Trust us, this is better than Ethernet, would we lie to you?" stuff.

Element. Worth its weight in... well, you know.



www.AxiaAudio.com

HD CONVERSION DIGEST

'Capable' or 'Ready' For Digital?

The First in a New Series of Hands-on Tips About HD Radio Implementation

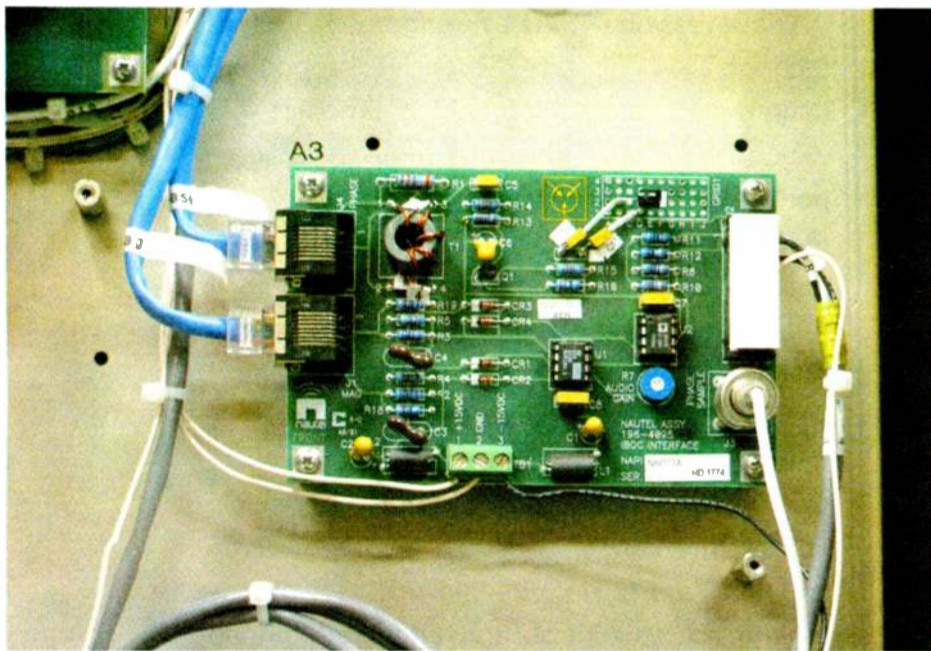
by **W.C. Alexander**

Cris Alexander is director of engineering for Crawford Broadcasting.

As our company has gone through the process of converting its stations for HD Radio, we have learned a great deal. These early lessons were applied to later conversions, making the process much easier and more streamlined. By sharing this information with you, we hope to make your conversion process easier as well.

turer will tell you whether or not you will need to replace the transmitter or whether you can work with what you have. The manufacturer also can provide you with an accurate quote for the equipment needed to produce an HD Radio signal, including transmitter modifications, digital exciter and ancillary equipment.

If your transmitter cannot be converted for HD Radio operation and you will need a new HD Radio-ready unit, you have several choices, including Broadcast Electronics, Continental, Harris and Nautel. Others, such as Armstrong and



The IBOC interface board added to a Nautel ND Series transmitter.

Over the next few months, I will, in this column, cover some of the practical considerations in HD Radio conversion for both AM and FM plants. I'll take things in more or less chronological order. In this, the first installment, I'll go over some of the AM conversion preliminaries.

Terminology

One of the biggest considerations in converting an AM station for IBOC is transmitter compatibility. A good percentage of modern solid-state transmitters are HD Radio-capable, but not necessarily HD Radio-ready.

To differentiate, an HD Radio-capable transmitter is one that can, with some reasonable amount of modification, be converted. An HD-ready transmitter is one that can directly accept the magnitude and phase signals from the digital generator and transmit an HD-R signal without modification.

If your transmitter isn't already HD-ready, the only way to know for sure if it is HD-capable is to contact the manufacturer and find out. It may well be that transmitters of a certain model number after a certain serial number are HD-capable, so be sure you have your transmitter's serial number handy when you make that call.

The answer you get from the manufac-

QEI, have announced HD Radio-ready units or HD modifications for existing transmitters. Do your homework. Talk to engineers using these products in the IBOC hybrid mode.

Pricing will likely be similar, so performance, ease of installation and reliability become perhaps more significant in product selection. Also consider size, because you have to fit the new rig into available space or else enlarge/augment the space. Remember power requirements, cooling and other environmental factors.

The "guts" of the HD Radio generator essentially are the same for all manufacturers. At the core of each unit is a "digital up-converter" or "DUC" that is manufactured by Ibiqity Digital Corp.

The DUC is a Peripheral Component Interconnect (PCI) card that plugs into a slot in an industrial-grade computer motherboard. The HD Radio generator, then, is really nothing more than a computer built around the DUC. Differences between brands are minimal and largely cosmetic, in my view. Even the software is the same.

In our next column, I'll explain some of the preliminary antenna issues that AM stations must resolve before they can begin HD-R operation.

Got a suggestion for a future topic? E-mail crisa@crawfordbroadcasting.com.

COOL STUFF 2006 AWARD WINNER



Product: Big Pipe LT
Company: Broadcast Electronics Inc.

"Little sister of Big Pipe," a judge enthused. "Imagine 12 to 18 Mbps over a 2.4, 5.3 or 5.8 GHz hop, no license required, 30-mile path not a problem, around the cost of a 950 link."

Roughly for what a traditional 950 MHz link costs, this high-capacity pipeline is capable of data speeds starting at 10 Mbps for transporting

AES and analog audio as well as multiple channels of HD audio and data. For stations upgrading to HD Radio it can handle a main channel, HD2 channels and advanced data services, while providing Ethernet connectivity and RS-232 serial data to the studio or remote site. It's bi-directional, so there's separate telemetry, communications or RPU backhaul links.

The Big Pipe LT works in the 5.3 GHz band and reaches up to seven miles point-to-point; in the 5.8 GHz band it's up to 40 miles. Systems are shipping. Shown, Rex Niekamp holds his "Cool Stuff" medal.

Designers: Collaborative effort led by Rex Niekamp

Price: Varies by configuration

Info: (217) 224-9600 or www.bdcast.com

COOL STUFF 2006 AWARD WINNER



Product: The Radio Experience Message Manager and Modules
Company: Broadcast Electronics Inc.

BE devoted a lot of booth space at NAB to what it calls messagecasting. Here's a suite of applications from The Radio Experience that goes beyond title and artist. It includes everything a station needs to message promos, traffic and weather text. Add-on modules include NewsFlash Pro, LiveCD and others.

Broadcasters can link messages to on-air contests or commercials, and link to third-party services to message EAS alerts or send "about-to-play" messages to listeners' mobile phones. Message "laundering" by the company's TRE Data Center means title and artist names are displayed properly and are consistent.

What the judges said: "This is the next step to making radio metadata an everyday, cross-platform reality and an integral part of regular broadcast operations." Shown: Allen Hartle.

Designers: Allen Hartle and development team

Price: \$1,100-\$7,700+, depending on number of program channels, output "pipes" (RDS, HD2, Web, etc.) and extras.

Info: (217) 224-9600 or www.bdcast.com



NEWS WATCH

SIRIUS GRIPE: Communications General Corp. filed a complaint with the FCC against Sirius Satellite Radio regarding "incorporating 87.7 and 87.9 MHz into the intentional radiator mini-transmitters built into many of Sirius' satellite receivers."

"CGC reasoned that if the FCC ultimately fined Sirius for the use of prohibited frequencies, that action would send a powerful message to other manufacturers of mini-transmitters that they, too, should abandon the use of the prohibited 'below 88 MHz' frequencies," the company wrote in its newsletter.

ENGINEER RECOVERING: Volker Schmitt was off of life-support and recovering from injuries suffered in an April accident in Las Vegas. The Sennheiser engineer had been critically hurt in the hit-and-run accident during NAB2006. A company spokeswoman said Schmitt faces "some intensive orthopaedic rehab ... but he's going to make it just fine."

ProFiler client success stories. Everyone post!

"PROFILER GIVES OUR PROGRAM DIRECTORS ACCESS TO LOGGED AUDIO ON ANY STATION PC. THEY'RE DELIGHTED!"

PROF. JIM DAVIS, KSUI/WSUI
UNIVERSITY OF IOWA

"No more forgotten airchecks since ProFiler is automatic. It saved at least one student from failing last year, since he kept forgetting to roll tape. It's hassle free!"

— Professor Mark Seignious
K E I S, Northwestern University

"ProFiler solved a particular problem for us with WAXY because we needed to keep this 'logger' off our house LAN and give access to it to non-employees whose computers live on a totally separate network. ProFiler fills the bill nicely!"

→ Gary Blau, Jefferson—Pilot Miami ←

"We had a problem with competitors recording our live sports broadcasts and rebroadcasting them in their own news. We used ProFiler's scheduled record feature to spot record those stations... then our lawyers took care of them. We're very pleased with ProFiler... I bought four of 'em!"

Dennis Eversall, Susquehanna Indianapolis

"We're running 3 Profilers at our stations in New York. I want to keep audio logs for years, not just months. So I installed a terabyte hard drive, I can store 4-5 years of audio on it! I love ProFiler."

MIKE TOCCO, SBS NEW YORK

"There was a notice of proposed rulemaking, so I decided to install **PROFILER** just in case the Commission decides to require it — it's a good defensive move. ProFiler's doing great: it's effective, it's easy to access audio... It does the job."

Jeff Zeismann, WNKR-FM

"We'll have internal audits required by the University, or a University official will get a request for a transcript, so we use ProFiler for long form logging and skimming. I use removable drives & get a year's worth of audio; when one's full I just pull it out and store it."

— Jeff DePolo, WRTI-FM
Temple University, Philadelphia

"EVEN SALES PEOPLE WHO AREN'T COMPUTER SAVVY CAN USE IT. OURS LEARNED PROFILER REAL EASILY — NOW THEY SAVE SPOTS AND SEND THEM TO CLIENTS WITHOUT HAVING TO ASK PRODUCTION!"

— GEORGE SEIFERT —
WAKR - WONE - WOMX



"We use our hard-drive playout system to record and re-air portions of our morning and midday shows. We use ProFiler as a backup recorder as well as for logging and skimming, and it's saved us a few times! Plus, when the jock says 'I did the greatest bit in the world!' it's nice to have an immediate high-quality version for promos or archiving."

>> Erick Steinberg, KFOG, San Francisco <<

We call it ProFiler. Our clients call it indispensable.

What would you do with a **computer-based audio logger**? Telos ProFiler's MP3 audio logging features alone (expandable to capture up to **8 streams** on one PC) are enough to satisfy most folks, but ProFiler is loaded with other tools... like a **skimmer** that switches to a higher bit-rate when the mic is open, **export functions** that help you assemble great-sounding airchecks and composites quickly, and remote **access via IP**.

But — as you can see — our clients tell us that ProFiler helps them do even more. How much more? Browse www.telos-systems.com/ProFiler/ to discover how ProFiler can work for you.

Telos ProFiler. How will you use it?

Telos

AUDIO | NETWORKS

Euro Regulators Seek DMB Accord

by Michael Hedges

GENEVA Nine European media regulators are coordinating their digital strategies.

Working in four distinct geographic "sub-projects," German, Swiss, Austrian and Italian authorities are meeting regularly to build a new architecture of "inter-working media services," said Peter Kettner, Digital Multimedia Broadcasting project manager for the agency that regulates broadcasting in Bavaria, Germany.

The project carries the umbrella name MI FRIENDS, an acronym for Mobile, Interactive, Favorite TV, Radio, Informa-

tion, Entertainment and New Digital Services.

Economic benefit

The technical platform is DMB, a South Korean-designed technology that builds upon the Eureka-147 DAB platform. Samsung and other Korean mobile phone manufacturers displayed new DMB handsets at a German media show last October. The four MI FRIENDS projects began this January and will run for 24 months.

"The goal is to develop and test new media technologies from an economic viewpoint, paying particular regard to

social and cultural aspects with man as media consumer at its center," Kettner said.

He said he expects the economic benefit "conservatively" to exceed roughly \$60 billion. German regulators, and the BLM in particular, were under pressure to organize the most beneficial digital services before the first match in the 2006 FIFA World Cup started on June 9. Germany is host for the quadrennial soccer championship.

Just as camera phones have made cell phone manufacturers producers of digital cameras, they are also becoming broadcast radio receiver makers. FM receiving chips are becoming common in next-gen-

eration cell phone handsets alongside other new digital platforms, as cameras and PDAs, said experts interviewed for this article.

Common geography

The pilot project turns Regensburg, in eastern Bavaria, into a mobile multimedia city for Germany and all of Europe. The choice of Regensburg was based on its size, demographic characteristics and the availability of media outlets. In addition, VHF band III frequencies, requiring less transmitter power, are readily available in the city. The test will involve 100 participants with new mobile receivers.

The second pilot subproject centers on the World Cup. For this, 1,000 participants in Munich will use mobile receivers for audio, video and new services. According to Kettner, the focus will be on radio and interactivity.

All World Cup venues will have adequate DMB coverage. The German state of Saarland also announced plans for DMB pilot tests, although those are not likely to start before the World Cup and no World Cup matches will be held in Saarland.

The pilot project turns Regensburg, in eastern Bavaria, into a mobile multimedia city for Germany and all of Europe.

Late September, regulators from several parts of Germany and Austria met to move forward another subproject to coordinate VHF band III digital media in the Lake Constance region, on the border of Germany, Austria, and Switzerland.

The three-country DRM Bodensee project is also intended to provide a framework for cross border regulation. About 30 DAB/DMB radio programs are offered in the Alpine region, a popular tourist destination for Germans, Swiss and Austrians.

A fourth subproject will bring DMB tests to the South Tyrol area of Austria and Italy.

Interactivity ingredient

In addition to the audio and visual offerings, the MI FRIENDS pilot emphasizes new services available via DMB platform handset receivers.

Timeshifting, allowing users to listen to audio material outside actual broadcast schedules, has been shown in the United Kingdom, for example, to help drive consumer interest, according to the WorldDAB Forum, which promotes the Eureka-147 technology. Enhanced memory capacity would also allow podcast downloads, considered a value-added service from radio broadcasters.

Interactivity will be included, giving users access to text messages and, with

See DMB, page 19 ▶

AM RF Systems...



without the surprises.



LBA Technology, Inc.

Reach Farther, Sound Better.SM

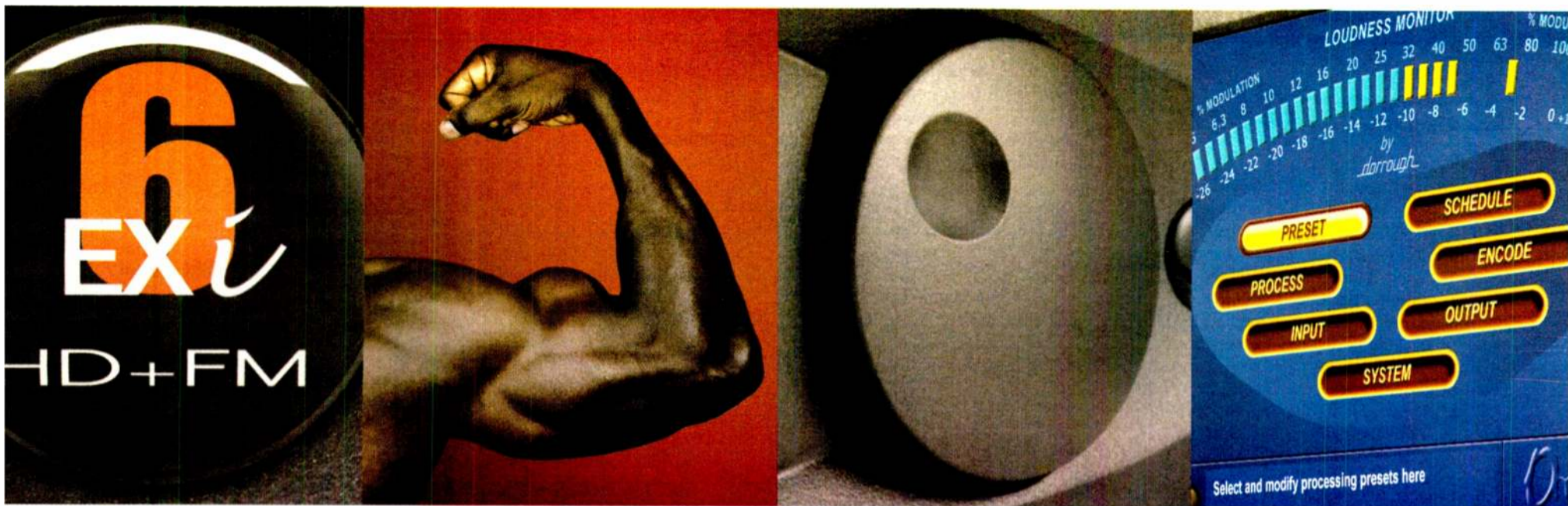
LBA Technology is your proven, worldwide supplier of IHD radio ready AM antenna systems. Our array of RF products includes directional antenna systems, diplexers and triplexers, ATU's, and components for every power level. LBA systems are designed and custom fabricated to your distinct requirements.

We put our 40 years of AM RF experience into helping you reach farther and sound better! See what we can do for you at www.LBAGroup.com or call us at 252-757-0279

252.757.0279 • www.LBAGroup.com • 3400 Tupper Drive • Greenville, NC 27835

World Radio History

got wire?
cables & connectors
racks
tools
problem solvers
test gear
& much more
www.systemsstore.com



Omnia 6EXi

The Ultimate Upgrade.

Omnia-6 is the standard by which all other processors are measured. In the last few years, thousands of leading stations in the world's top markets have upgraded to Omnia. In fact, Omnia-6 has been so successful that some competitors have just given up; others are mere shadows of their former selves.

So why do broadcasters love Omnia-6? The *sound*. The clean, pure, crystal-clear sound (bone-shakingly loud, if you want) that's become the choice of #1-rated stations in New York, Los Angeles, Tokyo, Paris, London, Rome, Sydney and Beijing. The other guys tried to match its winning sound... and failed. So they've settled instead for trying to copy its innovative features.



Features that Omnia pioneered — like dual, simultaneous processing paths for HD Radio™ and conventional FM at no extra cost. The world's first non-aliasing digital clipping system, with composite clipping for the ultimate in competitive loudness. The high-precision Multi-Band Look-Ahead Limiter (invented by Omnia) for perfect HD Radio processing. The six-band limiter for conventional FM, with adjustable crossovers for surgically-precise control over your signature sound. An integrated Dorrough™ Loudness Meter. And of course, the groundbreaking 96 kHz, 24-bit platform that delivers full 20 kHz bandwidth for HD Radio broadcasts. Always innovating.

Which is why the **new Omnia-6-EXi** makes perfect sense. With **integral HD Radio Diversity Delay** that helps digital broadcasters eliminate analog connections to the HD exciter, ensuring independent analog and digital program streams. And the exclusive new **LoIMD Clipper** that actually **suppresses intermodulation distortion** to deliver audio that's cleaner, clearer and more detailed than ever — no matter how aggressive your processing. (If you already own an Omnia-6, don't worry — there's a low-cost upgrade to give your processor full-fledged Omnia-6EXi power.)

A lot of muscle? You bet. No wonder the competition is running scared.



Expanded

► Continued from page 1
the original expanded-band plan.

The parties have filed a petition asking the FCC to waive its policy requiring that licensees return one of their AM allotments for cancellation and related requirements prohibiting the sale of a station during that period. This, the groups believe, would allow sale of stations to recognized small businesses for not more than 75 percent of the station's fair market value.

They are also asking the commission to delay the effective date of its requirement to surrender one of the AM broadcast licenses for one year.

The Minority Media Telecommunications Council, Independent Spanish Broadcasters Association, National Association of Black Owned Broadcasters and Office of Communication of the United Church of Christ Inc. signed on to the effort. Clear Channel Radio, Entercom and Mid-West Family Broadcasting also are among the broadcast petitioners.

According to the parties, "The joint petitioners believe that the preservation of the licenses of the stations which would otherwise be surrendered would serve a valuable public-interest goal by increasing broadcast diversity."

In the petition, the parties ask the FCC to allow the licensee of an expanded-band AM station to assign or transfer control of one of its stations to an entity qualifying as a small business as it applies to broadcasters in the Small Business Association's regulations. The term "small business" refers to any entity having annual gross receipts under \$6.5 million.

Any licensee already qualifying as a small business would not need to sell or return its additional station at all, according to the document.

Currently, 56 stations are operating in the expanded band (RW, March 1). The petition asks the commission to reinstate authorizations that have already been

returned and to extend their surrender dates by the same one-year period. Approximately 17 AM broadcast licenses have been surrendered, according to the FCC, including some expanded-band frequencies.

The commission has said it prefers that licensees continue in the expanded band, 1605–1705 kHz, to help relieve interference along the dial. The commission expected most migrators to keep their new frequencies, which have superior coverage areas. In many cases, they operate on the expanded band at 10 kW and 1 kW night non-directional.

Not since 1977 has there been a request before the commission filed as joint petitioners by public interest groups and broadcasters.

Hispanic group has entered into a programming agreement with Entercom by which it is providing Spanish-language programming," according to the petitioners.

Broadcast attorney David Oxenford, who worked on the petition on behalf of several expanded-band licensees, said he expects the FCC to act quickly on the "stay request to the status quo" while it determines the merits of the petition.

"We have had some discussions with the folks at the FCC and they are considering the requests," Oxenford said.

The FCC could hold hearings and seek public comment regarding the petitions, or

interference in the AM band — does not justify requiring expanded-band stations to return one of their authorizations when doing so would deprive the listening public of a broadcast service. The loss of any service is inconsistent with the public interest."

FCC officials said they are working through the process but declined further comment on the petitions in May.

The improbability of public interest groups and broadcasters showing solidarity on an issue affecting the broadcast industry is not lost on the participants, Honig said.

"That's the really unique and interesting part of this. Not since 1977 has there been a request before the commission filed as joint petitioners by public interest groups and broadcasters. That was the original request to set up the tax certificate policy," Honig added.

Congress killed the minority tax certificate policy in 1995 for alleged mismanagement. The incentive program gave tax breaks to station or group owners that sold facilities to minorities or women.

— David Honig, MMTC

"Congress has repeatedly asked the FCC to find ways to promote diversity. We think this is an opportunity for the FCC to do what Congress has ordered it to do. It preserves service to the local public and promotes programming diversity and minority ownership," said David Honig, executive director of the Minority Media Telecommunications Council.

Spanish-language formats

Honig said numerous AM broadcasters have specifically targeted programming on one of their dual frequencies to serve the needs of minorities and other niche audiences.

The petition cites examples in Madison, Wis., and Cedar Falls, Iowa, in which Spanish-language formats are now operating on frequencies that would have to be surrendered under current FCC rules.

"Similarly, in Kansas City, a local

it could address the issue as a simple waiver as opposed to official rulemaking, Oxenford said.

"This would give opportunities to small business owners to get into the radio business. Several of my clients have entered programming agreements with minority operators and presumably could sell to these groups," Oxenford said.

Honig admits the request doesn't follow the commission's original goals of clearing spectrum and limiting interference.

"Circumstances have changed since the FCC began drafting the procedures to expand the AM band. I don't believe limiting interference in the AM band is a legitimate concern now if it comes at the expense of diversity," Honig said.

According to the petition, "The benefit the commission expected to realize from a licensee's returning its initial AM band authorization — reducing congestion and

KDNZ(AM)

One station to which petitioners refer in the filing is KDNZ(AM) in Cedar Falls, Iowa. The 500-watt station, known as Radio La Buena, began broadcasting a Spanish-language format in early 2005. KDNZ broadcasts on 1250 kHz while the group's KCNZ(AM) airs sports on the expanded band frequency at 1650 kHz. The stations are owned by Fife Communications Co.

Station officials say Radio La Buena has connected with Cedar Falls' growing Latino population. Officials estimate it has 25,000 listeners.

"We have found a new purpose on this frequency. There is a great need for this station now that wasn't there five years ago," Jeff Ryant, KDNZ station manager. "Advertisers have used the station to reach a major population. This audience has been largely ignored by other local media."

See EXPANDED, page 19 ►

COOL STUFF 2006 AWARD WINNER



Product: WVRC-8 Eight-Channel Web/Voice Remote Control
Company: Broadcast Tools Inc.

The WVRC-8 "is a cut above" for a number of reasons, judges found, including eight channels of status, dial-up voice control in your recorded voice, a temperature sensor input and stereo silence sense. "The Web server provides a 100-event scheduler that should handle all the power/pattern changes for even multiple-level PSRA/PSSA authorized AM stations."



The unit offers monitoring and remote control features via Web or dial-up. It has a browser-based function program scheduler and alarm logger; you can notify up to four e-mail recipients. The unit has eight high-rez telemetry channels with independent SPST one-amp raise/lower relays that can be latched, unlatched or momentarily closed.

Each of the eight optically isolated status channels may be configured for 5 to 24 VDS wet or dry input monitoring. The system defaults to English but you can record your own prompts. The WVRC-8 may be programmed for dial-up operation via HyperTerminal, while the Web interface may be programmed using your favorite browser. Ships this summer.

Designer: Don Winget

Price: \$1,059

Info: (360) 854-9559 or www.broadcasttools.com

COOL STUFF 2006 AWARD WINNER



Product: M2.0 HD Radio Modulation Monitor
Company: DaySequerra

Multicasting is here and DaySequerra looks ready for it with a box intended to deliver high-quality monitoring of HD Radio AM and FM.



The mod monitor includes pushbutton tuning for AM and FM bands including multicast channels, and a total of 20 preset stations for each band. The front panel gives you station status with high-rez multi-color modulation meters and PSD data including station, title, artist, album, genre, program type and comment for HD Radio MPS and SPS Multicast signals.

Option M2.1 adds FM analog signal monitoring capabilities including peak-type measurements of the injection level for 19 kHz pilot, 38 kHz, 57 kHz, 67 kHz and 92 kHz sub-carriers and an indication for synchronous AM noise. A rear-panel MPX Output for external sub-carrier decoding is included.

Option M2.2 includes Remote Dashboard software, a PC-based application, and an Ethernet interface to provide remote control monitoring for AM and FM HD Radio broadcasts and an alarm panel for HD Radio signal and data attributes.

Now shipping.

Design: In-house team

Price: M2.0 \$3,995; M2.1 Option \$1,395; M2.2 Option \$1,395

Info: (856) 719-9900 or www.daysequerra.com

DMB

► Continued from page 16

soccer in mind, updates on match results. A back-channel capacity, considered important for the development of new revenue streams, will enable users to send text, audio and video contributions to selected channels. The new handset receivers will also offer 3D visual capacities.

These new services are the latest weapon in the handset receiver battle brewing between Korean manufacturers like Samsung and Finnish giant Nokia. Nokia supports a different mobile platform, DVB-H.

Northern German states, led by Berlin-Brandenburg, are firmly in the DVB-H/Nokia camp, with southern Germany going the other direction. DVB-H is considered more attractive technically but frequencies for DMB are often easier to acquire. Also, previous tests comparing DMB and DVB-H reception in automobiles suggest an advantage of DMB from about 62 miles per hour to 124 miles per hour.

Strategy differences

European regulators are uniting around the digital future, though strategy differences are confusing to consumers, broadcasters and even regulators. Promotion of any specific technology risks disputes with the European Commission.

Last November, the EC Directorate General ruled that the regulator for the states of Berlin and Brandenburg violated state aid rules by financially supporting commercial broadcasters in the digital switchover.

Expanded

► Continued from page 18

The company must surrender one of the frequencies soon, Ryant said, without identifying the exact date. He declined to discuss the company's specific plans for the stations. However, the filing to the FCC indicates the Spanish-language format would likely be eliminated.

"I really believe the FCC should look at what has changed since the rules were drafted in the early 1990s. The population base has changed in many communities and there is a greater need today for programming diversity," Ryant said.

The petition cited other licenses at risk for surrender that are currently providing programming tailored to the needs of minorities in Miami, San Francisco and Seattle and Huntsville, Ala.

Not all of the broadcasters that originally expressed interest in moving to the expanded AM band followed through with their plans. After 710 broadcasters expressed interest in moving, 88 stations were ruled eligible to apply for construction permits in 1997. The commission had released a third and final allotment plan after several appeals. Of the original 88, only 66 stations elected to file construction permit applications, with the FCC issuing 65 CPs.

Several broadcasters who were granted CPs but declined to move told RW previously that they felt the benefits of a move were offset by the cost of upgrading facilities.

The vast majority of AM receivers sold since the late 1990s have included the AM expanded band. Prior to that most tuners topped out at 1600 kHz.

COOL STUFF 2006 AWARD WINNER



Product: HD Radio Market Area Monitor
Company: DaySequerra



This is an information collection system that offers diagnostic measurements for any HD Radio station, whether an independent operation or part of a national group. A station or group can use this single rack-space receiver to record a snapshot of any station's HD output — including audio SNR, level and time alignment and audio program samples, along with cataloging its HD Radio data payload.

The system functions as a quality control platform for groups to monitor regional HD Radio and multicasting signals. But the company also touts it for unattended monitoring and cataloging competitors' output. Big groups can monitor several hundred stations using multiple MAM receivers, putting one receiver in each market. PC-based browser software then can be used to analyze all markets' data. Ships in fall.

Design: In-house team
Price: \$4,995 including software
Info: (856) 719-9900 or www.daysequerra.com



X100-HD2 news talk



X100-HD2 3'1



X100-HD2 country



X100-HD2 100 NEWS



X100-HD2 classic rock

Mixed Messages? Perfect!

Messagecasting and HD2 Multicasting builds listenership and revenue.



Your listeners are learning to "watch the dial" to see what you're playing. Messagecasting, available only from BE's The Radio Experience, takes you beyond simple title and artist display. Station promos, contests/winners, messages linked to commercials, traffic, weather and emergency alerts can all be displayed on many analog and all HD Radios as well as on your website, billboards and electronic signs.

Use third party services to send mobile phone messages and e-mails to subscribers with now playing and about to play info. Add HD Radio's "killer app" — the ability to transmit multiple programs on a single FM channel — and you've got the formula for total success.

BE can help you meet and defeat the competition with the only end-to-end HD Radio solution deliverable today. Our exclusive Total Radio Guarantee eliminates the risk of unpredictable expenses or rapid obsolescence. Put Messagecasting, HD2 Multicasting, improved quality and more to work for you — contact BE today.



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

Broadcast Electronics and the BE logo are registered trademarks and Total Radio Guarantee, The Radio Experience and Messagecasting are trademarks of Broadcast Electronics Inc. HD Radio is a trademark of iBiquity Digital Corporation.



RF Specialties®

CALL TODAY FOR D-75 PRICING

Principal Office Locations

RF Specialties of Washington, Inc.

Bob Trimble
Ph: 800-737-7051

RF Specialties of California

Sam Lane, Bill Newbrough
Ph: 800-346-6434

RF Specialties of Missouri, Inc.

Chris Kreger, John Sims, Rick Funk
Ph: 800-467-7373

RF Specialties of Pennsylvania, Inc.

Dave Edmiston, Harry Larkin, Ed Young
Ph: 866-736-3736

RF Specialties of Georgia

Alan Slaughter, Chris Hall
Ph: 800-476-8943

RF Specialties of Texas, Inc.

Don Jones, Wray Reed
Ph: 800-537-1801

Great **DIGITAL SOUND** for less

D-75 Radio Console



Shown here with 12 Input Channels. Also available as 18 Input Channel Mainframe

AUDIOARTS ENGINEERING

EVERYTHING you need in a COMPACT DESIGN:

- ✓ 100 percent modular design
- ✓ Network ready
- ✓ Dual fader superphone
- ✓ Switched meters
- ✓ Table top design



Configuration is SIMPLE using the hinged meterbridge

For more info on our 14 office locations, products, and services visit : www.rfspecialties.com

PODCASTING

Students Create War News Radio

At Swarthmore College, a Podcast Idea Draws National Media Attention

By J Ritchie

Students at Swarthmore College could have anticipated the impact of War News Radio when they launched their podcast about the war in Iraq in early 2005. They called it radio but they didn't have a studio or a radio station, just a Web site to host downloadable MP3 files of their programs. Yet, within a year they

found what makes reporting interesting, like getting people from both sides for balanced stories."

Some of those recent stories include "Images of War," a report on the new generation of artists



Wren Elhai and Eva Barboni

Photo by Kyle White, The Phoenix newspaper

In the studio recording is done using Electro-Voice RE-20 microphones running into a Digidesign Digi002R Pro Tools system connected to a Apple G5 iMac.

Editing is done on the G5 or on laptops, using the Digidesign MBox audio interface.

For recording Skype interviews, a line out of the headphone jack on the iMac runs into the Digi002R and allows for connecting a mic to the computer's mic input. The audio out of the computer is captured by Pro Tools and can be monitored out of the Digi002r's outputs.

"I feel a bit embarrassed to see that list of gear in a magazine that's read by folks with real equipment to play with," says Elhai. "We don't even have a functioning telephone hybrid, due to problems with our college's digital phone system."

The fact that Elhai and his fellow students have seen War News picked up by a number of FM stations should compensate for the embarrassment, according to Marty Goldensohn, their mentor and an award-winning broadcaster in public radio and television since 1975.

"We started out with about 400 listeners a week, and I assume it was the students' parents and my parents and friends," says Goldensohn. "Now on any given week we might have 1,000 to 10,000 listeners. People are interested in us and we have dozens of radio stations airing the podcasts."

Students at Carleton College in Northfield, Minn., plan to join War News and form a bureau station. Swarthmore's WSRN now broadcasts the show. The station has given the students a place to produce their shows.

"Unfortunately," notes Elhai, "WSRN's studios don't have the sort of recording equipment or editing software to do a fully produced show like we're putting together. That's a project I'm working on, on the side. So if anyone has any spare gear lying around, look me up."



The Iraq War is the first in history to be documented in real time on the Internet,' the site was reporting recently. This week on War News Radio, we hear from bloggers in the military about how they're using the net. Then, we find out what it's like to be at a military checkpoint, from an Iraqi's perspective and an American soldier's. Finally, we speak with two U.S. soldiers who discuss the difficulty of doing humanitarian work in Iraq when you also have to carry a gun.'

generated a storm of media coverage and boosted the credibility of podcasting in journalism and traditional broadcasting.

The concept of War News Radio began last year, with a suggestion from David Gelber, a producer at CBS program "60 Minutes" and 1963 graduate of Swarthmore.

This is a small (1,500 enrollment) liberal arts school southwest of Philadelphia in the borough of Swarthmore, Pa. Gelber, a member of the college's board, and Elhai was inspired by a similar program on Vietnam that aired on Pacifica Radio in the early 1970s. The concept struck a chord with a group of students who volunteered for the project.

Among the students was Wren Elhai, a sophomore and political science major with an interest in radio. Elhai recalls that the college's small FM station wasn't operating when War News launched. Students produced programs in makeshift studios, and used a Web site (www.warnewsradio.org) to host downloadable MP3 files. Their resources were limited, and so were their skills.

"When we started, we didn't have any experience even with how to hold the microphone to make sure the interviewee wasn't peaking on the tape recorder," says Elhai. "Now we have become pretty good in the technical side of things. And we

that contains a portrait of a young Iraqi filmmaker and a profile of an Iraqi artist who paints the violence. Previous programs examined Iraqi history, exit strategies and reconstruction efforts. Interviews

In finding interview subjects, the War News staff has made good use of Skype, the Internet-based telephone service that uses peer-to-peer technology.

have included journalists stationed in Iraq, experts from academia, Iraqi citizens, American soldiers and their parents and the CEO of the Iraqi Stock Exchange.

Such topics and in-depth reporting have attracted coverage from the New Yorker, Philadelphia Inquirer, BBC, Association Press, NPR and media-related sites and blogs.

Elhai credits podcasting — the distribution of subscription audio files over the Internet using RSS syndication — as the key to reaching a wide audience and interesting interviewees.

In finding interview subjects, the War News staff has made good use of Skype, the Internet-based telephone service that uses peer-to-peer technology. Skype offers free local and long-distance calling between computers and allows users to share personal profiles, do searches and download files.

"Something like this couldn't have been without the Internet," says Elhai. "Skype is very helpful because we've been able to interview people at no cost and search for people who know English and are willing to talk to us."

Both podcasting and Skype are free, and the students have kept costs on equipment down as well. Interviews are recorded using "a hodgepodge of little handheld machines," including JK Audio QuickTaps and Sony MDS-520 MiniDisc recorders.

COOL STUFF 2006 AWARD WINNER



Product: Flexstar HDX-FM/HD Exciter
Company: Harris Broadcast Communications Division

"Harris hits a home run with this HD exciter," a nominating judge wrote. "Not a PC-based product, but direct-to-channel, 'real hardware' exciter with RTAC to give the best possible spectrum mask for HD implementation."

The exciter is a third-generation FM/HD product. You use it with the Harris HDE-100 Exporter to create the FM HD signal using the Exgine platform; this allows a station to simplify STL installation and makes it easier to manage multicast streams and data.

Features include RBDS, SCA gens, external inputs for RBDS and SCA, as well as analog left and right, dual AES inputs, dual composite inputs and mono input. These are switchable in case of failure of the main feed. Real Time Adaptive Correction, or RTAC, makes this an efficient, powerful device and includes analog group compensation. The exciter has the same footprint as DigitCD or SuperCiter analog gear.

Now shipping. Photo: Geoff Mendenhall and Gary Liebisch.

Designers: Team led by Geoff Mendenhall
Price: \$18,995 analog + HD, or \$10,995 analog (add Exgine card later to convert to HD)
Info: (800) 622-0022 or www.broadcast.harris.com



MILE STONES

We Can Really Hear You Now

by Charles S. Fitch

Communications is our business. In broadcasting we use whatever tool works best to make that vital connection. What communication tool has had such an effect on our business — or business in general, or society — as cellular communications?

Time passes quickly when you're having fun, or working your butt off; but can it be that we are coming up on a quarter-century of cellular phones?

Bob Barnett, an executive of Ameritech, made the first cellular call from a car just outside of Soldier Field in Chicago on Oct. 13, 1983. The phone he used that day had all the critical features of the system we have now: portability, multiple hand-off sites, user commanded access to the wireline network, central computer control of both base and user phone frequency as well as power control, billing, etc. This wasn't even your older brother's two-way radio or SMR but a totally new animal.

The technological developmental pace that led to the present worldwide cellular/PCS system is amazing. Wireless communications has been with us in the United States just since that day in 1899 when the physics department at Notre Dame sent the first Morse signals across the street to St. Mary's College, emulating Marconi's seminal work in Europe.

The state-of-the-art communications we enjoy today did not leap forth fully



grown from the head of Jupiter but progressively, each advance built on the last: Morse to amplitude modulated voice, to frequency modulated voice, to FM two-way, to FM analog cellular, to digital cellular/PCS and hopefully onward.

Early adopters of cellular/PCS recognized the value and luxury of a large signal footprint and immediate connection to the wireline network. In broadcasting, sales people and managers were the first users, who sought to make business more efficient, followed by news people, who wanted actualities with dispatch.

With various digital compression

schemes, programmers now schedule remotes of acceptable audio quality, reliably and casually, from just about anywhere via cellular. After twenty-five years the footprint of cellular/PCS is so large that nearly no origination location is beyond it.

It wasn't always so

Remotes have long been a staple of radio. Before cellular, programming from remote locations came to the station via radio link, dedicated telephone circuit or, as a last resort, a dial-up POTS line.

Radio links (recall our Marti "milestone," RW May 25, 2005, page 18) were usually one-way. Two-way radio links were a luxury most stations couldn't afford, as this feature doubled the equipment cost. You knew you were in the "big time" if you had a two-way radio system.

Metallic pairs from the telephone company — just a pair of wires straight from the remote to the studio — usually sounded dull over a couple of miles in length but they did offer the luxury of two-way connection.

The board operator could send a sample of the program feed down the wire to the remote; rudimentary intercom was possible for cues and interaction right to the moment when you sent programming for air.

When all else failed, you could use a POTS line for connection, especially for news actualities. The usual gambit was to make the connection to the studio and unscrew the mouthpiece on the phone. After removing the mic cartridge, you would clip onto the mic posts the top of your mixer or cassette recorder.

It didn't sound very clean or high-quality. POTS did work. I have done innumerable road basketball games and racing broadcasts by commandeering a pay phone for 15 or four hours. That's a lot of quarter-

Can it be that we are coming up on a quarter-century of cellular phones?

Usually the folks at the remote would set up, turn on the transmitter and then, assuming they were getting through to the studio, ask the person at the board to use a code word on air, do an ad-lib promoting the upcoming remote or break programming to let them know they had a connection.

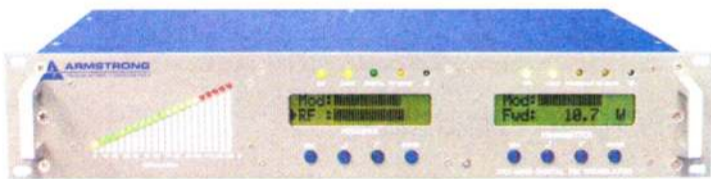
Most stations chose to break the programming quickly, which could be done in short order. The most dreaded signal you could hear in the earpiece of your little transistor receiver was a "double break," which meant that there was a problem. You needed to find a POTS phone and call the studio.

The flexibility, reliability, coverage and convenience of cellular compared to what came before are stunning. And the cost of cellular service goes down by every staff member and department that goes up and applications have multiplied.

Right now, imagine your station going out cellular. Gee it would feel like

Charles S. Fitch, W2IPI, is a registered professional consultant engineer, member of the AFCCE, senior member of the IEEE, lifetime CPBE with AMD, licensed electrical contractor, former station owner and former director of engineering of WTIC (TV) in Hartford, Conn., and WSHS (TV) in Marlborough, Mass.

INTRODUCING The FIRST Analog & HD Digital FM Translators



The TRX-HD Series
from



Manufacturer of Solid State and Single Tube FM Transmitters to 35 KW, Digital and Analog STL Systems, AM Transmitters, FM Antennas and Passive RF Equipment

All of your listeners can
now hear your analog and
HD Radio® Programming!

Visit our web site at www.armstrongtx.com

email us sales@armstrongtx.com or call 315-673-1269

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

COOL STUFF 2006 AWARD WINNER



Product: MasterLink-IP

Company: Harris Broadcast Communications Division

IP is the bomb these days, and creative products popped up all over the NAB convention. MasterLink-IP is a low-cost audio-over-IP system. Harris sees it finding many uses: to relay EAS audio back to a studio; for confidence monitoring of distant translators, boosters or full-service radio stations that cannot be heard at the main studio; as an RPU; for emergency STL; or for program distribution up to eight simultaneous locations, and more with database management. Bit rates of up to 192 kbps provide quality MP3 audio.

"A highly scalable, incremental and cost-effective way to leverage the power of IP audio distribution within a legacy infrastructure," the judges found. Shipping in June.

Shown: Johannes G. Rietschel of Barix, Jim Paluzzi of Colorado Public Radio and Jim Hauptstueck of Harris.

Designers: Harris, Colorado Public Radio and Barix

Price: Varies by configurations, units start at under \$500

Info: (513) 459-3719 or www.broadcast.harris.com



BSW SPECIAL!!

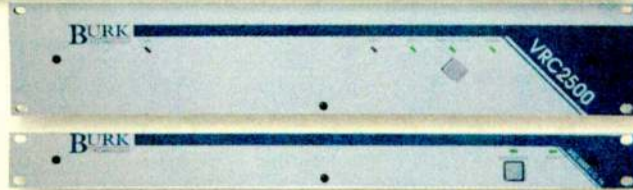
Free Temperature Monitor With Any of These Burk Transmitter Remote Controllers



Burk Transmitter Remote Site Controls

Right now, through July 31st, purchase a Burk ARC-16, VRC2500 or GSC3000 transmitter remote control system and receive a FREE temperature monitor (up to a \$419 value). A BSW exclusive!!

Burk builds the most reliable and most comprehensive remote site control products in the industry. If you're trying to get by (or simply not getting by) with outdated or inferior equipment, take a look at the Burk lineup. From 8 to 256 channels, simple web interfaces, and single or multiple station set-ups, Burk makes it and BSW sells it at the lowest price!! Call and talk to your sales representative today. Offer expires 7/31/06.



FREE Temperature Monitor when You Purchase a Burk Remote Site Control

For the ARC-16 and VRC2500 get the BTU4 (a \$319.00 Value)!! With the GSC3000 get the GT-4 (a \$419.00 Value)!! Only at BSW. Offer expires 7/31/06.



LowestPrice@bswusa.com
OR CALL : 1-800-426-8434

Marantz PMD660 CompactFlash Recorder

The portable PMD660 records hours of MP3 audio on a single CompactFlash card (or as high-quality uncompressed 16-bit .wav files) and easily transfer them to your computer via USB. You can even edit in the unit itself – use simple cut-and-paste editing or take advantage of Marantz's non-destructive playlist editing. Up to 99 virtual tracks let you compare edits, set up multiple sound bites or provide interview segments of varying durations.



FEATURES:

- Onboard mics for on-the-spot stereo recording
- Two XLR inputs and stereo mini-jack line I/O
- Up to four hours recording on AA batteries
- Optional RC600 wired remote with peak indicator

PMD660 List \$649.99

LowestPrice only \$499!

Accessories:

RC600 Remote control \$69.00



HD Radio Now In Stock!!

Here's the HD tabletop you've seen in nearly every radio publication. With HD Radio™ Technology by iBiquity Digital, it delivers enhanced audio quality and reception. It's the perfect receiver for General Managers, Program Directors and Station Engineers to monitor the station's main HD signal and digital sub-channels. Or to have at home to tune in to your favorite sub-channel. Stations transmitting in HD are automatically received and played back from the tuner. Headphone jack, remote control, dual independent alarm clocks, presets, more. Call and order yours today. While supplies last!

RECEPTER-HD

LowestPrice only \$299!



Behringer 4-Channel Headphone Amp

Here's a great deal on a headphone amp. The Behringer HA4700 offers four stereo amps, each with a stereo aux input, mono/stereo and left/right mute switches, and balance and volume controls. Additionally, it has XLR and 1/4" line inputs, a 2-band EQ and an accurate 8-digit LED output level meter per channel.

HA4700

List \$139.99

LowestPrice only \$109.99!



Last Chance!!

Free Sony 7506 Headphone!

Sony MZM100 Hi-MD Recorder w/Stereo Microphone

Perfect for any portable recording or playback, the MZM100 has a line-in jack and a mic input. You can use the line-in to archive audio or data, and the minijack input is there for making field recordings using your favorite microphone (this model also includes the ECM-DS70P high-quality, two-head, plug-in stereo mic). The MZM100 supports MP3/ATRAC3/ATRAC3plus and linear PCM audio formats, and supports WMA and WAV audio formats with conversion to ATRAC3. Each Hi-MD disc can hold up to 1GB of audio. One HiMD included as well as remote control stick, rechargeable battery, USB cable and AC power adaptor. Offer expires 7/31/06 or while supplies last.



SONY

MZM100PROMO Total List \$569.99

LowestPrice only \$399!

FREE MDR-7506 Headphone with purchase of MZM100!!

Or buy 'em separately: 7506 List \$130.00 \$99.00

SONY



SENNHEISER

5-Pack of Sennheiser Headphones

Five Sennheiser HD202 headphones for \$89? We're not kidding! These sealed-ear headphones provide power bass response and good isolation. Powerful neodymium magnets offer high sound levels with 18 Hz-18 kHz response. Order today from BSW!!

HD202PKG List \$149.75

LowestPrice 5 for only \$89!



Day Sequerra AM/FM HD Radio Modulation Monitors In Stock AT BSW!!

From the visionaries at Day Sequerra comes the this new HD radio modulation monitor (AM and FM). The M-2's ultra-low noise RF front-end with built-in pre-selector and double-balanced mixer provides pinpoint sensitivity for FM broadcasts, and its over sampling DAC and class-A biased audio outputs ensure the highest fidelity demodulation of HD Radio programs. Call for our sale price!

M-2 FEATURES

- Synthesized pushbutton tuning [AM, FM, multicast]
- High level direct [+7Vp-p] and antenna level RF inputs for AM and FM
- Bargraph metering of HD and analog programming
- HD Radio digital-to-analog time-alignment monitor

Day Sequerra also has the downsized M-4, a radio tuner with multicast capability for monitoring analog & digital signals. In stock!!

M-2 List \$3,995.00
M-4 List \$1,595.00

LowestPrice@bswusa.com
OR CALL : 1-800-426-8434

Price Reduction!! Now Only \$7,399 at BSW!!

Audioarts D-16 Digital Console

Save like never before on your new digital console!! Now only \$7,399 at BSW!! The Audioarts D-16 16-channel console combines the benefits of the Audioarts and D-16 into one cost-effective digital package, letting you route any analog or digital input to any fader or monitor feed with inputs clearly shown in bright LED dot matrix displays right above the faders and monitor controls. With 24-bit A/D-D/A I/O and sample rate converters on every AES digital input, the D-16 will work with virtually any digital source gear. Its DSP digital metering simultaneously displays VU columns and peak hold. Powerful caller tools generate mix-minuses automatically. Dim: 30"W x 20"D x 7"H.

FEATURES:

- Bright LED dot matrix displays show inputs
- Analog/digital Program and Audition stereo outputs
- 2 mono analog outputs and 4 generated mix-minus outputs



AUDIOARTS ENGINEERING

- 14 mic preamps, 8 stereo analog & 8 stereo digital ins
- 14 input faders plus two caller faders
- Control room and studio monitoring; 2 cue speakers
- ESE-compatible clock and programmable timer

D16 List \$8,395.00

LowestPrice only \$7,399!

Accessories:

D16FSD Dual fail safe power supply List \$1,683.00
D16CPSD Sliding copy stand List \$383.00



Anonymous Customer Profile # 34

We aren't at liberty to tell you Harlan Q. Oglethorpe's name (oops!) but we CAN show you a picture of the delight Harlan experienced when he realized that BSW really DOES have the lowest prices AND the best service.

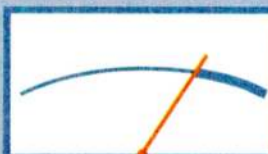
Lowest Prices on everything at: www.bswusa.com

Same Day Shipping

BSW stocks a huge warehouse of products. If we have it in stock, we'll ship it the same day. Just order by 7:00 PM Eastern Time.

Free Shipping on Most Web orders over \$189

Most web orders over \$189 get FREE ground service delivery to the contiguous 48 states. Excludes heavy or oversized items.



BSW

1-800-426-8434
World Radio History

Knowledgeable Staff

Our sales professionals have real-world broadcast and studio experience to offer expert help with your equipment purchase. RW_D62206

LowestPrice@bswusa.com

For the best prices on all of your gear visit us on the web at www.bswusa.com or email us for a quote at LowestPrice@bswusa.com

YOUNG ENGINEER

Brannan Learns the Ropes in Georgia

by Ken R.

In the Feb. 1 issue — seeking to explore the question “Where will the next generation of engineers come from?” — Radio World reported on several young radio broadcast engineers. Here we launch a regular series of occasional profiles keeping readers up to date with the industry’s “new blood,” the promising stars of tomorrow who may also be teaching their mentors a few tricks.

Joseph Brannan is 23 and an engineer in the Columbus, Ga., Clear Channel cluster. His uncle was a ham operator. While still in high school, at age 16, Brannan became a board op at WDAK(AM), part of the group where he is now employed.

He is now a student at Auburn University, a fifth-year senior because of changes in his major. Brannan works at the stations when he is not studying or in class; one of his first tasks was to help introduce his stations to the Internet.

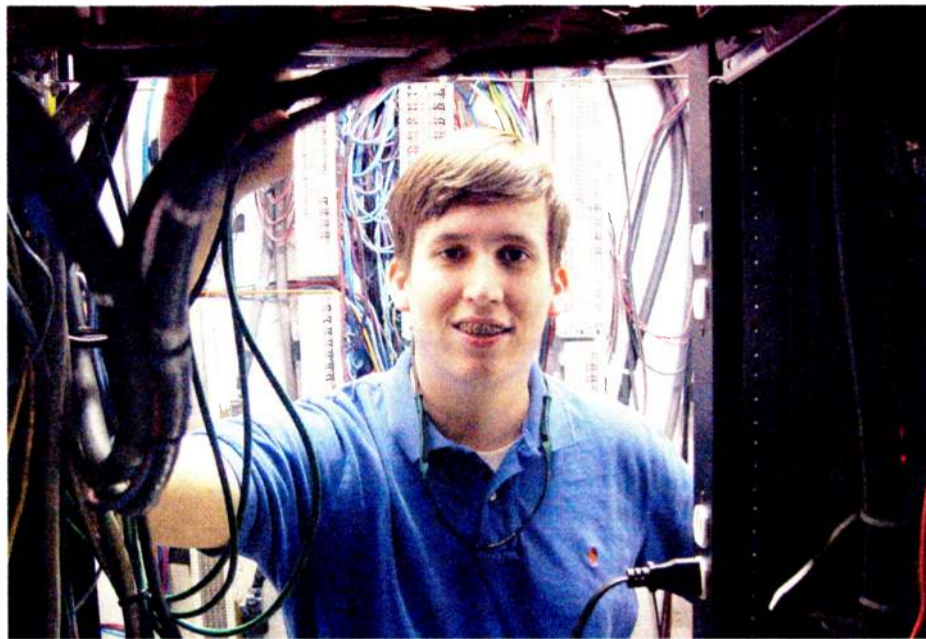
“In 2000 when I started here, only the sales managers and program directors had computers,” he said. “Someone asked me how we could get Internet access in the studio, so I strung a phone line across the hall from the fax machine and got us a dial-up connection.” Though not out of school, he already is an SBE Certified Broadcast Networking Technologist.

Brannan predicted that people won't own traditional radios one day; they'll just have a data connection.

Brannan is an accounting major but has taken courses in programming and engineering.

“Auburn’s mass communications department was more geared to understanding demographics and the programming side of things,” he said. “I was already working at the campus station, WEGL(FM), so I wasn’t going to get a lot more technical training in my classes.”

While Brannan enjoys engineering, he also is keenly interested in the business side of radio.



Joseph Brannan, CBNT

“The biggest challenge radio faces is figuring out new delivery methods,” he said. “We need to push out HD2, streaming, even getting our content onto cell phones through a data network. We won’t be the ‘radio industry’ anymore and transmitters might not be the primary delivery method of the future. I think as many people will listen to our stream as our broadcast signal eventually.”

Brannan predicted that people won’t own traditional radios one day; they’ll just have a data connection.

“People will be listening on more appliances, anywhere they are,” he said. “The important thing is to give listeners access any time they want. Right now people can get AM and FM easily, and our challenge is to make it all just as available.”

He also believes it is important for an engineer to understand his role in the greater picture.

“I want to know how the sales department works, how orders are generated and how logs are built,” he said. “Where does it all interconnect to the automation system? As our contract chief engineer Frank McLemore told me, radio engineers have to become system-level engineers. Understanding component-level work is great, but it’s better to understand how the entire system functions so we can spot problems.”

Not just an IT guy

“This is a very IT-intensive company and does a great job of investing in engineering resources,” Brannan continued. “Every studio has a computer, every person has a computer. When I started they were running everything out of one little server in a closet. Now we have, besides our Prophet NexGen hardware, about five or six servers to handle Arbitron, traffic, billing and production.”

But Brannan is also learning the RF

side of the business. “I’ve been going around to transmitter sites with Frank, learning to understand basic diagrams. He is teaching me a lot and is very patient with me as I learn more about engineering.”

Brannan’s Clear Channel mentors also include Ben Brinitzer, CPBE, regional vice president of engineering for the Mid-South region, and Steve Davis, senior vice president of engineering. Brinitzer says Brannan is “at the top of my list for upcoming guys ... he is one of our best and is tapped on occasion to assist us in other markets; he is a member of last year’s Katrina response.” Brannan also was recently tapped to help in Clear Channel’s recent consolidation project in Washington, D.C.

“His title is IT but he is our engineer in the trenches,” Brinitzer said, noting McLemore’s “superb oversight” of his work.

Others who have influenced Brannan include Gabe Warren, director of technology for the Creative Services Group, and Warren Davis, senior regional IT manager.

All about the people

In the immediate aftermath of Katrina, Brannan said, Clear Channel put the needs of people ahead of normal business considerations.

“When our engineers said, ‘We need this generator for our families or to get back on the air,’ there were no questions asked,” he said. “It was a great counterbalance to normal corporate decision-making. We dropped the commercial load during that time because getting information to the people was more important. The only advertising I remember hearing was ‘Hey, XYZ store has these supplies if you need them.’”

“I stayed down in Baton Rouge for a day and a half helping get stations back on. It put everything into perspective.”

Brannan recently became engaged and plans to marry when he and his fiancée graduate.

Tell Radio World about a young engineer for whom you see a bright future. Write to radioworld@imaspub.com.

MARKET PLACE

RFS Updates Catalog

A fourth edition of the Radio Frequency Systems products catalog is available. It offers items in eight product ranges for industry applications including radio and TV broadcasting, in-tunnel and in-building wireless and other uses.

The catalog is available from RFS sales representatives or online.

For information contact RFS at (203) 630-3311 or www.rfsworld.com.



COOL STUFF 2006 AWARD WINNER



Product: NetWave digital on-air console
Company: Harris Broadcast Communications Division

Judges found this “a lot of console for the money” and liked its numerous busses, affordable approach to networking and “very cool heads-up display for metering.”

Harris calls NetWave a cost-effective stand-alone board that brings some of the benefits of networking and audio management to middle/small-market stations and independent broadcasters. An optional network port allows it to function in a networked environment with other Harris/VistaMax networked systems. Look for the company to market this with its new Envoy audio management system as an affordable contemporary architecture.

Available in 8-, 16- and 24-channel versions; all may be networked as an option. Ships in July.

Design: A Harris/Pacific design team led by Ted Staros

Price: From \$7,600

Info: (800) 622-0022 or www.broadcast.harris.com





WorldNet Oslo is the perfect solution for 5.1 contribution and distribution applications, transporting high quality content over an E1, T1 or IP link.

MAKE YOUR THE STRONGEST LINK

Introducing WorldNet Oslo from APT. Now you can have up to eight full bandwidth audio channels with low delay, cascade-resilient, Enhanced apt-X™ coding on a single T1 line.

Each WorldNet Oslo gives you a choice of Encoder, Decoder and Duplex Audio Modules, AC and DC redundant power supplies, a flexible auxiliary data system and automatic backup. WorldNet Oslo supports 16, 20 or 24-bit Enhanced apt-X™ audio, delivering lossless audio quality with under 2ms delay.

WorldNet Oslo comes complete with an easy to use IP-based Management System so you can set up, configure and monitor your installation across town or across the globe. To see just how useful this user interface can be, download a demonstration version from www.aptx.com.

Contact us to find out what WorldNet Oslo can do for your air chain or request a demo.



Highly intuitive user-friendly interface with VU meters and programmable fault monitoring, all via IP

Features & Benefits

- Multiple Channel Audio Codec
- Designed for your STL and Studio-to-Studio Links
- Redundant Power Supplies
- Modular Architecture
- Audio over E1, T1 or Ethernet
- Up to 4 audio channels per audio card
- Up to 6 audio cards per chassis
- Analog and AES/EBU audio interfaces
- Enhanced apt-X™ coding

APT
AUDIO PROCESSING
TECHNOLOGY

Audio Processing Technology Ltd
Tel: +44 28 9037 1110
Fax: +44 28 9037 1137

Audio Processing Technology North America
Toll-free: 800-955-APTX
Fax: 732-796-0304

Audio Processing Technology Japan
Tel: +81 (0) 3 5771 1191
Fax: +81 (0) 3 5771 1192

Email: info@aptx.com
Web: www.aptx.com

Overcome ITSM Stage Fright

You're on Your Way to Becoming A Successful IT Service Management Star

by Bill Eldridge

This is the last in a five-part series about IT Service Management. Review the series at www.rwonline.com; click on the tab IT Service Management.

You've gone through the hoops of getting your IT Service Management together; now it's time to go live. But are you ready? What distinguishes a good IT show from a bad one? And how to prevent stage fright?

Much of what people think of as IT comes from the public-focused Service Desk, which handles Incident Management and some Problem Management. In

of thorough preparation and comfort with the material.

Timing

The Service Desk should have its act timed — how long to handle an Incident of whatever type — and have systems back in service by the end. The recovery process involves tools, spare parts, specific roles, procedures, communications, a business case and a limited mission.

Your Service Desk personnel should be comfortable running through the basic types of swap-outs and repairs required in typical cases, and they should have a good sense of procedures in unrehearsed scenarios. They should know the types of

duty. Well-designed IT Service Management should instead promote outstanding performance within agreed-upon boundaries through planning.

Training can be especially important for the handling of Incidents. Life is much easier when your users know how to work around system failure, turning trouble tickets into issues for Problem Management to resolve at a convenient time rather than urgent matters for the Service Desk.

Some methods of helping users to Do It Yourself include rebooting machines, using spare stations and studios or choosing alternate transmission paths, though there are rational limits to users' abilities as well as costs involved with providing spare facilities. But for off-hours users, emergency training can cut down on late-night and weekend pages and the need for more 24/7 staff.

Of course not all Incidents are initiated by users. Your monitoring systems or routine maintenance can flag needs, failures or impending doom, and it's up to the Service Desk to assign the proper priority for the response.

See IT, page 28 ▶

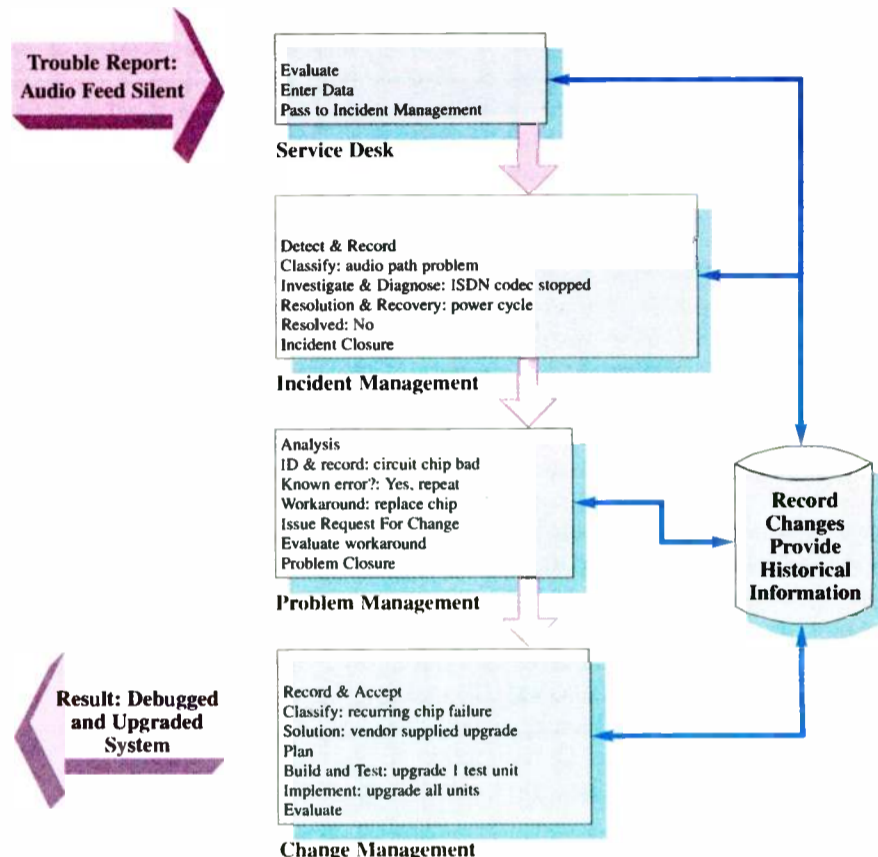
You've gone through the hoops of getting your IT Service Management together; now it's time to go live.

IT Service Management, Incident Management is concerned primarily with returning a system to a usable state, although service requests as well as failures can constitute Incidents.

Being out front, it's easy to go with the flow, handle requests as they come in and take care of problems as they appear. This is a recipe for chaos. A good performer prepares the audience, has practiced the material and knows just how far to go. He or she even anticipates hecklers and has witty comebacks at the ready. ITSM should be no different. A good performance is creativity layered on top

inputs needed for a solution — personnel, equipment, processes, et al. They should know when and how to escalate their response to problems to higher levels or more specific support functions, and when to stop, including how to use a diplomatic "No."

The priority of an Incident is based on urgency of the problem crossed with business impact, usually defined and limited by Service Level Agreements. While some common sense is required in performing duties, too often the Service Desk is seen as providing heroics — performing above and beyond the call of



The process flow behind facility recovery, including timing and resources, makes for a professional IT performance.

Easy Ordering in Nanoseconds



With the **ONLY** 1,700+ page catalog of the **NEWEST** information **4 times a year**, and daily updates to over 660,000 products on-line, you can depend on Mouser for easy ordering in nanoseconds!

mouser.com (800) 346-6873



NEW Products for NEW Designs

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

COOL STUFF 2006 AWARD WINNER

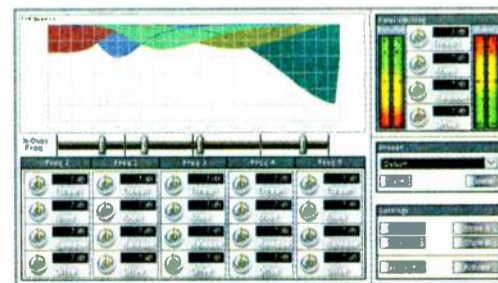


Product: NeuStar SW4.0 Codec Pre-Conditioner
Company: Harris Broadcast Communications Division

"A huge step forward in user interface and PC processing control for codec pre-processing," one judge wrote. "Brings this once-arcane science into every station's hands and allows codec pre-processing to become another part of a broadcaster's sonic signature."

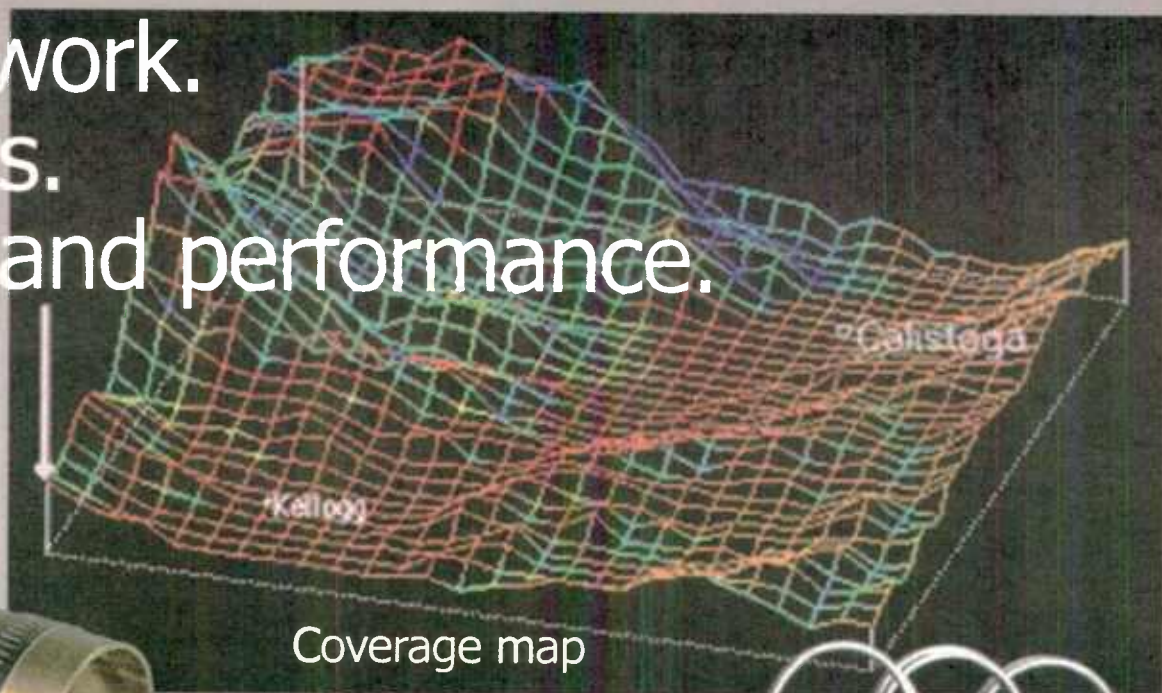
The SW4.0 Codec Pre-Conditioner is aimed at HD Radio, DRM and DAB apps. It uses what the company calls N-CLAST, or Neural Codec Load Analyze System. This allows visual inspection and enhancements of codec performance. NeuStar SW4.0 also offers a suite of audio management tools.

This is the software version of the NeuStar 4.0; it can run directly on the Importer, offering multiple audio channels of processing within one computer. The software also can be placed in-line ahead of Internet streams, DAB, DRM, satellite, compressed STLs, ISDN and other channels for codec improvements and audio processing in front of any low-data-rate transmission path. Ships in July.



Designers: Neural Audio Team
Price: \$2,500 single channel, \$3,500 multi-channel
Info: (800) 622-0022 or www.harris.com

Advanced pattern work.
Innovative products.
Superior coverage and performance.



The FM Specialists

FM Antennas • Digital Radio Solutions
Combiners/Filters • Coax Components
Rigid & Flex Transmission Line

Shively Labs®

A Division of Howell Laboratories, Inc.
Bridgton, ME 04009 USA
(207) 647-3327 (888) SHIVELY
sales@shively.com

- An Employee-Owned Company - World Radio History

www.shively.com

IT

► Continued from page 26

Once the Incident is handled, it should be properly recorded and passed on to Problem Management as needed. While in practice the cause of Incidents may be diagnosed and fixed in handling the Incident, this is a second hat, and should be kept separate, at least mentally, from the prime responsibility of restoring order.

Don't forget the role of external systems in recovery. While you may have underpinning contracts for third-party vendors, these may not help when you need to be back online. Plan your contingencies around the likelihood of external problems, and try to understand the vendors' emergency flows before you need to rely on them.

The human touch

Once the situation is handled, make sure users are aware of and using the restored system. It is also time to perform whatever public relations are required, be it a simple e-mail noting the problem is fixed, or a full facility briefing of what happened.

While a good automated trouble ticket system will handle much of the work for you, there is always room for a human touch. This is important not just for keeping users informed and productive but also for keeping a good attitude towards the clientele and putting the relationship to good use. One study noted that only 15 percent of facility problems are caused by people, but almost all problems can be better solved through feedback from those familiar with the systems.

Though Incident Management is separate from Problem Management, the staff that resolves problems has wide access to historical data and current Configuration info that can be useful to Incident efforts as well as Problem diagnosis. Recent change to the facility is a frequent source of breakage, so that logging changes and being able to pull up maintenance records quickly are important for the recovery effort. Anything that can help automate

logging and bring the reporting closer to the point of service helps ensure accurate records. It's not uncommon to be stopped in the hall on the way to your desk, so think of ways such as PDAs and logging stations to make updating the database more immediate.

Of course if the Configuration Database and other resources are down, they cannot help. Some thought needs to be given to what resources and informa-

tion into the routine. Otherwise, there will never be a "good" time when staff can review procedures and knowledge — daily firefighting will take precedence.

Sustainable

Problem Management is of course not standalone. Aside from areas mentioned, there are strong obvious ties with Capacity, Continuity, Availability and Security, as well as Financial and Service

and others involved are paying attention to the important points. Aside from outsourcing your job and cutting your budget, management might be making large errors in planning due to faulty understanding of IT operations, while lower staff may be adding to problems by not following procedures. Be prepared to follow up on pertinent issues in more depth. IT performance may impact other strategic issues, and its goals should be aligned as part of the overall business.

Managing expectations and providing calibrated service are two goals of ITSM, though "shameless self-promotion" should not be neglected. A quiet IT department may have problems or be under control, but users and management typically will suspect the worst. It's not often that a shy, hesitant performer wins over a crowd, and the same can be said for IT. Come in prepared, organized and ready to improvise, and the chances of success improve 1,000 percent.

Too often the Service Desk is seen as providing heroics. Well-designed IT Service Management should instead promote outstanding performance within agreed-upon boundaries through planning.

tion are critical with power outages, network or server failures; make sure backup versions are available, such as a PDA, USB drive on a laptop, a hard-printed copy or an accessible off-site system.

By the time an issue arrives at Problem Management, it is typically an Error that needs to be analyzed and resolved. This is generally a fix or a workaround matched to a new or known error, or a Request For Change (RFC) affecting equipment, software, processes, training or even the Service Level Agreements.

Monitoring known problems and proactively preventing outages is a main part of the job. But the facility doesn't stand still — learning about new weaknesses, building up better capabilities for debugging and monitoring, going proactive on system upkeep and staying abreast of improved technical solutions are some of the tactics for problem handling. Make problem, process and facility improvement part of the daily and weekly schedule, build it into the budget, force

Level management. Release Management attempts to decrease problems through controlled rollouts and homogenous systems. Even when a fix is in place, the solution needs to be monitored to make sure it's effective and sustainable. Problem Management should drive the effort to make the facility reliable and understood.

Understanding takes on a special role with management. Aside from users, Service and Problem roles need to communicate effectively with management, both to provide metrics on performance and facility needs, as well as to express the reasons for its existence. Look at ways to tie your Configuration Database and trouble ticket systems into management reports that provide simplified graphical views of key facility metrics. Even line personnel need to see processed relevant metrics and other information, not raw unreadable data.

Try to send out reports automatically, not on demand, and follow up with human contact to make sure management

Smooth the edges

We've covered the gamut of IT Service Management, from its business goals, structuring and planning down to implementation. But this is just a framework; a real-world system accounts for the type of facility, the people who work there and end users of services.

Some audiences are better than others, while every performer has an off night here and there. Train your ITSM sights on the long term, a steadily improving act moving from stage fright through remembering your lines, adapting your content to the crowd and finally, perfecting your delivery.

Every act starts off a bit stiff, but try to have fun along the way, choosing appropriate goals and challenges and enjoying your successes. These will smooth the edges on the long path to becoming a successful ITSM performer.

Bill Eldridge is a musician and engineer who has worked in studios, the Internet and radio broadcast for 20 years. He lives in Prague and is involved with mobile phone video streaming and project management. Write to him at dcbill@volny.cz.

COOL STUFF 2006 AWARD WINNER



Product: USB Match Plus and USB Matchbox
Company: Henry Engineering

Bill Sacks dips a toe back into the broadcast water with the USB Match Plus, a USB-to-XLR interface that is used in place of a sound card in a PC or laptop computer; it provides stereo balanced line-level ins and outs on XLR connectors at professional levels, with audiophile performance and the ease and reliability of a USB connection.

It eliminates hum, buzz and interface hassles, with great sound quality. Features include LED level meters, reference-quality headphone amp and a speaker output that can be muted with an external closure. These boxes also are powered by USB itself. A "lite" version, the USB Matchbox, lacks LED meters and headphone output.

Designers: Bill Sacks, Kim Sacks, Hank Landsberg
Price: \$695 (USB Match Plus) and \$495 (USB Matchbox)
Info: (626) 355-3656 or www.henryeng.com



COOL STUFF 2006 AWARD WINNER



Product: FlashMic DRM85
Company: HHB Communications Ltd.

"A handy tool," the judges said. Promoted as "the world's first professional digital recording microphone," this unit combines a Sennheiser omni condenser capsule with a Flash recorder.

It's aimed at radio journalists who will enjoy not having to worry about cables. Push a button and you're recording Broadcast WAV files, either MPEG 2 or uncompressed at 48, 44.1 or 32 kbps. Drag-and-drop file transfer at up to 90x real time is enabled by a USB connection. Two AA batteries provide eight hours of power. An adjustable pre-record buffer and 1 GB of Flash memory are provided.

Design: Joint effort of HHB and Sennheiser, led by HHB's Henry Edwards
Price: \$1,399
Info: (860) 434-9190 or www.hhbusa.com





Audemat-Aztec said it won a contract from **Global Security System Technologies** to provide broadcast equipment for an emergency alert application in Mississippi. RDS encoders, FM/RDS monitoring units and Broadcast manager are to be installed to cover the state. ...

The **BitXchange** morning show prep service signed **WIOQ(FM)** in Philadelphia. The supplier said it has 120 affiliates. ...

International Datacasting Corp. said **Radio y Televisión Unida** in Ecuador launched a radio network using IDC's SuperFlex satellite datacasting system. ...

Music station **WERE(AM)** switched to a "Hot Talk" format using an **Omnia-5EX HD+AM**. The chief engineer is Rick "Rocco" Bennett. Separately the supplier reported sales of its **Omnia-6EXi HD+FM** processor to **KBCO(FM)**, Denver; **KRCL(FM)**, Salt Lake City; and **WENN(FM)**, Birmingham, Ala.; and an **Omnia-3AM** to **WPKE(AM)**, Pikesville, Ky.

Sister company **Telos Systems** reported phone systems sales to **WMXD(FM)**, Detroit; **KPLA(FM)**, Columbia, Mo.; and **KKFR(FM)**, Phoenix.

Axia IP-Audio systems were sold to **Radio Free Asia**, Bangkok; **KWMU(FM)**, Univ. of Missouri, St. Louis; **Minnesota Public Radio**, Saint Paul; and **KINV/KDOS** in Austin, Texas....

Harris announced the first sales of its **HT-HD+** tube-type HD Radio transmitter to Clear Channel stations **WCOL(FM)** in Columbus, Ohio and **KRFX(FM)** in Denver. Dan Mettler is regional VP of engineering for Clear Channel Radio. ...

Micropower Corp. said **BBC Radio & Music** is using its **Powergold Music Scheduling Software** for Windows. Micropower designed an interface that works with the BBC network radio playout system, **VCS dira!** The products exchange data via XML. ...

OMT Inc. said **Vista Broadcast Group** has standardized its 19-station radio group on the **iMediaTouch Digital Audio Delivery System**.

Separately, **ZJAM Youth Ministries**, a syndicated Christian youth music and information network, will use OMT's **iMediaTouch Broadcast Automation** to produce its radio show from Spring Hill, Tenn. ...

WideOrbit Inc. said its research, sales, traffic and billing software has now been installed in 400 radio, TV and cable operations. ...

Jampro said the **Radio Voice of Vietnam**, headquartered in Hanoi, ordered of two **JFVD** high-power FM antenna systems. Jampro said the model was selected due to the hot, humid tropical climate. Fiberglass radomes will provide additional protection.

Separately, Jampro said **KHHT(FM)** is using a **JSCP** FM antenna in support of a new digital signal. The 50 kW Clear Channel station serves Los Angeles with contemporary AC. ...

Netia said **Rai Radio** will use the company's system in all of its offices and stations in Italy. Rai now uses the **Radio-Assist** digital audio software in its Rome-based radio stations. **Radio-Assist** will be launched in about 20 regional sites, which will be connected over a WAN to **Radio Uno** in Rome.

Send news of recent equipment sales or purchases to radioworld@imaspub.com.

COOL STUFF 2006 AWARD WINNER



Product: H3-D 5.1 Channel Surround Sound Microphone
Company: Holophone

The Holophone H3-D is designed to make surround sound broadcast easy; 5.1 surround can be aired over standard or digital radio using any LT/RT matrix surround encoder. As a single-point source surround sound capture device, the company says, the H3-D is designed to provide a front end for capturing surround in studio or in the field.

Said one judge: "This brings the creation of high-quality surround sound content to new levels of cost-effectiveness and convenience." (Added another: "It's about time FM went surround.")

Shipping this summer. Shown: Jonathan and Michael Godfrey.

Design: Michael Godfrey

Price: \$1,695

Info: (416) 362-7790 or www.holophone.com



all the audio and communications for broadcasters

BROADCAST AUDIO CONSOLES

EQUIPMENT FOR REMOTES



ARENA Console
 Ultimate digital audio console.



BC 300
 Analogue audio console with built-in telephone hybrid and power amplifier at incredibly low price.



BC 500
 Cost effective analogue audio console with built-in digital telephone hybrid.



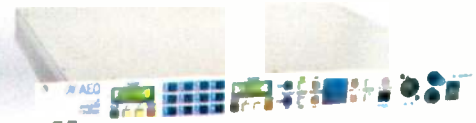
BC 2500
 Top level analogue audio console.



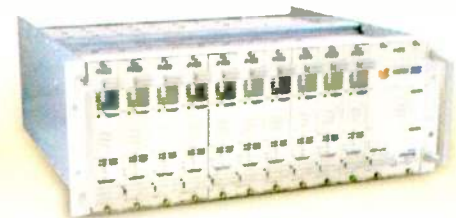
PAW 120
 Palm-size digital recorder. New and improved design.



Swing
 Portable codec, audio mixer and telephone hybrid.



Eagle
 ISDN audiocodec with phone hybrid capabilities at a great value!



Course
 The COURSE, a 4-unit chassis, with control software and dual power supplies accommodates up to 10 communication boards: dual channel ISDN codec, Digital Hybrid (analog line) or V35/X21, and soon to be released IP codec.



TH 02
 Digital telephone hybrid with frequency extender.

AEQ USA
 Phone: +1 954-581-7999
 Toll Free: 1-800-728-0536 (US only)
 e-mail: sales@aeqbroadcast.com

For more information please visit us at
www.aeqbroadcast.com

For Many, NAB Is About the Shopping

by Jackie Broo

Judging from the comments of NAB2006 attendees, the NAB is doing things right when it comes to presenting displays and equipment at its annual convention extravaganza.

Most of those sampled by Radio World in an unscientific survey were fairly pleased with the equipment and technology that the show had to offer, though it also appears sessions have become a little underwhelming for some attendees.

Dane Johnson, director of operations at KUOW(FM) in Seattle, liked what he saw at the show but doesn't attend presentations. He said, "I've stopped going to the sessions because I don't think that they are radio-friendly anymore. I kind of feel that NAB has been neglecting the radio side, especially the radio sessions."

Johnson said the show has become all about buying for his station. "We are rebuilding a bunch of studios, and we are looking at consoles. As far as the floor goes the vendors are all great; that hasn't changed much."

David Remund of Regent Communications, Yuba City, Calif., said, "I am generally pleased with the show, but I would like to see all the radio engineering sessions come back over to the North Hall so we don't have to truck back and forth. If you are over [in the South Hall] and you have a half hour between sessions, you can't go come back and forth" to the radio exhibits. "When the sessions are in the North Hall, you can pop back or forth real easily."

His Regent colleague Michael Hutchens of Flint, Mich., said, "I have managed to fill up three days just wandering around the exhibitor hall. And I am still not going to see everything." Hutchens, Remund and friend Mark Young had only one big complaint this year: shuttle bus service. They reported a 45-minute wait rather than the more typical 20 minutes between shuttles.

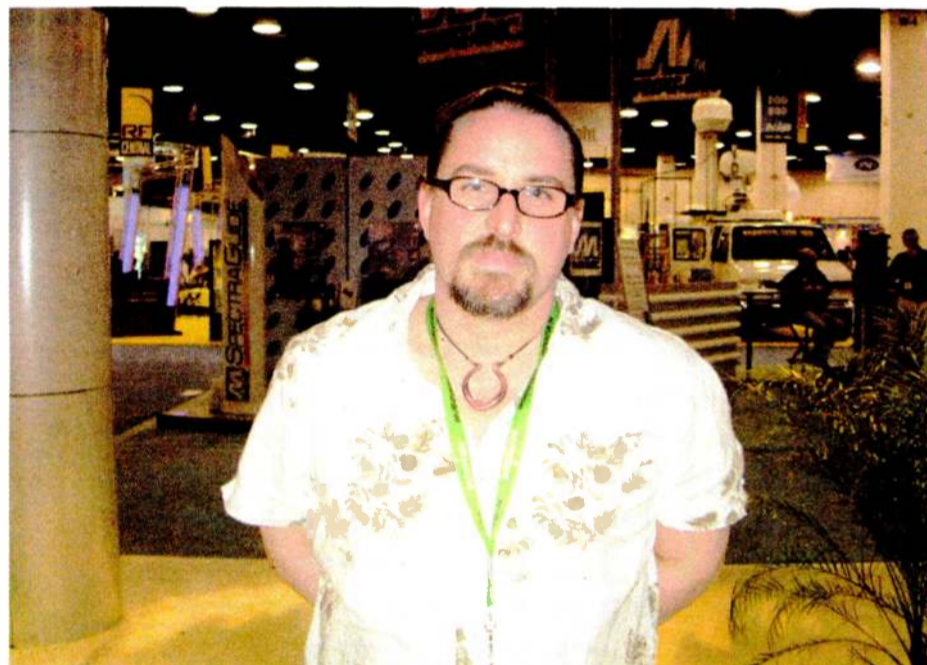
Shopping

Asked about session content, Dennis Wharton, senior vice president of communications of NAB, "We spend an enormous amount of time surveying attendees and asking for advice on the sessions, in order to present the most worthy experience possible. We're anxious to get feedback and comments from attendees.

Radio attendees, he said, "are our truly valued customers." Wharton invit-



From left: Mark Young, Michael Hutchens and David Remund of Regent



Dane Johnson

ed comments or suggestions about conventions; e-mail Susan Platt at splatt@nab.org.

Some attendees were on a mission, skipping seminars and going straight to the exhibits. Many said the show was the best way to see, hear and test new gear that was available in the marketplace. As one person succinctly put it, "I am here for shopping."

Heywood Greenberg of Lynchburg College, Lynchburg, Va., echoed that theme: "This is a great way for us to see where the technology is going. We're

most interested in looking at podcasting products; in fact that is where I am headed right now."

One attendee wasn't pleased with where some of the product booths were placed on the convention floor. Michael Gay of Cumulus Media in Atlanta was looking for storage technology and thought that the products were spread out over too much of the floor space. "Last year, and the year before, things were a little more logical in the layout." Although he did not attend sessions this year, he has been a presenter in the past and felt that they were worthwhile and well organized.

Two newbies to the show, Brad Wilson and Ross Conner of Virginia production company Pillar to Post, had started in the North Hall and were anxious to take it all in. They had come to the show to check out new equipment.

"I was here all day yesterday," Conner said. "It was pretty impressive. It is pretty cool to talk to the Dolby people. It was very informative and very helpful." They both found the environment casual, with "tons of people who are interested in what you are."

And more shopping

Fatemia Ricks with Red Dragon, a media production company in Detroit, said, "This is my first show and I am very excited. This is really amazing. I was just testing a few of the mikes. I'm seeing some possibilities."

Farther along the experience spectrum, Douglas Barton of KMTI(AM) in Manti, Utah, has been coming to NAB for three decades and was looking at transmitters and antennas. "We'll be buying a lot of stuff over the next two years," he said.

He felt that session prices were somewhat expensive and that the content could be improved. Barton usually waits to read the session reports in trade publications. He was also not happy about the cost of using the monorail. "I don't know if [NAB] can do anything about [that]. When you can park your

See FLOOR, page 31 ▶

COOL STUFF 2006 AWARD WINNER



Product: Model 532 FM/HD Radio Mod Monitor
Company: Inovonics Inc.

This company was founded in 1972 with the idea of offering a solid-state recording electronics package for Ampex 350-series tape recorders. Its latest is a full-featured mod-monitor for FM and FM/HD Radio.

It features bargraph readouts for FM carrier deviation, analog FM program metering and HD Radio program parameters, and includes an RF and FM-baseband spectrum display. The unit supports HD multicast programming; it also measures FM subcarrier injection, gives alarms for out-of-tolerance operation and decodes PAD and RDS/RBDS messaging. The 532 has serial, USB and TCP/IP network ports for remote control, data logging and simplified firmware updates.

Ships this autumn. Jim Wood is shown.



Design: Inovonics designers "with a little help from our friends"

Price: \$5,990

Info: (800) 733-0552 or e-mail info@inovon.com

Product Showcase



Model DAI-2 Dialup Audio Interface

- perform unattended remote broadcasts
- DTMF operated controller with relay outputs
- fully programmable output on any key press
- momentary and/or maintained relay outputs
- four logic inputs with programmable output
- balanced audio input and output with ALC

Sine Systems, Inc.

615.228.3500
more information: www.sinesystems.com

Floor

► Continued from page 30
car cheaper than taking the monorail, that's not good."

On conference pricing, Wharton of NAB said the cost for the Broadcast Conference Package — which included the Broadcast Engineering, Broadcast Management and Business, Law and Regulation Conferences — is affected by several factors including the amount of work by NAB staff and the number of people that are brought in to participate in the conferences, among other things. This year's conference package was \$495. He said NAB has tried to keep costs affordable.

Mike Starling of National Public Radio and NPR Labs was wearing two hats as an attendee and an exhibitor; NPR was present in several booths. He said, "I think the show itself is absolutely fabulous. But Las Vegas is showing a little wear and tear on its logistics. In particular, they need to work with the Convention and Visitors Bureau to get more

I am generally pleased with the show, but I would like to see the radio engineering sessions come back to the North Hall.

— David Remund

cabs here when we have the big sessions. Or they should extend the monorail to all the hotels and get it fully populated with monorail [or] cabs, so they can handle the big crush of people."

Of sessions at the Public Radio Engineering Conference, which was held concurrently with NAB but is not part of it, Dane Johnson felt that there was more emphasis on TV this year, and would like to see more focus on new technologies for public radio.

Starling was involved in the PREC planning; he said involved TV and radio engineers were together this year because of lack of available space at the Hilton and LVCC.

"This year [NAB] had so many activities at the front of the conference that they didn't have space for us. That's why we merged with our PBS engineering colleagues. It was a nice synergy for us," Starling continued.

Steve Herbert of KCRW(FM) in Santa Monica, Calif., said of the NAB convention, "Overall, I have been very satisfied with it. Generally speaking they bring in good people, and they are relevant especially in light of HD Radio. I think that they are doing a good job of it. It seems to flow pretty well."

Comment on this or any article to radioworld@imaspub.com.

COOL STUFF 2006 AWARD WINNER



Product: LSR4300 Series Studio Monitors
Company: JBL Professional

"Part monitor, part room analyzer with calibration mic, a system that auto-adjusts the monitors to the space," the judges said. "It's a no-brainer."

JBL says it was thinking broadcast when it came up with a speaker that features an on-board analyzer to measure and automatically correct response to compensate for room acoustics and give greater accuracy at the mix position. This isn't for everyone in radio, of course; but good production facilities and high-end studios will take note.

Digital and analog inputs allow connection to a range of sources. Harman HiQnet network protocol enables simplified configuration of surround-sound systems. The LSR4328P and LSR4326P have 8- and 6-inch woofers, respectively, 1-inch silk dome tweeters and internal bi-amplification with 220 watts.

Design: JBL staff

Price: \$1,399-\$1,699/pair for 6- and 8-inch models; \$1,100 for subwoofer

Info: (800) 8JBLPRO or www.jblpro.com/lsr



HD RADIO™? I'M GOING WITH MOSELEY.

My challenge is to make the right STL choice for today, as well as for tomorrow.

With Moseley, it's no problem.

Check out their **Starlink SL9003Q-2SLAN**, the first STL to provide AES digital audio and Ethernet data over the traditional 950 MHz band.

Or add a bi-directional Ethernet LAN extension and serial data link to a new or existing STL with the license-free 900 MHz **Lanlink 900D**.

For T1 lines or license-free 5.8 GHz **Starlink SL9003T1** STL/TSL transports bi-directional AES digital audio, Ethernet LAN extension, remote control, and telephones.

Your best connection to the future is a smart STL choice today. Take it from me, Moseley will insure that your station is ready for HD Radio™ and the new digital services of tomorrow.

Give the digital STL experts at Moseley a call for more details.



Moseley

Dave Chancey 805 968 9621
Bill Gould 978 373 6303
www.moseleysb.com

Stuck in the Middle With UGC

Broadcasters Are in Unfamiliar Territory When Their Podcasts Compete With User-Generated Content

by Skip Pizzi

The ongoing evolution of the Internet has engendered a democratization of audio distribution that continues to expand. What started with a few webcasters doing streaming radio has now grown to a major marketplace of user-generated content (yes, now it's even got an acronym, "UGC") via the medium of podcasting.

Yet, as this column has frequently remarked, nothing stops broadcasters from themselves partaking in this expanding universe with their own offerings, and promoting the existence of these new services to their "legacy" audiences over the air. This produces an interesting market dynamic, still emerging, where large corporate purveyors of audio services are competing for ear time with small independent operators and even private individuals. This is sort of analogous to a shopping mall where big anchor stores compete with small boutiques and vendors on carts, kiosks and blankets on the sidewalk.

Just as quality control is often erratic in such a shopping environment, so, too, is compliance with relevant laws and regulations in the Internet audio world. The odd juxtaposition of broadcasters' content against UGC in many podcasting venues illustrates this divergence.

Time was when broadcasters only competed with other broadcasters, so the



PODCASTING LEGAL GUIDE: RULES FOR THE REVOLUTION

Colette Vogele, Esq.
Vogele & Associates
Stanford Center for Internet and Society

Mia Garlick
Creative Commons
Stanford Center for Internet and Society

**The Berkman Center
Clinical Program in Cyberlaw**
Harvard Law School

rules were relatively stable and a level playing field was maintained. It was understood that if someone tread outside the commonly accepted boundaries, they'd be quickly called on it — it was broadcasting, after all, so there weren't any secrets about what you were doing — and the stakes were high.

Now, however, it's possible to find a wide range of compliance regimes, gener-

ally set and enforced by a site's host, making it difficult to compete fairly. Broadcasters aren't used to this kind of moving target, and also are pretty risk-averse, so this environment is not perceived as a very friendly one.

The site hosts don't like it much either, since they have to set many of their own rules and then manually monitor each posting individually for compliance, a labor-intensive exercise.

Nevertheless, the popularity and growth rates of these sites have kept them a hot property for the online services industry, and thus it is important for broadcasters to keep a presence in this space, while monitoring activity for the emergence of any new trends, which will likely continue for some time (if not permanently).

Breaking the code

Podcasts are a great example of the need for copyright law reform.

Even though the law continuously has been made more granular and complex in an attempt to keep up with new media forms — and is now an almost incomprehensible morass of patched-up rules — podcasts defy categorization. They seem to fall directly into a gray area of existing regulations.

Nevertheless, unless and until such reform takes place, all podcasters, and particularly broadcasters, need to follow the existing rules if they wish to avoid legal troubles. Interestingly, the most daunting rules and highest risks involved with podcasting today are not associated with indecency, but with music licensing. (Each UGC posting site has its own rules about adult content — many don't allow it — but these are based mostly on business considerations, not legal ones.)

Usage of published music content (or TV and movies) online, on the other hand, is an area fraught with controversy, with much current activity in the arenas of regulation, legislation and litigation (a three-ring legal circus, some might say). Thus, while the industry waits for wholesale copyright law revision, what's legal for podcasting of music is continually affected by piecemeal changes in rules, statutes and case law.

That's why many have welcomed the recent publication of a comprehensive set of guidelines for podcasters called "The Podcasting Legal Guide, v 1.0." Although it opens with the requisite caveat against taking its words as legal advice (also repeated as a footer on each of its 30+ pages), it bears a lineage of the highest legal pedigree. Its authors are Colette Vogele, a fellow at Stanford University's Center for Internet and Society; Mia Garlick, general counsel for Creative Commons; and collectively, Harvard Law School's Berkman Center for Internet and Society, specifically its Clinical Program in Cyberlaw.

The guide includes a foreword by

The Big Picture



Photo: Gary Hayes, BBC

by Skip Pizzi

Lawrence Lessig, arguably the Johnny Cochrane of digital law, who spends most of his space railing against the current state of copyright law, but meanwhile recommending the guide. He also manages to get a plug in for his Creative Commons organization, and after perusing the guide, the reader likely will be persuaded that any effort toward simplification of the process, as CC attempts, is laudable.

The publication addresses legal issues in both the content and the distribution of podcasts, and although it is clearly written with the legal layperson ("amateur" podcaster) in mind, it applies broadly and equally well to "professional" (e.g., broadcasters') podcasts. It also includes a brief history and technical explanation of podcasting, and provides a rich set of additional resources.

**For broadcasters
who are trying
their hand at
podcasting, or
those considering
it, this guide is
worthwhile
reading.**

The guide's most useful information for broadcasters is probably its coverage of music rights in an up-to-the-minute treatment of substantial depth, as well as its clarification of what might constitute "fair use" — an often misapplied term.

Considering the subject matter, the guide is surprisingly readable and refreshingly free of legalese. Its frequent use of examples and scenarios helps illustrate the issues in real-world ways for broadcasters.

For broadcasters who are trying their hand at podcasting, or those considering it, this guide is worthwhile reading. If nothing else, it provides a good briefing on just how different from traditional broadcasting the world of podcasting and UGC is — and yet how much it is the same.

The guide is available at http://wiki.creativecommons.org/Podcasting_Legal_Guide.

Skip Pizzi is contributing editor of *Radio World*. Comment on this or any article to radioworld@imaspub.com.

got tools?
cables & connectors
racks
tools
problem solvers
test gear
& much more
www.systemsstore.com

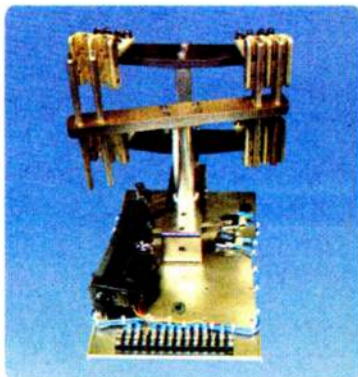
COOL STUFF 2006 AWARD WINNER



Product: High-Power RF Contactors
Company: Kintronic Laboratories Inc.

Founded in the 1940s by Louis A. King, Kintronic began manufacturing in 1952. Fifty-four years after that, the company is still cranking out dependable, specialized broadcast gear.

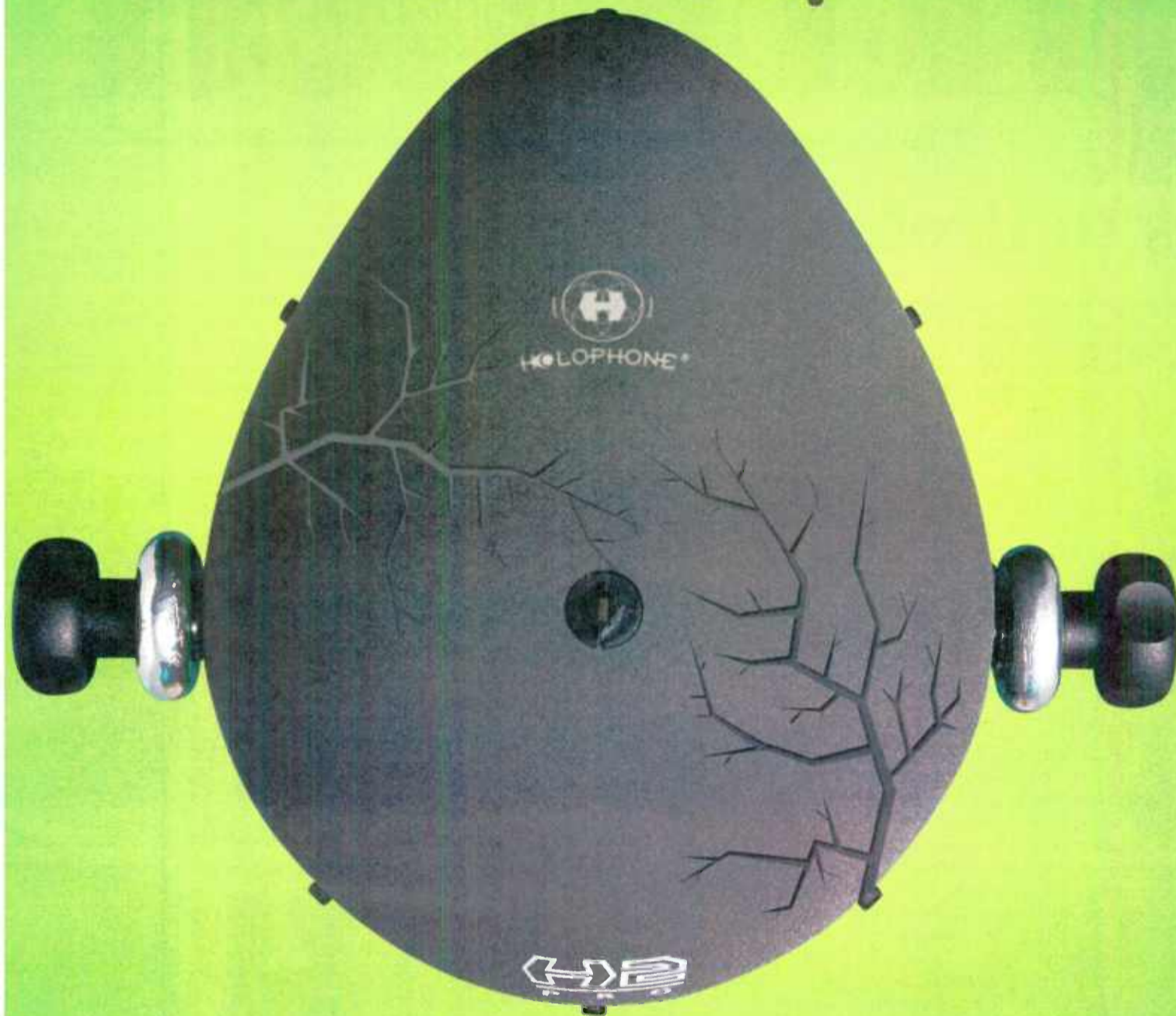
At NAB it debuted three RF Linear Drive Contactors for high-power AM/MW applications. The RFC-150L-55 is capable of handling 150 amps at 55 kv and is available in a single-pole single-throw or SPDT configuration. The RFC-200L-30 is capable of handling 200 amps at 30 kv and available in a SPDT or DPDT configuration. The RFC-200L-80 is capable of handling 200 amps at 80 kv and is available SPST or SPDT. Each of these models switches in less than one second with no shock or vibration. They use an operational 110-240 VAC voltage and have dry closures for position sensing and an actuator driver board with contactor position selector switches. Now shipping.



Design: Kintronic electrical and mechanical engineering departments
Price: Varies by configuration
Info: (423) 878-3141 or www.kintronic.com

HOLOPHONE®

All It's Cracked Up To Be...



Surround. Simple.

Partial User List /
Captured by Holophone®

- Dolby Labs
- Bose Corporation
- Elton John
- Lionel Richie
- Whitesnake
- Iron Maiden
- Dave Matthews Band
- Joss Stone
- Paul McCartney
- Celine Dion
- "One Love" Bob Marley Tribute
- Bonnaroo Festival
- Branford Marsalis live in Amsterdam
- 47th and 48th Grammy Awards
- Three Super Bowls
- Muchmusic Video Awards
- Genie Awards
- NBA Basketball
- NFL Football
- NHL Hockey
- TNT HDTV
- ABC HDTV
- NBC HDTV
- FOX HDTV
- CBS HDTV
- CBC HDTV
- ESPN
- NHK Japan
- Sapporo TV - Japan
- Van Morrison - Grand Ol' Opry
- BTM Beijing TV - China
- Mexico Soccer
- Bell Expressview-Canada
- City TV-Canada
- Real Madrid (Soccer)
- Any Given Sunday (film)
- Frank Sinatra
- Drew Carey Show
- Klaus Landsberg
- Andrew Watersman
- Moscow International House of Music (Russian Philharmonic)
- George Jonsen - Mortal Kombat III, London Philharmonic
- Hank Neuberger - Third Wave Productions
- Hiroshima TV - Japan
- Hong Kong TV (ATV)
- University of Central Florida
- The Church of Scientology
- PBS HDTV- USA
- Sapporo (TV) - Japan
- MBC TV - Korea
- Sandia Labs
- ATK Audiotek
- TV Asahi -Japan
- NHK - Japan
- Kitanihon TV - Japan
- Kansai TV, Osaka, Japan
- TV Azteca - Mexico
- The Kentucky Derby
- MTV Canada
- Sam Roberts
- Kanye West
- Van Morrison, Grand Ol' Opry
- Extreme Makeover, Home Edition TV and the list goes on.....

"Since its introduction last year, The Holophone H2-PRO Surround Sound Microphone has captured more High-Profile events, in more countries, than any other Surround Sound Microphone on the Planet. Holophone Products make it Really Simple to create Ultra-realistic 5.1, 6.1 or 7.1 Channel Broadcasts or Recordings. To capture multi-channel sound for HDTV, films and Music, using a Holophone instead of a multiple-microphone array will save you time, money and a major Pain in the Butt! In repeated 3-D audio testing, the Holophone sonically beat up on the competition time and time again. The Holophone H2-PRO sounds like no other microphone in the Whole-Wide-World. We guarantee it ..."

"Holophone provides the most accurate and comprehensive capture of the ambiance of a crowded concert hall. The best word I would use to describe the H2-PRO is persuasive. I've struggled with spaced pairs for surround in post production; it's very difficult to make them work in a convincing manner. Holophone has solved that problem for us. It is always persuasive; it always puts you right there."

Hank Neuberger, Third Wave Productions, USA

Check our web site for updates on our two New products;
The Holophone H3-D; a cost effective 5.1 channel professional Surround Microphone,
and the much-anticipated (and very cool!) Camera-mountable, Holophone H-4 SuperMINI

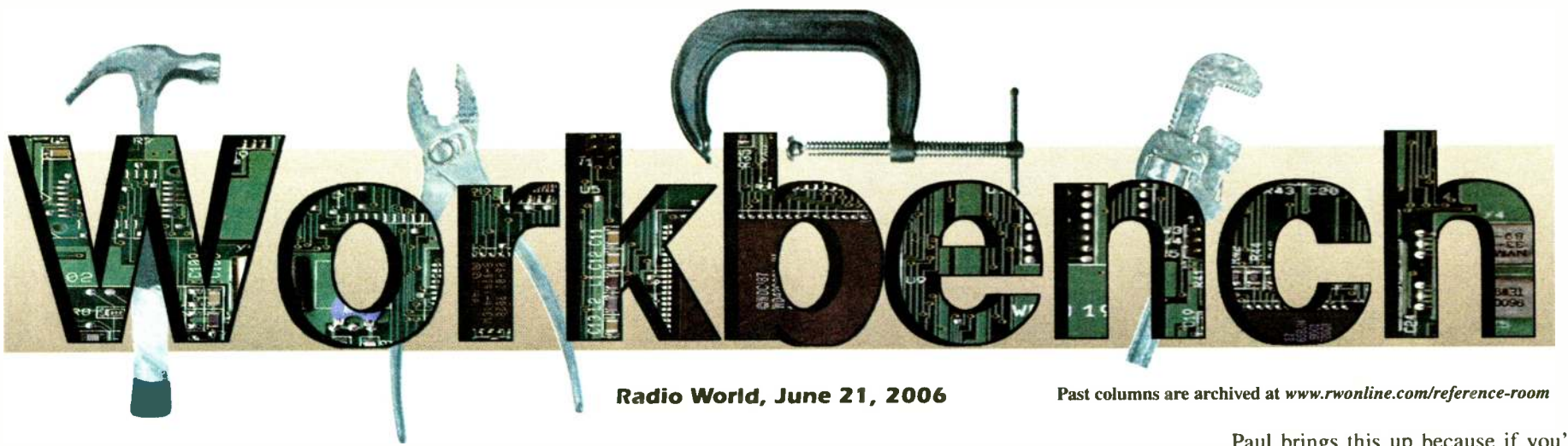
Award Winning Products



HOLOPHONE®

Surround Sound Microphone Systems

www.holophone.com  01.416.362.7790



Radio World, June 21, 2006

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

Take Notes to Protect Yourself

by John Bisset

Good weather usually brings not only remotes but construction projects. Here are a few tips from West Virginia Radio Corp. Vice President of Engineering Noel Richardson. He and his staff have built and refurbished a number of facilities and he'll be the first to tell you that whatever can go wrong will.

With that in mind, his first suggestion is to give yourself plenty of time. Too often engineers want to over-promise, then we under-deliver and pay the consequences. Yes, management is depending on us; but basking in the glory of a short-sighted delivery date will mean you'll be under the magnifying glass when that date is not met. It's not worth the stress and aggravation.

If the project will take three weeks, don't promise that it can be done in two. Add an extra week as a cushion. This time will be absorbed by contractor delays, which always occur.

It's not at all uncommon to begin planning for a major studio move a year or more in advance.

Not sure how long the project will take? Meet with some contractors and get some opinions. They're usually congregated at a local 7-Eleven getting coffee in the early morning. Go talk to them. They may tell you that permits in your region

are impossible to get quickly or that the good weather has them backlogged through summer.

Noel's point is to get into "fact-finding" mode and gather as much information as possible.

Good architects who have done broadcast work should be able to provide realistic time estimates; but be conservative in any event. Even if your project is to get the transmitter building roof replaced or a parking lot re-sealed, remember that your timeframe may not line up with the contractor's.

Noel can't stress enough the need to plan. Review your plans and have engineering friends look them over. The object is to spot problems. What are you forgetting? What's not going to work? There's always something.

Planning also can be the difference between a nicely designed plant and one thrown together helter-skelter. Designate your cable and electrical runs for a neat installation. If it's a transmitter building, keep in mind future additional capacity required for HD Radio. Also, when laying out your room, plan for both transmitter and rack door swing — something that's easily forgotten, and not always on the transmitter drawing.

Thanks, Noel, for providing some good project management ideas. Noel Richardson can be reached at nrichardson@wvradio.com.

nrichardson@wvradio.com.

★ ★ ★

Paul Sagi has engineered a number of stations in the Far East. He comments from Kuala Lumpur on our transmitter breaker discussion (March 29).

Breaker specifications, he notes, usually give trip times for various levels of current, 100 percent, 110 percent and so forth. These ratings sometimes are shown in an overload time-current graph. See if you can get a specification sheet for the breakers used at your site.

Paul brings this up because if you've experienced phantom breaker trips, don't forget the temperature de-rating of the breaker. When the breaker is installed and doing its job, it's in a panel that may have various heat sources, possibly from other wiring or breakers. A thermometer is useful to check the breaker box temperature. Several DVMs have inexpensive temperature probe accessories, and the price of stand-alone probes has dropped dramatically. Visit your Home Depot to see what's available.

Also check the connections of the wires to the breaker, to ensure they are clean and tight. Oxidized or loose connections will cause heating that will de-rate the tripping point of the breaker. Most often, the breakers are tripped

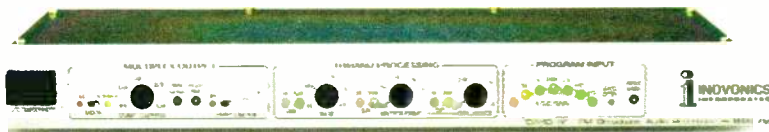
See DIARY, page 37 ►



Fig. 1: Designate cable and electrical runs.

Bigger, Bolder, Brighter!

**THIRD-GENERATION "DAVID" PROCESSING...
SMOOTH AND EXCEPTIONALLY COMPETITIVE!**



Improved AGC, 3-band Spectral Loading™ processing, and our proprietary PIPP™ limiter... new features we've merged with the 'elegant simplicity' that characterizes the "DAVID" FM-airchain legacy. The result is performance that rivals processing systems costing several times the DAVID-III's modest price. Your listeners will hear music with dynamics and 'punch,' and live-announce that's natural and non-abrasive.

The DAVID-III is easy to set up and easy to use. It employs quasi-digital PWM processing circuitry, digital synthesis of the FM baseband signal, and it never requires routine calibration. Component parts are common and available worldwide.

Ask your preferred distributor for a demonstration of the DAVID-III at your station.

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

DAVID-III - \$2200

Visit www.inovon.com
for full technical details



Fig. 2: An exhaust fan helps you keep your cool at the transmitter shack.

OPTIMOD

FM

*Consistent Quality
Consistent Sound*

NEW! 8500-FM for analog FM broadcasters

This cost-effective version of the award-winning Optimod 8500-FM / HD gives you everything but digital radio processing, which you can add at any time to **upgrade the unit to full 8500-FM / HD functionality**. The 8500-FM offers double the sample rate and double the processing power of any previous Optimod, making it the most advanced Optimod-FM ever.



The 2300, 5300 and 8300 V2 offer progressively higher performance as you move up the line to the 8500-FM.

They're all loaded with features and innovative technology. Most importantly, they all deliver that inimitable Optimod sound. Regardless of your budget, there's an Optimod-FM that's perfect for your station.

Worldwide sales, Luis Endara (Phone) +1 305 383-1200 (E-mail) endara@orban.com

European sales, Peter Lee (Phone) +31 299 40 25 77 (E-mail) plee@orban.com

North American sales, Kevin Clayborn (Phone) +1 480 403-8300 (E-mail) kevin@orban.com



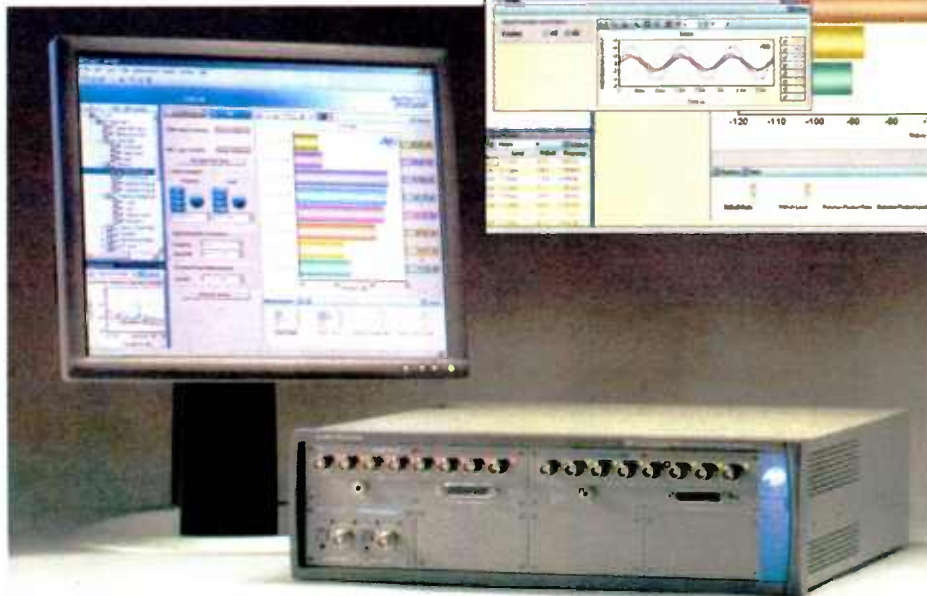
MARKET PLACE

Audio Precision Has Eight-Channel Audio Analyzer

Audio Precision in May introduced the APx585, calling it the first audio analyzer with eight simultaneous channels of analog I/O. It ships in July and retails for \$21,000.

This system is aimed at multichannel consumer audio products and includes a user interface that allows users to take measurements almost immediately and automate test sequences with no programming.

"Consumer audio moved to multichan-



View shows an eight-channel THD+N measurement on the colored meter bars, with pull-off signal monitors providing Scope and FFT views. Measurement Navigator/Sequencer is at the left.

nel systems years ago, and test and measurement has now caught up," said Bruce Hofer, co-founder and chairman of the company. He said the market also has expanded "from audio experts, to engineers who have little formal audio training." Target markets include PCs and portable media players.

A measurement Navigator presents a set of measurements that can be made by selecting with a checkbox, then clicking Run. Test sequences can be defined by selecting multiple tests, then clicking the Navigator's Run button. Automating test sequences eliminates the need for programming.

Test sequences are supported with an integrated reporting facility that generates graphic reports on individual test settings and results. Reports are exportable and can be customized with a company's name and logo.

The system also uses a new, patent-pending sweep method called "continuous sweep" that AP says is faster than previous methods and can make multiple measurements at once.

For information visit www.ap.com.

COOL STUFF 2006 AWARD WINNER



Product: FM411

Company: Mother USA Inc.

You can tell your listeners when you're about to play songs they want to hear.

FM411 is a service, free to listeners, that sends a Live Alert that their favorite artist or song is about to play in a few minutes. Listeners sign up on the station Web site and pick their favorite artists and songs from your playlist. A Live

Alert is sent to their e-mail address or cell phone. The goal is to drive audience to the station, always a good thing; and you can sell ad content within the alerts for nontraditional revenue.

The system operates via software installed on the PC tied to your audio management system, like the BE AudioVault. FM411 was on display in BE's booth at NAB.

Designer: Jeffrey Levy, Brian Schoenbeck, Frank Cincotta

Price: Provided to stations on barter.

Info: (508) 655-4567 or www.getfm411.com

Today's top engineers
need a reliable source
of deep tech info.

Now they have it.
Radio World
ENGINEERING EXTRA

Published six times a year, this "deep tech" version of **Radio World** is pure technology, with articles written by engineers for engineers, and edited by a veteran radio broadcast engineer. White Papers, in-depth engineering session coverage, technical op-ed and analysis articles — if it's important to radio engineers, you'll find it in **Radio World Engineering Extra**.

Even if you are a **Radio World** subscriber, you must sign up to receive RW-EE.

Sign up now for your **FREE** subscription at:
<http://www.rwonline.com/eng-extra>

COOL STUFF 2006 AWARD WINNER



Product: Optimod-AM 9400

Company: Orban/CRL

"One slick package," a judge wrote. "After the common AGC, you get separate multi-band processing and limiting all the way out each output."

You don't need to buy two boxes to get independent multiband processing for your analog AM and AM HD Radio chains. This unit offers two independently adjustable processing chains: one for the analog channel and one for the digital.

The only processing common to the channels is the AGC and stereo enhancer; beyond the front-end processing, you get two equalizers, five-band compressor/limiters and peak limiters, each optimized for its intended transmission channel. The processing is based on the 8400's code, so its AM-channel signal processing is more advanced than that of the 9200. Notable changes, according to Bob Orban, are two-band window-gated AGC, "intelligent" clipping distortion control and anti-aliased clippers. Also the 9400's AM signal processing path is stereo, whereas the 9200 is mono.

Now shipping. Shown: Jay Brentlinger processes news of the award.

Designer: Bob Orban

Price: \$7,990

Info: (480) 403-8300 or www.orban.com



Diary

► Continued from page 34

thermally, although some are tripped magnetically.

If your transmitter site has cooling problems during the summer months, adequate ventilation should be explored before the breakers — and other equipment — shut down due to the heat. A thermostatically controlled exhaust fan, as shown in Fig. 2, represents money well spent.

★ ★ ★

Paul also writes that the time has come for engineers to protect themselves. He does this with an appointment diary.

Here's an example of how it's used to keep you safe. Paul's station complex had its largest (and most expensive, at a million bucks) recording studio go down at night from a UPS failure. A technician, on his own initiative, bypassed the UPS

The habit of taking notes is a great self-preservation move. I worked with an engineer who kept track of his daily work hours. Months later, a former employee went to the state employment commission about lack of overtime being paid. It turned out that a number of employees were due overtime. According to the state's requirements, this engineer was not "exempt" from overtime and was due a healthy back paycheck, documented by his daily work diary.

Paul wrapped up his letter with a great link if you're maintaining vintage equipment: reel-to-reels, cassette decks or VCRs. Paul has ordered rubber and cloth belts, idlers and pinch rollers from the folks at Russell Industries. This is worth bookmarking, as they are a good source for spare parts for this type of equipment. Go to www.russellind.com and click on PRB line (which stands for Projector-Recorder Belt Corp.).

The company also sells hook and loop fasteners, with both buckle and screwdown options. These straps are



Fig. 3: Velcro brand or other reusable 'hook and loop' straps keep cables secure.

to bring the studio back into service.

Paul dealt with the UPS from the moment he arrived the following morning. He diagnosed that the control circuitry was faulty. The UPS was an older model, and no parts were available. The unit had to be replaced.

After passing a quote onto management, they decided they were not going to spend the money for a new UPS, saying failure was rare and the studio was OK without the UPS. Paul saw this as penny-wise and pound-foolish, and made management aware of what systems were powered by that UPS. Their decision stood, the UPS was not replaced. Months later, there was another power surge and the studio was down, long term. Companies wanting to record ads were being turned away, and the station was losing money. High-level management wanted to know what had happened.

The level of management that had refused to buy a new UPS tried to pin the blame on Paul, as though he had not been diligent in doing his job.

Paul had recorded his earlier meeting with management in his appointment diary. He was able to show the date and time of the meeting and who had said what, including the refusal to buy a new UPS.

great for securing remote cables, as used by Bob Drazba at WILK(AM) in Wilkes-Barre, Pa., and seen in Fig. 3. The hook and loop (Velcro brand) securing method means the straps can be reused over and over.

★ ★ ★

Nick Markowitz, a contract engineer for WAVL(AM) in Apollo, Pa., and owner of Markowitz Electric Protection, a private industry fire investigation company, has stated a newsgroup with associate Al Columbo. Here you'll find discussion of a variety of fire subjects, many of which may pertain to broadcast engineers. Visit www.tpromo.com/firenetonline. The site has interesting articles, including one by Columbo on how often to replace gel cell batteries. They don't last forever, folks!

John Bisset has worked as a chief engineer and contract engineer for 37 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.

DRM85

FlashMic

THE WORLD'S FIRST
DIGITAL RECORDING MICROPHONE



Forget tapes, discs, cards and cables. Just pick up a FlashMic and go.

Combining a broadcast-quality Flash recorder with a Sennheiser mic capsule, HHB's new FlashMic is perfect for interviewing, journalism and any type of voice recording.

One button press is all it takes to start recording in either linear or MPEG 2 formats. 1GB of built-in memory stores a massive 18 hours/999 tracks of recordings and it's easy and quick to transfer files for editing or onward transmission via FlashMic's built-in USB interface.

Power comes from standard AA batteries and the included FlashMic Manager software makes it easy for individual users or news organizations to configure single or multiple FlashMics for particular applications and file naming protocols.

FlashMic is all you need for broadcast-quality recording.

So just pick up a FlashMic and go.

www.flashmic.info



FlashMic shown actual size



Distributed in the USA and Latin America by: Sennheiser Electronic Corp., 1 Enterprise Drive, Old Lyme, CT 06371 USA • Tel: 860-434-9190 • Fax: 860-434-1759 • www.hhbusa.com
Latin America: Telephone: 52-55-5639-0956 • Fax: 52-55-5639-9482
Distributed in Canada by HHB Canada: Tel: 416-867-9000 Fax: 416-867-1080

End-to-End Solutions From SCMS

AudioArts Engineering D-75 Digital Live Radio Console



**Get Your Studio Solution
from the Dealer That Knows Radio.**



Install an AudioArts Engineering D-75 in your studio and you'll know you've made the right choice as soon as you power it up. You get the benefits of its predecessor, the D-70 plus more functionality.

The modular plug-in design is key for installation and service—making it easy and FAST for you to change configurations.

Even better is the fact that you can get it from the most reputable supplier in radio broadcast—SCMS.



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

HQ in Pineville, NC: 1-800-438-6040

Bob, Ernie, Matt Mike

Mid-South: 1-877-391-2650 Bob Mayben

Central: 1-731-695-1717 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: 1-877-699-9151 Tyler Callis

Pro Audio 1-877-640-8205 Ric Goldstein



www.SCMSinc.com

Salem Takes Talk Into Blogosphere

by Jim McLain

This article appeared in the Ventura County Star and is reprinted with permission.

Are blogs and the Internet going to be the new talk radio?

Salem Communications Corp. thinks so, and it just put up \$5 million to make it happen.

The Camarillo, Calif., company, owner of 104 radio stations, a host of Web sites and magazines and three radio syndication networks with nearly 2,000 affiliates, targets people interested in religion and politics. And it closed a deal in May to take its fastest-growing radio format — conservative news/talk — into the blogosphere.

Salem bought Townhall.com, one of the country's largest and oldest conservative news and opinion Web sites, and will relaunch it soon as a next-generation platform for people with something to say. It also will provide a more visible stage for the company's talk show hosts.

One executive predicted the site will be a forerunner of a new "grassroots media," with a potential impact rivaling that of nationally syndicated talk radio's dawn in the late 1980s.

"We forget, now that it's been 20 years, how revolutionary it was that an average person could pick up the phone, call a talk radio show and have their voices broadcast to millions of folks," said Chuck DeFeo, Townhall.com's new general manager.

"There wasn't a platform like that for people, ever. ... This is where the grassroots media of talk radio and blogging can intersect."

Money maker

Salem reported total broadcast revenues last year of \$201 million, up 7.9 percent from \$186.3 million in 2004. Its 2005 net income was \$12.7 million, up 72.7 percent from \$7.3 million the previous year. Founded in the mid-1970s by Edward G. Atsinger III of Camarillo, who remains its president and CEO, the company has 1,530 employees, including about 120 in Ventura County.

Its radio portfolio includes 66 stations in 24 of the country's 25 largest markets. Most broadcast one of its three primary formats: Religious "teaching and talk," Christian contemporary music and conservative news/talk.

KDAR(FM) (98.3) in Oxnard, which airs the religion format, was Salem's first station. It is the company's only radio property in Ventura County.

The Townhall.com Web site, based in Washington, D.C., was launched in 1995 by the Heritage Foundation, a conservative think tank. It features content from more than 115 member groups and commentary from scores of well-known writ-

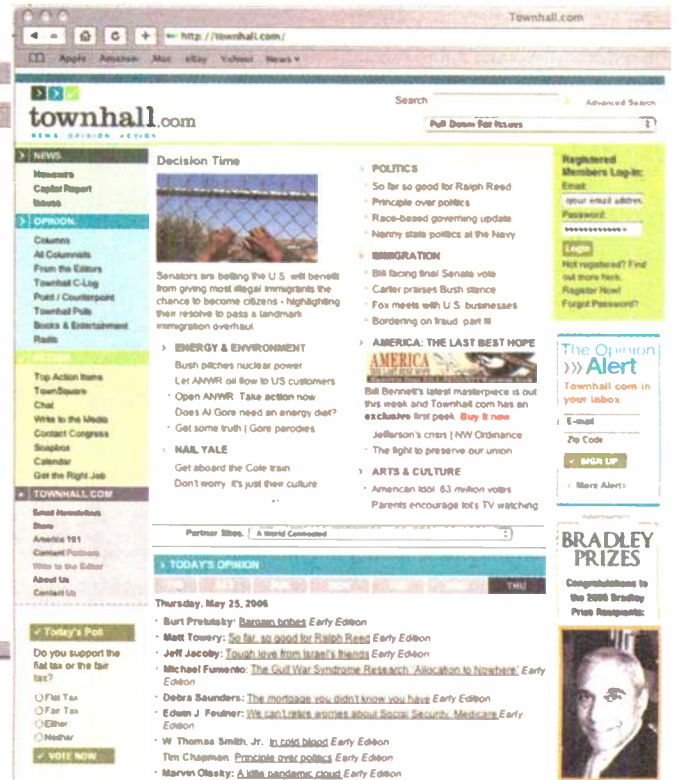
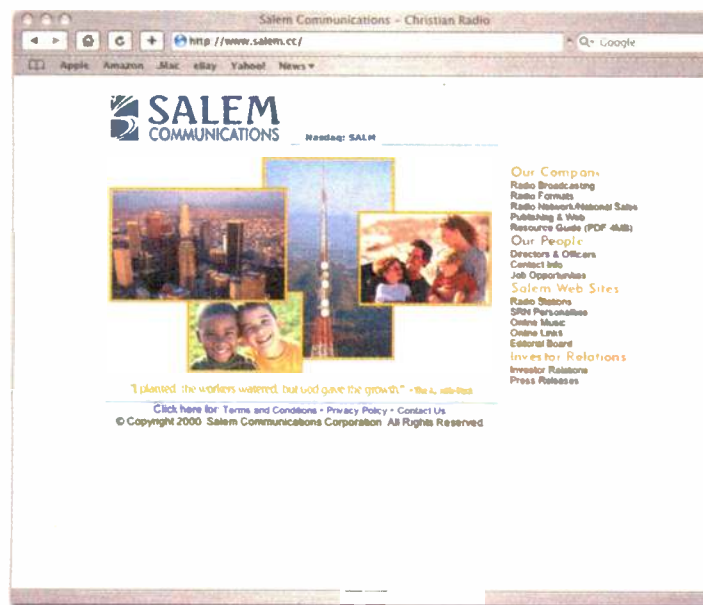
ers and talk show hosts, most backed up with at least a decade's worth of archives.

The site has 1.2 million unique visitors and 12 million page views each month,

"The acquisition ... provides a highly effective means to promote across a multimedia platform," Atsinger said in a prepared statement.

growing business unit. The format was on 17 Salem stations in 2003, half the number carrying it today. It's heard in eight of the country's top 10 markets, 20 of the top 25. Locally, the format airs on KRLA(AM) (870) in Los Angeles.

In an earnings conference call with



according to NielsenNetRatings, which measures online activity.

Salem wants to integrate its content on Townhall.com with what's being discussed on its nationally syndicated talk shows and rapidly growing chain of 34 conservative news/talk stations, Atsinger said. Targeting the same audience on the air and online is a strategy that has served the company's 44 religious stations well.

"We see an opportunity to significantly grow the Townhall.com brand, while broadening the exposure and popularity of our news/talk radio hosts and radio stations."

Salem launched its conservative news/talk station group in 2002. For two years, it's been the company's fastest-

investment analysts transcribed by SeekingAlpha.com earlier this month, Atsinger said news/talk stations raked in 15 percent of Salem's first-quarter broadcast revenue, up 15 percent from the See SALEM, page 40

The Fabric of Time

Precisely measured and delivered by

ESE

Broadcasters have woven ESE precision master clocks and timing-related products into their facilities for over 35 years. 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 vast universe 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

Salem

► Continued from page 39
same period in 2004, when the format generated \$29 million.

Internet strategy

When it relaunches Townhall.com in mid-June or early July, Salem hopes to boost news/talk revenue and ratings by prominently featuring its syndicated talk show hosts on the site. Their photos, blogs, columns and podcasts will be the first thing visitors see, though links to dozens of other conservative commentators — including Rush Limbaugh, Sean Hannity and Bill O'Reilly — will still be there.

Visitors entering their Zip codes will see a list of nearby Salem stations and network affiliates, along with e-mail links to their congressional representatives and be invited to blog on any issue.

"There's going to be so much cross-pollination between our owned radio stations, our network programming, the existing Townhall writers and bloggers, it really is an exciting prospect," said Tom Tradup, Salem Radio Network's vice president for news and talk programming. "It's an opportunity to do something that takes us to the next level

... it gives us the chance to key into the core of any talk radio audience, people who are active in the political system."

The talent

Salem's broadcasters include long-time Los Angeles personality Dennis Prager, authors Mike Gallagher, Hugh Hewitt, Michael Medved and Bill Bennett, who also served as Ronald Reagan's education secretary, George H.W. Bush's drug czar and chairman of the National Endowment for the Humanities.

"We like to bill him as the only talk show host in America ever confirmed three times by the Senate," Tradup said. "All of these hosts ... have a sort of multidimensional, multimedia image to them.

"They're all people who have a life outside of radio as opposed to being radio personalities. I think that's why they're so interesting and why they've stood the test of time."

Bennett launched his daily "Morning in America" broadcast in 2004 on 30 stations, most Salem-owned. Today, the show is on 152 stations, most not owned by the company. Gallagher is heard on 173 stations, Medved on 177 and Prager on 109.

Salem spent about six months building a Web site for its conservative commentators that was to be called

Beyondthenews.com. General Manager DeFeo said the company was weeks away from launching it when it learned early this year that Townhall.com was for sale.

Now, Salem is retooling much of what it planned for Beyondthenews.com for use on Townhall.com, being careful not to alienate Townhall's many long-time visitors by changing too much.

DeFeo declined to say what the company is spending, but he thinks most people will like the revised Web site.

505,000 listeners in the same demographic.

KRLA could probably do a little better, one expert said, by airing some non-political programs, but Salem seems to be aiming for a niche audience.

"I would imagine their audience is a very white, very conservative, very religious group of listeners just by the lineup of the people they have on the air," said Don Barrett, editor of LARadio.com, a Web site that covers the Southern California radio industry.

**There's going to be so much cross-pollination
between our owned radio stations,
our network programming, the existing
Townhall writers and bloggers, it really
is an exciting prospect.**

— Tom Tradup

"I can tell you that what will be coming out in six to eight weeks will be significant. I think there's nothing else like it in the conservative space on the Web," he said. "I don't think there's anything that's going to combine the grassroots media of talk radio, the blogosphere and the Internet together like this any place else."

Making connections

Townhall.com will feature links to the Web sites of all Salem's news/talk stations, and company officials hope many online visitors unfamiliar with the stations will tune in.

The format is fairly new in most cities. While it is making money and attracts intensely loyal listeners, audiences for most are small. In the winter ratings, Los Angeles' KRLA ranked 32nd with listeners aged 25 to 54, with 134,000 listeners weekly, according to Arbitron Inc., the radio ratings service.

By comparison, mainstream talk station KFI(AM) (640) attracts more than

"They don't let up ... When you are so limited in your approach, it's really difficult to get a wide base of listeners. I'm just not sure they even want to be No. 1."

Reaching the target audience

Tyler Cox, national program director for the company's news/talk stations, said the format is aimed at a mostly male audience aged 35 to 64. While ratings for many of the stations are low, audiences for all of them are growing incrementally, he said.

In the Denver, Minneapolis-St. Paul, Louisville and Cleveland markets, the relatively new format is doing better than Salem expected.

"When you start developing this platform, you know you're coming in as the new kid on the block, and we know it's going to take time for growth," said Cox, who is based in Dallas. "We have very realistic expectations. We expect growth ... but the key thing for us at this juncture is that growth is occurring year-to-year." 🌐

STATION/STUDIO SERVICES

Happy 230th Birthday, Sam!

Doing anything special to celebrate this 4th of July? Why not take your audience back in time and introduce them to the men who founded our great nation. *Founders of Our American Republic* is our exclusive series of :60-second profiles of the men who put everything on the line when they signed the Declaration of Independence. Treat your listeners (and sponsors) to some of our nation's history - and your station to even more of its *currency!* Details and free demos at our website now.



GRACE BROADCAST SALES
Sound Ideas for Building BusinessSM

Questions? Call us toll-free (888) 472-2388.
www.gracebroadcast.com

The Ultimate NTR Machine!

Generate Non-Traditional Revenue for your station
with a telephone time & temperature system

- ☐ Easy Installation
- ☐ Affordable Lease — No costly equipment to buy
- ☐ Daily Remote Support

www.timeandtemp.net RTI Inc. 800.860.5701 Demo Line 919.362.1117

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.

CONGRESS July 4, 1776
"FOUNDERS OF OUR AMERICAN REPUBLIC"
25 :60-second features \$149
easy sell.
www.gracebroadcast.com

COOL STUFF 2006 AWARD WINNER



Product: Blue Wireless
Company: Ricsonix

An Australia-based company, Ricsonix, has this lightweight digital radio microphone. The device is aimed at video, film and stage, but our judges found it cool for uses anywhere you might want to do away with audio cabling.

This is a Bluetooth-style device that uses spread spectrum and delivers CD-quality audio with no compression. It is about a third the weight and size of conventional studio mics. The receiver is the XLR plug with an antenna. Available as a full AES digital out or straight analog; it will plug into any pro recorder. "No more butt packs for wireless body mics," says a judge who has worked with plenty.

Ships in July. Photo: Ric Creaser mans the booth.

Price: \$1,295

Info: (323) 876-7525 (Grace Distribution) or www.ricsonix.com

Hanley's Three Rules

The following are excerpts of remarks by Carol Hanley, senior vice president of sales, U.S. media for Arbitron. She spoke at the RAB Radio Forum in March about "new rules for radio."

Arbitron [has] announced that after 15 years — and 10 generations of technological refinement — we are actively deploying the Portable People Meter as the new currency for radio measurement in the top 50 markets ...

In the last year the radio industry has implemented more innovations than I think I can ever remember. Clutter reductions, new formats like Reggatone and JACK, the introduction of HD Radio and the adoption of EDI making the process of buying and selling more efficient. ...

I believe there are three key themes — or rules — that are consistently emerging in radio today.

Rule 1: Radio will no longer lag behind other media on accountability. The shift into electronic measurement will provide radio with more timely, robust and actionable data. That will translate into more money for the entire radio industry. PPM measurement will enable us to better determine the impact of advertising investments and assess we are addressing our clients' full objectives.

More importantly, electronic measurement will provide programmers with compelling new insights to enhance radio-programming content. That all translates into more customer value — which translates into revenue growth.

In addition, we are moving into a world of commercial encoding — a demonstration of not just who is exposed to content on a radio station or distribution channel, but who was exposed to the actual commercial execution. Radio has an opportunity to lead other media in this highly accountable measurement metric.

Rule 2: Advertisers who never looked at the medium will now begin to consider it. I met three weeks ago with an auditing company that works for over 165 major advertisers. An auditing company verifies for an advertiser that the agency is, in fact, doing exactly what they claim to be doing with their advertising dollars.

The CEO of the company told me that of the 165 audits a year that they do, only three advertisers are in radio. Why? Because in his world of econometric modeling, radio is not perceived as an accountable medium. PPM — commercial encoding — and project Apollo have the potential to change all of that and welcome new advertisers and budgets to radio.

Rule 3: Radio will no longer be thought of as just a frequency medium. Radio will now also be seen as a branding and reach medium. PPM tests in both Houston and Philadelphia revealed that the average station's come doubles that of the diary. In some cases, we see the market cluster now reaching what the local TV station does.

This is a major branding story for radio. I cannot tell you how many meetings I have been in during the past year where an agency told me that some random percent of their radio budget is moving to the Internet. Why? For example, I heard "because there is the belief that when a consumer wants to purchase a car — it is the Internet that they turn to." ...

How does a consumer get to the point that they are looking up pricing on the Internet for that Ford Truck? *Branding.* Radio must reposition itself as a media capable of large-scale branding. That is what a "reach" medium does. ...

Radio is changing, it's alive and it's ready to acknowledge that a single thought development and shift can and will revolutionize how the media is bought and sold. Arbitron and PPM are looking forward to being a part of that change. 🌐

COOL STUFF 2006 AWARD WINNER

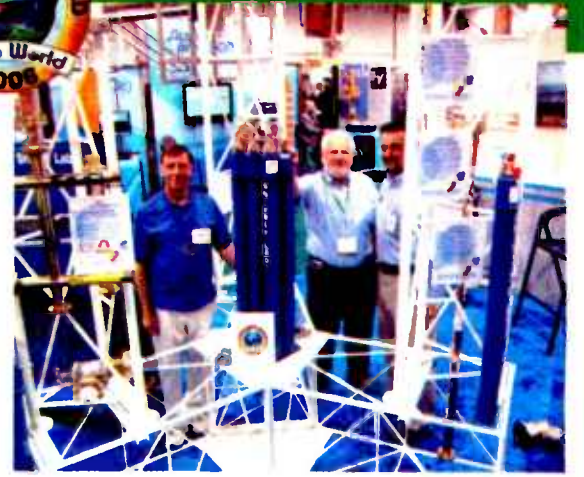


Product: 2900 Series Low-Power FM Notch and Bandpass Filters
Company: Shively Labs, Division of Howell Laboratories Inc.

The Model 2900 low-power filter series targets the complex broadcasting environments in which low-power transmitters are used these days. They can be configured for notch and bandpass use, group delay equalization, spectral regrowth suppression and use in low-power branched and balanced combiners. Their small size makes them suitable for crowded broadcast facilities.

Shipping now. Photo: Bob Surette, Joe Rohrer and Sean Edwards

Design: Shively new products design group
Price: Varies by configuration
Info: (888) SHIVELY or www.shively.com



In times of change....

Our commitment stands firm.

With all the news and hoopla over dMarc lately, the news striking home was no doubt our strong commitment to leadership in station automation technology. Not only is that commitment as strong as ever, but it's growing ever stronger.

dMarc spends more money on R&D perfecting our industry-leading digital automation systems than do all the other automation companies combined. For our client stations, that means true peace of mind knowing that not only do you have the best digital solutions in the industry, but the inside track to even better technology in the future.

**The best digital systems.
 The best broadcasting solutions.
 The best service**

ALL FROM DMARC. STILL.

1-888-438-7268
www.dMarc.net

Scott Studios Maestro

680 Newport Center Drive, Suite 150, Newport Beach, CA 92660

dMarc
 from Google

The Art of the Live Radio Spot

A Great Live Spot Is Conversational: Hiccups, Hesitations and No Stentorian Tones

by Tom Fitzmorris

The most powerful kind of radio advertising is the ad-lib live spot. If you doubt it, it's because you're reading these words instead of hearing me make them up as I speak them.

The live commercial is the original form of radio advertising. That was by necessity, of course. Everything was live in the beginning. Recorded spots became common in the 1930s, but the live commercial remained the standard of the industry, on both local and network radio, well into the 1950s. As late as the early 1970s, you'd still hear live commercials even on ABC and CBS network newscasts, delivered by special announcers brought in for the purpose.

The practice never went away, particularly on talk radio, which lends itself well to live commercials. But live and ad-lib spots work in any format.

Just talk

The live spot gets its power because it plugs into the essence of radio. It's one person talking to another, personally. Ask any client who uses live radio commercials about their effectiveness. There's no question about it. They're worth the extra cost and trouble.

Unfortunately, few practices make radio managers as uncomfortable as the idea of letting an on-air person cut loose with a live script, let alone with copy points from which he can make up the spot from whole cloth.

This is understandable. Back in the old days, everything in radio was scripted. Even interviews. It seems absurd now, but radio stations worried so much about what could be allowed to air that they insisted on knowing every word that would be uttered, in advance.

Then along came Arthur Godfrey. At the time, he was a standard big-voice,

perfect-enunciation local announcer in Washington. An automobile accident put him in the hospital, where he listened to a lot of radio. It occurred to him that announcers sounded as if they were talking not to another person, but to a microphone. And that this was obviously wrong.

When he returned to the air, he ditched the diction and started speaking like a normal person — perhaps even exaggerating that a touch. Instead of reading his scripts, he talked about what the scripts said. Sometimes he stopped dead in his tracks and questioned what he read from them, even poking fun at the sponsor at times.

Management and other announcers at the station thought Godfrey had lost his mind. But before they could do anything about it, the surge of popularity among both listeners and sponsors made it clear that Godfrey was onto something. Within months, advertisers were on a waiting list to buy time on Godfrey's show.

Informed friend

There was a good reason for this. Godfrey's spots didn't sound like commercials. They sounded like the words of a well-informed friend, and people believed them as such. Scripted spots, in contrast, came across as disembodied advice from ... who knows who?

The effectiveness of the ad-lib spot was so pronounced that it spread throughout all of radio. On the networks, it took the form of scripts written to sound as if they were ad-lib, but the idea was the same. To this day, every show that develops a reputation for doing live commercials always has a high demand for them. The most famous current example is Paul Harvey.

So why isn't the form nearly as widespread today? One word: convenience. It's easy for the traffic department to

enter a produced, numbered spot into the Dalet or Prophet system. Then everybody can just about forget about it. The spot will run even if nobody's at the station, during automated hours.

But a live spot requires a few inconvenient elements. The first is, obviously, a live announcer — the elimination of whom is a continuing process in our industry. Syndicated programming makes live commercials difficult.

And for really great live spots, you need a personality, someone who not only is well known as a trustworthy human being by his or her listeners, but who has the talent to put the point across in a convincing, entertaining way.

Few practices make radio managers as uncomfortable as the idea of letting an on-air person cut loose with a live script.

Such people are expensive. However, the demand for good live commercials being what it is, much of the added expense can be insulated from the station's revenue stream by having the talent bill the client for talent fees. A personality adept at live commercials can at least double his income that way.

Part of the show

Live commercials have other unique advantages:

1. They don't interrupt the show, thereby preventing tune-outs. Ad-lib live spots at their best should be so entertaining that a listener, far from tuning out, actually likes to listen to the spot. Live spots should stand alone, the host moving seamlessly from the program into the commercial and right back into the program. At the very least, the live spot should lead into a recorded spot set.

2. They strengthen the bond between air personality and listener. Ask any jock who does a lot of live spots how often listeners mention that they use whatever it is he endorses. When the listener buys the product, he thinks of the radio show. The product becomes a promo for the station!

3. The spot is never exactly the same twice. Not only does this eliminate listener burnout, but it allows the spot to turn on a dime to serve the immediate needs of the client. New copy points? Bang! They're on the air immediately, not in line in the production department. This is a tremendously valuable talking point for the sales guys.

Live commercials are not without their downsides.

Not all air talent is adept at them. If all a jock can do is read a script as if he were in the production booth, he needs to work on his skills. A great live spot is conversational. That means unpolished sentences, hiccups, hesitations and complete avoidance of stentorian vocal tones. A collection of imperfections adds up to the perfect live spot.

Before the talent goes on the air with a live spot, he needs to know what he's talking about. He should know enough about the advertiser that if he were stopped on the street and asked about it, he could speak about it authoritatively. Too many live spots betray an obvious ignorance of the subject.

Sincere

It's also important that the talent express some criteria that must be met by a potential client.

Every master of the live commercial from Arthur Godfrey on down made it clear that he wouldn't do commercials for just anybody. Otherwise the enterprise becomes craven. Listeners pick up on the insincerity, and lose their trust of the personality.

Certain kinds of businesses lend them-

selves especially well to live and ad-lib commercials. The ones that benefit most are those whose main selling point is enhanced quality.

Restaurants are naturals. Jocks love to eat, and most of them can wax poetic on the excellence of the food they had at Chez Maison de la Casa last night. But any business that says its wares or services are better than most will benefit from artfully performed live radio commercials.

A common misgiving that both on-air talent and management have about live commercials is that it will hurt the credibility of the host. Interestingly, this almost never happens if the spots are done well. Few of Paul Harvey's millions of listeners are bothered by the fact that he does all the commercials on his newscasts. In my own experience, doing a dozen or more live spots every day for restaurants that I deem worthy of my endorsement for 17 years has had no significant impact on my credibility as a restaurant critic. If anything, I'd say it's helped.

So go out and sell those live spots, and teach your air staff how to do them well. It will deliver better results to your clients, to the benefit of everybody.

Tom Fitzmorris wrote this article while evacuated from Hurricane Katrina. In normal times he's host of "The Food Show," called "America's only three-hour daily PM-drive talk show about nothing but eating," on Entercom's WSMB(AM) in New Orleans. He estimates he has done at least 25,000 ad-lib commercials. E-mail him at tom@nomen.com.

COOL STUFF 2006 AWARD WINNER



Product: iProFiler
Company: Axia Audio

Axia is fast becoming "the IP guys." This is a multi-channel audio archiving and logging program that works with Axia IP-Audio networks to capture and store 16 stereo audio channels — or 32 in mono — of time-stamped MP3 audio. There are no sound cards to buy or install. It can be used to log programming,

store and forward network audio feeds and make airchecks.

iProFiler uses your computer's Ethernet port to record audio streams directly. Each stream can be recorded in one of three modes: continuous, skim or "SmartSkim," which archives less-vital audio such as music at a low bit rate, then switches to a higher bit rate for the jock's voice. "A brilliantly integrated logging solution," said a judge.

Denny Sanders and Ioan Rus are shown in the booth.

Designer: Ioan Rus

Price: \$1,295

Info: (216) 241-7225 or www.axiaaudio.com

Write to RW

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

Products & Services SHOWCASE

raduga automation

Automate Your Station in Minutes
...No Degree Required

NEW! Just Released v3.8.7

- Extremely Easy To Use & Understand
- For All Stations, All Formats
- Schedule Spots, ID's, Build Rotations
- Plays All Audio File Formats
- Complete Automation Systems Available
- AirList Music Scheduling Software Only \$259
- Music Libraries Available

...Did we mention **FREE SUPPORT**

Raduga Software



Download your FREE Demo Today
www.raduga.net/rw.htm
(513) 887-0714

Low as \$149* Buyout

Talking. Dial-Up Remote Control



Introducing the First Totally New Talking Remote Control Design in Over a Decade!!

- Voice recordable technology
- Internet capable
- 8 channels metering, status, & control
- Expandable up to 16 channels
- 2 heavy-duty SPDT relays per channel
- Self-calibrating, auto-ranging meters
- Up to 5 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 how the Sicon-8 can help you
take control at www.circuitwerkes.com



CircuitWerkes, Inc. - 2805 NW 6th Street, Gainesville, Florida 32609, USA. 352-335-6555

Audio Editor Go South Again?

The Short/cut Alternative

VoxPro®

Version 4.1

Available at all broadcast distributors
AudionLabs.com 206 842 5202 x203

THE BEST RF EQUIPMENT GUARANTEED!

- ▶ FM-VHF-UHF-L Band
- ▶ RF Line Components
- ▶ Cables and Connectors
- ▶ Antenna Panels and Systems
- ▶ Loads
- ▶ Filters
- ▶ Combiners
- ▶ Patch Panels
- ▶ Splitters & Couplers
- ▶ Digital Power Meters



TERACOM
COMPONENTS

Tel: +1 207 627 7474
Fax: +1 207 627 7473
sales@acornrf.com

Acorn

Efficient
Effective
Affordable

RADIO WORLD'S
Products and Services Showcase
provides a perfect medium for
marketing your products and services.

For more information, contact
Claudia Van Veen
at 703-998-7600 ext. 154
to request a media kit.

Radio World

BEXT

FM & TV
Transmitters
Solid State or Tube
Antennas & Combiners

20 Years of Service
Asistencia en Español
24 Hour Support
2 Years Warranty

www.bext.com
Tel 619 239 8462
Fax 619 239 8474
bext@bext.com

FROM THE TALL
TO THE SMALL



**NEW
EXCITERS/TRANSMITTERS**
w/stereo generator & audio limiter,
field programmable FSK ID keyer, all built-in!

Radio Listener: You Are in My Power

The Idea Is to Make The Listener 'Click' Subconsciously and Say, 'Yes, That's Me'

by Ken R.

What's the difference between a hypnotist and a good broadcast copywriter? According to programming and advertising consultant Dan O'Day, not much.

"While radio is a mass medium, it is also like the one-to-one relationship between a hypnotist and the subject," said O'Day. "Hypnotic advertising incorporates my own insights into radio but also my background in hypnosis and techniques from neuro-linguistic programming."

O'Day, a certified NLP practitioner, admits these methods are not magic.

"There are all sorts of outrageous claims out there about how you will be able to control the mind of the consumer, which is not true," he said. "But NLP and hypnotic techniques can be effective in maximizing the impact of your sales message."

Day discussed the topic of "Hypnotic Advertising" at NAB2006.

Right this way

What are these techniques? Three hypnosis concepts useful in advertising are mirroring, pacing and leading.

"An example of mirroring and pacing would be if you are walking in step with someone and then you speed up slightly. Your friend will unconsciously speed up a bit to match you," said O'Day. "In a commercial, you establish the premise in a way that the listener identifies closely with (mirroring). Then you modify things a bit so that the subject will modify his behavior to match what you are telling him (pacing)."

To make this psychological concept more concrete, let's take a spot for pool tables.

"It begins by mirroring and pacing the

experience of millions of men who want to have their own pool table in their own masculine rec room," said O'Day. "Then the commercial leads the listener into making that fantasy come true."

Talking carburetors

All those TV beer commercials in which an average guy is magically surrounded by attractive women are unrealistic — and, according to O'Day, not that effective.

While radio is a mass medium, it is also like the one-to-one relationship between a hypnotist and the subject.

— Dan O'Day

"If you want to make these messages work better, start with the guy in the bar feeling very awkward and afraid to talk to the girls," he said. "That more closely paces the listener's experience."

O'Day has also seen other commercials that may seem clever to the copywriter, but are a bit hard to relate to for the viewer.

"How about a talking carburetor?" said O'Day. "No one is going to say to himself, 'Yeah, I see that every day.'" The idea is to make the listener "click" subconsciously and say, "Yes, that's me."

According to O'Day, the most com-

mon error in radio commercials is selling with facts.

"By now most copywriters have been taught at least to sell benefits instead of features, but even that isn't enough," he said. "You should be selling associations between the brand's results and the targeted consumer."

The second most common mistake?

"Selling an association but the *wrong* association," said O'Day.

"An example is an actual commercial created by a radio station for a real estate agent. The spot was built around a satisfied homeowner sitting on the porch of his new country home watching insects getting electrocuted by a bug-zapper. The local advertising club gave this spot an

award; but the ad probably didn't generate any new business — because the association created in the mind was that this Realtor will help the listener buy a mosquito-infested property."

O'Day cited another bad spot, this one for a Mexican restaurant promoting fajitas.

"It featured a man and a woman having dinner there and the alleged humor came from the fact that they were passing gas," he said. "Never mind the fact that fajitas are not even made with re-fried beans so that this phenomenon wouldn't occur anyway. The commercial associated that restaurant with intestinal gas."

Further examples of radio commercials, bad and good, can be found at www.danoday.com.

Ken R. is a former radio copywriter who made almost every mistake possible. He says he would like to apologize to all those clients at this time.



COOL STUFF 2006 AWARD WINNER

Product: Commander G3
Company: Tieline Technology

Between 1998 and 2001 an Australian company called Audio Video Communications set out to create a global distribution network. Backed by a government development grant, AVC also came up with a family of digital audio codecs, now familiar by the company's new name, Tieline.

Commander G3 codecs send broadcast audio over networks such as the Internet, including wired IP, Wi-Fi and wireless cellphone broadband links. They also offer traditional network interfaces such as POTS, ISDN and GSM. Each interface is available as a module; you buy what you need now, and add later as needs change — a useful approach in this era of evolving distribution channels.

Shipping now. The company offers free trials through dealers.



Design: Company design team
Price: G3 Field Unit with POTS & IP, \$2,890
Info: (888) 211-6989 or www.tieline.com

SH SHOWCASE SE

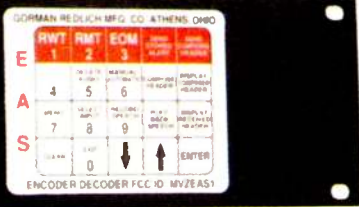
Products & Services

Buy simplicity, reliability and service
EAS
Price \$1750.00
Equipment is in stock for immediate delivery!

Now available with optional DTMF control via a phone line.

GORMAN-REDLICH MFG. CO.
257 W. Union St. Athens, Ohio 45701

Phone 740-593-3150
FAX 740-592-3898



- 5 two-way RS-232 inputs/outputs for computer, remote signboard & character generator
- 2 year warranty
- 6 audio inputs on standard models. All audio inputs & outputs are transformer isolated from encoder-decoder board
- 2 minutes of digital audio storage
- Automatic interruption of program audio for unattended operation
- 25 pin parallel printer port for external printer
- 4 line 40 character LCD display with LED backlighting
- 52 terminals on the rear to interface with other equipment by removable plugs
- 20 key keypad to program unit, set modulation level, set input levels
- BNC fitting with 600ohm balanced audio out for second transmitter
- Will handshake with automation equipment

jlmg@gorman-redlich.com Web Site: www.gorman-redlich.com

◆ Also available: weather radios, antennas for weather radios, crystal controlled synthesized FM digitally tuned radios, remote signboards, cables for interconnection, character generators.

A Great Place to Advertise!

Radio World

Radio World's Products and Services Showcase provides a perfect medium for marketing your products and services.

For more information contact
 John at 330-342-8361 (Eastern US)
 or Dale at 916-721-3410 (Western US)
 to request a media kit.

Thanks for Reading Radio World!

Stations Saluted For Their Service

The NAB Education Foundation named winners of its annual Service to America Awards, recognizing outstanding community service by local broadcasters.

Bonneville's WTMX(FM) in Chicago won the Partnership Award for a 36-hour radiothon that has raised \$8.4 million for Children's Memorial Hospital over six years.

KHUM(FM) in Ferndale, Calif., owned by Lost Coast Communications, was honored with the Friend in Need Award for its staff's efforts during and after unexpected storms between Christmas and New Year's Eve including one with 97 mph winds that left three-quarters of the county without power and main highways blocked with fallen trees.

KMSU(FM) at Minnesota State University in Mankato, Minn., earned the College Radio Award. Among its programs is "Human Race Radio," a monthly show on sensitive topics including media bias, the state of religion and community organizations. The station also sponsors a Toys for Tots program and a High School News initiative.

KVAK(AM/FM) in Valdez, Alaska, owned by North Wave Communications, earned the Service to Children Award. The station invites kids into the studio to participate in the "KVAK Kids Club," the goal of which is to engage children in activities aimed at promoting community service. Club members in the 4th through 6th grades record community service announcements that air daily on the stations.

Money for School

Jefferson-Pilot station WLYF(FM) in Miami partnered with electronics retailer BrandsMart USA to award a \$2,500 college scholarship, desktop computer and \$500 BrandsMart USA gift certificate to Stephanie Maestre, a senior at the School for Advanced Studies.

Maestre plans to study biology and take pre-med courses as an undergraduate. She was selected for the scholarship from among 300 local high school students by a panel that included station representatives, educators and businesspeople.

Jefferson-Pilot's Dennis Collins, left, presents the scholarship check to Maestre. Also shown is Maestre's mother Dalila and station Account Executive Susan LaBarbiera.



NEW! USB Digital Audio Solutions...

USB-to-XLR interfaces eliminate soundcard problems!



The **USB Matchbox** gives you audiophile performance without the noise, hum, and interface headaches of consumer soundcards.



USB Match Plus adds accurate peak-reading level meters and a reference-quality headphone monitor amp.



Both versions feature easy USB interface to any PC or laptop. Balanced analog inputs and outputs at professional levels are on XLR connectors. The Speaker output can be used for monitoring, with muting via any GPI closure.

Computer audio just got easier!

- 48K, 44.1K, 32K sample rates
- Burr-Brown 8X ADC and DAC
- Speaker output with Muting
- Superb analog filter design
- XLR connectivity
- USB powered

STATION SERVICES

AirPlay Direct Pushes Digital Delivery

AirPlay Direct said its customers now include Clear Channel, Sirius Radio and Live 365.

It is a Web-based digital delivery system that allows artists and labels to make music available to broadcasters.

"The radio industry has been slow to adopt digital delivery in some regions globally, but that appears to be changing," the company stated. "Recent trends indicate that radio programmers are now aggressively embracing digital delivery."

CEO and Founder Robert Weingartz cited a "big uptrend" toward radio's acceptance and adoption of digital delivery.

Broadcasters can search the service by artist, title, genre or label to find material; they can register to use the site and material is free. The company touts the service to artists as an economical way to distribute music directly to broadcasters.

New members can register with AirPlay Direct, build a personal mini Web site and post three tracks for free. Additional tracks can be uploaded for \$10 each.

For information call the company at (678) 318-1900 or visit www.airplaydirect.com.



Now in stock at all Henry Engineering dealers. Complete info at www.henryeng.com.

626.355.3656

We Build Solutions



A Prayer for the Future of HD Radio

I was listening to an AM station in HD when a friend came into my office. We spoke for a few minutes and he turned to walk out. Before reaching the door, he said: "Wow! That station really sounds so better much online than over the air."

I explained that I was listening on-air through an HD receiver. He was stunned. This is someone who works in the radio industry and has heard the on-air promotion and commercials for HD. He had no knowledge that AM broadcasts in HD.

Ah, the smell of opportunity!

The sound

I gotta weigh in with a few thoughts about HD marketing, promotion and content.

For starters, AM radio stations should not be airing the same promotional announcements or commercials for HD Radio as FMs. The main selling proposition for AM radio is incredibly better sound. For somebody hooked on AM radio talk, sports, news or some niche music format, this is a huge benefit.

Perhaps the industry is waiting until AM HD broadcasting is permitted at night, I don't know; but most listening is occurring during daylight hours, so even that objection is weak. Focus on promoting better AM sound: no fading, no static, no noise during thunderstorms!

Also, when AM stations are doing live broadcasts, they should make sure the live crowd is hearing that specific broadcast in HD sound. On-site signage is needed and a literature on a nearby table would be helpful to sell the product. Can the HD consortium afford listener kiosks in malls, amusement parks and stadiums? Sampling has to start somewhere.

As for FM, promoting better sound

on HD is a non-starter for most people. The way many are processing HD Radio now, they almost sound like FM stations anyway. While I might buy an HD receiver to improve my AM listening experience, I'm not forking out hundreds of dollars just to hear better FM.

Content is the only thing that's going to bring buyers to the after-market store or Web site to buy the product and then go through the hassle of installation, or at the least the setting up and learning how to use a table radio.

in a mainstream publication, I anticipate the writer is going to slam the industry for repeating the same content daily or even every few hours (because many HD channels don't run daily music logs, they're just hard clocks).

When they don't discover the repetition, I figure that they just really haven't listened very much. However, real listeners will catch on quickly as they hear the same song at the same time every day.

Program directors today are also

Promo Power



by Mark Lapidus

What's the point in advertising HD Radio to the masses on AM and FM stations, only to have those who make the leap become adversaries instead of missionaries?

Most broadcasters I speak with are hoping that the big broadcast companies have a fast timetable for investing in and improving the formats of HD Radio stations.

Unique

HD formats left up to program directors who are concerned about ratings for their AM and FM stations are at best an afterthought. Many HD Radio stations are brand extensions for their FM sisters and it's easy to understand why. The PD will likely know the music for a brand extension product. The PD may also reason that by using their FM branding in some fashion there's at least a chance a listener may write down that station in a diary for ratings credit.

Each time I read an HD Radio review

amazing risk-averse. They've been trained not to take chances, or build radically niche formats.

Where will unique HD programming come from? For most HD stations, it will come from their corporations — either directly, with the company developing unique formats and then sending them to multiple cities for HD transmission, or with the firm funding more local programmers, who treat their HD stations as real radio stations with daily needs. Either scenario could provide the niche products that HD will need to attract listeners.

Local automation for HD station with nobody paying attention is the worst, but most common, solution.

Station engineers need clear direction

about how important it is that HD stations stay on the air. Let the technical staff know that the HD Radio station can't go off the air for hours or days — that you value that channel. I also know of some engineers who have HD stations on the air but don't have an HD Radio in their office. I'm not putting the entire blame on engineers; consolidation has cut the labor pool to an all-time low and there are often just not enough bodies around to do the work.

What's the rush for better and more varied formats on HD? The industry can't afford to alienate those brave consumers who are forking out substantial money for receivers. We also need positive press for HD Radio. What's the point in advertising HD Radio to the masses on AM and FM stations, only to have those who make the leap become adversaries instead of missionaries?

The author is president of Lapidus Media. Write to him at marklapidus@yahoo.com.

Comment on this or any article to radioworld@imaspub.com.

COOL STUFF 2006 AWARD WINNER



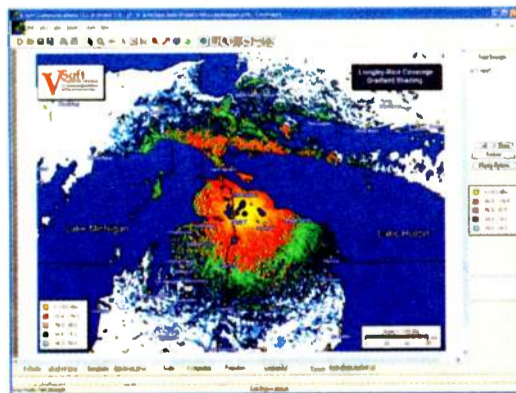
Product: Probe Version 3
Company: V-Soft Communications LLC

"Where does my signal go? Where would it go if I moved my site or increased power?" Good questions for broadcasters. Probe 3 is a propagation prediction computer program. It integrates a polygon-based mapping system with routines for predicting coverage of broadcast or communications systems in the 22 MHz to 22 GHz frequency range.

The program uses various propagation models including FCC, Longley-Rice, Okamura/Hata/Davidson, Cost-31/Hata, TIREM, PTP, ITU Model P.1546-1 and others. It can predict locations of received interference as well as coverage. There are modules for importing measured signal, booster/single-frequency network synchronization analysis and specialized D/U analysis. Numerous high-res terrain, land cover and population databases are available.

Said one judge: "Sophisticated and visually stunning." Shipping now.

Design: John Gray, Jesse Connell, Doug Vernier
Price: Basic \$7,995; Standard \$9,995; Professional \$12,995
Info: (800) 743-3684 or www.V-Soft.com/Probe



COOL STUFF 2006 AWARD WINNER



Product: Vorsis AP-1000 Digital Spectral Processor
Company: Wheatstone Corp.

"A credible entry for the company into the very competitive world of on-air processing," one judge wrote. While this is not Wheatstone's first processor, the company has significantly ramped up its presence with a unit that provides 31 bands of processing, three-band AGC and matrix processing.

"I like that it also includes an expander and de-esser," a judge said. "The display and control system really make the unit stand out, providing front-panel dedicated LED light-column FSD metering, a color screen and touch pad with left/right mouse buttons. Operation is considerably easier with its familiar-feel GUI display/controls than the usual push-encoder controls."

Occupying three RU and equipped with AES digital and analog inputs and outputs, the AP-1000 performs FM/AM and HD audio signal functions. The 31-band compressor/limiter provides individual thresholds, clipping and filters for each band. Wheatstone says the design allows for more detailed compression algorithms than six-band processors. Signal activity is shown via spectrum analysis graphs on an FFT flat-panel display, as well as on the matching PC software GUI. The panel has an Ethernet I/O connection, a headphone output jack and a USB mouse port. Shipping now.

Designers: Gary Snow and Wheatstone Engineering/Product Development
Price: \$13,000
Info: (252) 638-7000 or www.vorsis.com

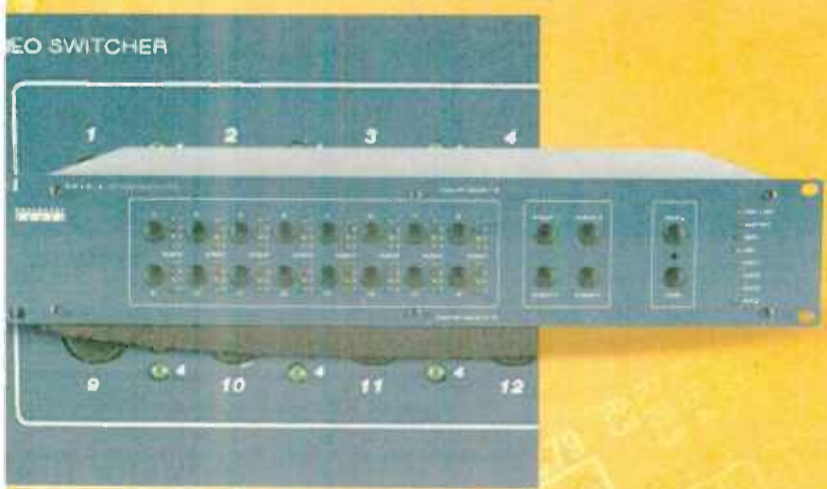


The Preferred Choice for Automation and Switching Solutions



SS 16.16

The SS 16.16 provides audio routing of 16 stereo inputs to 16 stereo outputs. This type of routing allows any one stereo input to be assigned to any/or all stereo outputs. The SS 16.16 may be controlled via front panel encoder controls and/or a multi-drop RS-232 serial port. A 40 x 4 LCD back lit display provides for input descriptions and macro setup. Additional features: headphone amplifier with front panel jack and level control, front panel monitor speaker with mute switch and level control, internal audio activity/silence sensor with a front panel ACT indicator and rear panel open collector, and a 16 GPIO port. FREE Windows NetSwitch remote control software, which supports Serial, USB and Ethernet with the optional ESS-1 Ethernet to serial converter, is available for download. Installation is simplified with plug-in euroblock screw terminals.



SS 16.4

The 16.4 provides matrix audio switching of 16 stereo inputs to 4 stereo plus 4 monaural outputs. Matrix switching allows any/or all inputs to be assigned to any/or all outputs. The SS 16.4 may be controlled via front panel switches, contact closures, 5-volt TTL/CMOS logic and/or the multi-drop RS-232 or RS-485 serial port along with 24 GPIO's and input expansion port. Installation is simplified with plug-in euroblock screw terminals.



ACS 8.2

The ACS 8.2 provides matrix audio switching of 8 stereo inputs to 2 stereo plus 2 mono outputs. Any input assigned to output one has fading capabilities. Matrix switching allows any/or all inputs to be assigned to any/or all outputs. The ACS 8.2 may be controlled via front panel switches, contact closures, 5-volt TTL/CMOS logic and/or the multi-drop RS-232 serial port along with 16 GPI's, eight relays, eight open collector outputs, and input expansion port. Installation is simplified with plug-in euroblock screw terminals.



SS 4.2

The SS 4.2 provides matrix audio switching of 4 stereo inputs to 2 stereo plus 2 mono outputs. Matrix switching allows any/or all inputs to be assigned to any/or all outputs. The SS 4.2 may be controlled via front panel switches, contact closures, 5-volt TTL/CMOS logic and/or the multi-drop RS-232 serial port along with 16 GPI's, eight GPO's, and input expansion port. Installation is simplified with plug-in euroblock screw terminals.



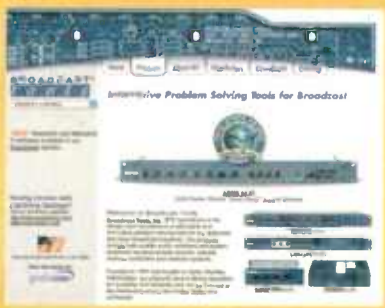
SS 8.2

The SS 8.2 provides crosspoint switching/routing with 8 stereo inputs, 2 stereo plus 2 mono outputs. 3 switching modes, I/O trimmers, internal silence sensor, selectable headphone and powered speaker level controls and outputs. LED VU meters, 16 GPI's, eight relays and eight open collector outputs. Multi-drop RS-232 and RS-485 serial ports, plug-in euroblock screw terminals and input expansion port.



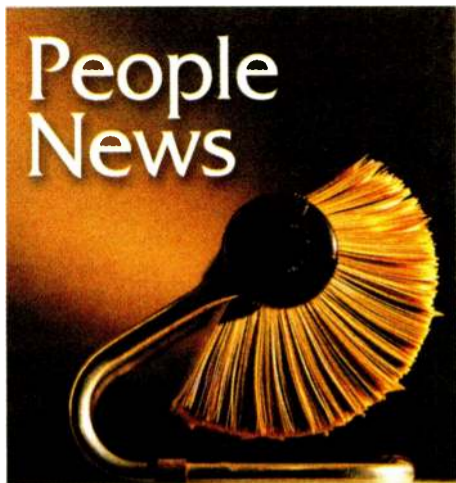
Ph: 360.854.9559 • Fax: 360.854.9479

support@broadcasttools.com • www.broadcasttools.com



Be sure to visit our website at www.broadcasttools.com for downloadable manuals, complete product information, and a list of dealers.





We're particularly interested in hearing news about radio engineers and 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

John Barrett was named director of engineering for Fisher Radio Seattle and KOMO(TV), replacing Kelly Alford, who was promoted to VP-CIO. Barrett previously served as broadcast engineer.



John Barrett

Charlie Osgood was appointed chief engineer for the Morris radio stations in Wenatchee, Wash. He had been...

WAY(FM) Media Group made changes to its engineering and technology department. **Morgan Grammer** was promoted to director of engineering and technology.



Morgan Grammer

Jim Turvaville

He had been western regional corporate engineer since 2004. ... **Jim Turvaville** vacated his post as southeast region corporate engineer, which he had held since 1999, and relocated to Colorado Springs, Colo., to assume the position of corporate expansion specialist.

Salem Communications named **Dennis Ciapura** senior VP for broadcast development, overseeing broadcast development and property management and well as the company's engineering and research departments. Prior to joining the company in 2004, he had been president of Performance Broadcasting, a consulting company that provides management and acquisition services to the broadcast industry.

The **Society of Broadcast Engineers** presented **John H. Battison, PE, CPBE**, with its Lifetime Achievement Award at the SBE's spring Membership Meeting, held during the NAB convention. Battison, known as "Member No. 1," is founder of the SBE, formed in 1963.



John H. Battison

Klotz Digital Audio Systems appointed **Larry Howard** vice president, sales for South, Central and North America. He brings 20 years of experience in the commercial electronics field. He has held positions at Universal Studios, Planet Hollywood International, Soundelux Showworks and Tannoy and Community Loudspeakers, where he is credited with developing several products for commercial and studio applications.

The **New York State Broadcasters Association** named the VP/GM of WNYW(TV) and WWOR(TV) **Lew Leone** as chairman, filling the vacancy of Dennis Lamme, who left the state to become regional VP and market manager for Clear Channel Radio in St. Louis.

Jim McKernan was named vice president/general manager for **KEZK(FM)**

and **KYKY(FM)**, CBS Radio's AC stations in St. Louis. He had been VP/GM of Emmis Television's CBS affiliate KMTV in Omaha, Neb.

Axia Audio hired **Marc Johnson** as its applications engineer. He had been chief engineer at WEGL(FM), a student-run station at Auburn College and Axia's first studio client.



Marc Johnson

Orban/CRL appointed 13-year company veteran **Kevin Clayborn** to North American sales manager, including the United States and Canada. He replaces Steve Gordon, who accepted a position with Audemat-Aztec. Clayborn joined Orban/CRL in 1993 as a customer service manager and has worked within the company in various positions over several years, including Orban customer service support engineer, and CRL and Avocet product manager.

Jeff Jaworski joined **World Christian Broadcasting** as an engineer at its facility in Anchorage, Alaska. He had been a student at Abilene Christian University in Texas.



Jeff Jaworski

Audio-Technica appointed **Greg Pinto** vice president, marketing. He had been managing business director for Beech Acres.

ABC Radio Networks appointed **Carey Davis** vice president, multicultural sales. His most recent position had been VP/GM at Spanish Broadcasting System.

Harris Corp. named **Robert K. Henry** executive vice president. He had been senior VP of Harris and president of the company's Government Communications Systems Division, one of Harris Corp.'s two government-related businesses; the other is the RF Communications Division. Henry continues to serve as president of GCSD, as well as business leader for the GCSD and RF divisions.

Bill Hess was appointed operations manager for Clear Channel Radio AM stations **WTEM, WTNT** and **WWRC**. He oversees programming operations for the company's AMs in Washington and continues in his role as PD for **WASH(FM)**. Prior to joining Clear Channel's Washington cluster three years ago, he spent five years as director of programming for three stations in Providence, R.I.

Westwood One says **Bob Meyers** was named executive vice president of digital media, data and video. In 2002, he served as general manager of CNBC Enterprises; in 2004 he added the title of SVP, prime-time programming. Most recently, he joined the board of DoubleClick Inc.

NAB Radio Board Chair **David Field** reappointed the Radio Board members listed below to another two-year term: **Susan Davenport Austin**, vice president of strategic planning and treasurer, Sheridan Broadcasting, and president, Sheridan Gospel Network; **Edward K. Christian**, president and CEO, Saga Communications; **Lew Dickey Jr.**, chairman, president and CEO, Cumulus Media; **David J. Field**, president and CEO, Entercom Communications; **Alfred C. Liggins III**, president and CEO, Radio One; **Mark P. Mays**, presi-

dent and CEO, Clear Channel Communications; **Susan K. Patrick**, executive vice president and co-owner, Legend Communications; and **Charles M. Warfield, Jr.**, president and COO, ICBC Broadcast Holdings. Terms for the reappointed board members begin at the June NAB Radio Board meeting.

Abby Goldstein was hired as program director for New Hampshire Public Radio, succeeding Michael Arnold, who left the station in October 2005 to take a position with Public Radio International. Goldstein had previously been program director at KERA(FM) in Dallas.

Broadcasters' Foundation Director **Richard A. Foreman**, president and chief executive officer of Richard A. Foreman Associates, was presented with the 2006 Broadcasters' Foundation Chairman's Award at the organization's annual breakfast during the NAB2006 in Las Vegas on April 26.



Richard A. Foreman

Lamar Marchese, founder and president/general manager of Nevada Public Radio since 1979, said he plans to retire in March 2007. A national search for a successor has been launched.

Dara Altman was named executive vice president of business and legal affairs for **XM Satellite Radio**. She had been executive vice president of business affairs for Discovery Communications Inc.

The **Network Radio Research Council** selected **Dr. Tom Evans**, senior vice president of research for ABC Radio Networks as chair for a one-year term. **Charles Steinhauer**, senior vice president of research and operations for Dial Communications-Global Media, was selected as vice chair.

Richard Rice joined **Broadcast Electronics** as a regional sales manager responsible for the company's AudioVault and The Radio Experience digital media product lines. He previously served as director of business development for IT firm Midwest Information Technology Group.

RW published a story in Feb. 1, 2004 about a young broadcaster, Brian "Dee" DeNicola, who was 18 at the time and working for Salem stations **WMCA(AM)** and **WWDJ(AM)** as a control operator and announcer. Today, DeNicola is in his third year at Rutgers University. He works at **WABC(AM)** in New York and at Sirius Satellite Radio as co-producer of Cousin Brucie Morrow's live oldies show.



COOL STUFF 2006 AWARD WINNER

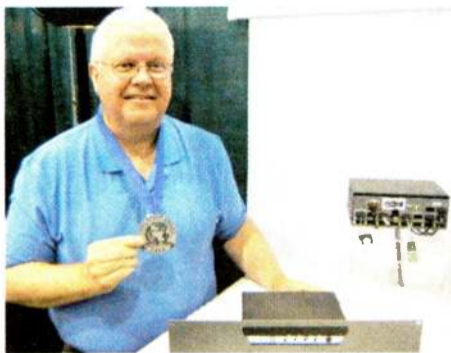


Product: easi-8 Remote Monitoring and Control System
Company: WIT Inc.

"A fine first entry from a new supplier on the radio scene," the Cool Stuff judges found.

Radio World introduced you to WIT in an interview with **Bill Gillman**, shown here, last year. The company's three partners are former Gentner Communications employees based in Utah.

The easi-8 monitoring and control system offers eight true differential inputs that accept 0 to 160 volts AC or DC and can be designated either metering or status. A 16-bit analog-to-digital converter coupled with five input ranges allows inputs as small as 50 millivolts to yield 12 bits of precision. Eight relay outputs offer both normally open and normally closed contacts. Remote monitoring is accomplished with a Web browser from anywhere on the network. Alarm notification is via e-mail, with an internal clock offering logging and time-of-day functionality. Multiple units can be stacked to achieve any channel count. Now shipping.



Designers: Chris Clark, software; Bill Gillman, concept and hardware.
Price: \$1,295
Info: (801) 326-1300 or www.easi-8.com

got connectors? cables & connectors racks tools problem solvers test gear & much more
www.systemsstore.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

AM Ground Systems

Reliable, On-time Installation
Quality Workmanship
Ground System Evaluation
and Repair
www.amgroundsystems.com
1-877-766-2999

WANT TO SELL

425 Foot Stainless 24 in Face Tower with Beacon lights. 400 feet 3 1/8" Coaxial Andrews Cable and 3 Bay Jampro Antenna. 140 feet of tower on Ground, Antenna on 100.5 mHz (needs work). Make offer - Carl Haynes 601-573-2445

PROMOTE YOUR BUSINESS!

ADVERTISE!

For more information, call Claudia Van Veen at 703.998.7600, ext. 154.

TOWER FOR SALE

455' guyed Pirod 3' face. Factory augmented twice since 1991 erection. Supported cantilevered 40' pylon/6-Bay FM Antenna, three cell sites, second FM Station and six two-ways. Complete with all lighting, controller, all hardware. Had 8 Guy Points, 300' radius, 60' nupla rods, torque arms, safety climb. Dismantled and stored in Corbin City, NJ which is about 15 miles SW of Atlantic City. As is. Best offer. Len Stevens, mornings and evenings: 609-714-0596, afternoons: 856-786-7200 ext.11, Cell: 609-304-2240, len@towereconomics.com

Bird Thurline inline-watt meter - 0-125 MHz, carries 50,000 watts forward - 5,000 watts reverse. \$2,000 - weighs about 50 lbs - alleo21@yahoo.com or (770)-300-9287 8-6pm

Used QEI FMQ 10000 in fair condition. Unit has bad IPA and combiner and can only make 60% power. Will let go for only \$6500.00 and buyer is responsible for removal and shipping. Transmitter was built in March of 1994. Please call Mike at 704-523-5555 - but better to e-mail Mike at mralej@bbradio.org for pictures and information.

WANT TO SELL

Twenty-five 20 foot sections Rohn 65G (500 feet) Call Ken Diebel 318-728-2370

3 1/8" And 1 5/8" Coaxial Relays, Continental Communications 314-664-4497, Contcomm@Sbcglobal.net

AUDIO PROCESSING (INCLUDES ON-AIR)

WANT TO SELL

Motorola C-Quam exciter - AM Stereo Exciter - Make offer - Carl Haynes 601-573-2445

Inovonics AM 235 - almost new AM Broadcast Audio Processor Compression - AGC - EQ. Loud and clean and easy to use. Was \$1800 new, will sacrifice for \$750.00 Call Chip 319-850-5277

AUTOMATION EQUIPMENT

WANT TO SELL

3 Station Audio Vault system, vintage 2001 - Two AV-2 Servers. 3 On Air Workstation, 3 Production Studios. All hardware supplied by BE and is rack mount. Three Broadcast Tools 8x2 Switcher. 2 Bext UPS to float all systems. System includes AV Sat. NewsBoss and Cybex Extenders. Best offer. Email Dirk, dnaon@nassaubroadcasting.com

DIGITAL AUTOMATION SYSTEM FOR HD RADIO. Internet, Podcast, or terrestrial radio stations. Smarts Linux-based system less than two years old. Can run up to 4 stations independently using satellite automation, live-assist, voice-tracking, music on hard drive, or all of the above. Includes input switchers, all documentation, rack-mountable deluxe cases, and peripherals. Excellent condition-ready to ship or deliver. Best offer. Contact Mike@radioworksforme.com, or call 812-236-2657.

Seven-foot equipment racks. Various manufacturers. Some with accessories. All used in good condition. Five available. New ones average \$750 each. We're selling at one hundred dollars each plus shipping/freight. Located in Palm Springs California. Any questions, please call Bob. 760-320-4550 or bobrivkin@dc.rr.com

Three RDS Rack-Mount Phantom Automation Systems. Each system records and plays in the following formats: MPEG, CDI-C 4:1, ADPCM 4:1, ADPCM 1 4:1, PCM 16-bit (WAV), Each system includes keyboard, monitor, and Broadcast Tools SS8.2 dual stereo crosspoint switcher. \$2500 or best offer per system. Contact Greg Garrett @ (864) 414-4140.

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. Visit digitaldevelopment.net and click on RADIO AUTOMATION for screen shots. The software is free, there is a small duplication fee. For more info call 406.665.1832.

WANT TO BUY

25hz sensor for Christian radio station WPEE in Michigan. bajack004@yahoo.com

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

Autogram Mini-Max 8A, 8 Channel Broadcast Console. Less than 1 Yr. Near Mint Condition. Power Supply and Manual Included. Asking 2,200 OBO. email for pictures, questions, offers. ccarpenter@andersonctc.k12.sc.us

WANT TO BUY

Sparta A-20, A-20-2, AS-30, or A-15 Mid 1970s "lift-top" Sparta Grey and Silver console. Should be in working condition and complete. Prefer S/N 191 through 303. Prefer you send me information on your unit and your price to my email account- Duane Williams, djwillia@libby.org but you can also call me at 406-293-6234.

Ampex AM-10 mixer in operating condition. Bill Cook, 719-687-6357.

LIMITERS/AUDIO PROCESSING

WANT TO SELL

Airtools 6000, Analog Profanity Delay \$1000. Call David Hood 317-684-8128

Symetrix SX 208 Stereo Compressor/Limiter - \$100 - Call John Felz, 310-503-0444

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

BORON BLOWERS AND FLAME BLOWERS, new & rebuilt for Ecom, Harris, CCA, CSI, McMartin, Goodrich Ent. 11435 Manderson St. Omaha, NE 68164 402 493 1886 FAX 402 493 6821

WANT TO BUY

Want to buy 1960/70 vintage Robert Hall Productions LPs of Production music/news sounders. Call Dan toll free 1-866-568-8780.

25hz sensor for Christian radio station WPEE in Michigan. bajack004@yahoo.com

MONITORS

WANT TO SELL

QEI 691-FM Modulation monitor in working condition installed in 1987. \$215.00 "as is" includes shipping. For a picture e-mail mralej@bbradio.org

REMOTE & MICROWAVE

WANT TO SELL

Adtran ISU 128 Kbps - ISDN units, new condition - Make offer - Carl Haynes 601-573-2445

Broadcast Tools DC -8A Dial up 8-Channel Remote Control \$250 - Carl Haynes 601-573-2445

WE RENT FOR LESS

Blueboxes FM Exciters
Zephyrs FM Power Amps
POTS Codecs STL's
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"

WANT TO BUY

Marti Rpu Equipment - Continental Communications. 314-664-4497, Contcomm@Sbcglobal.net

RF SUPPORT

WANT TO BUY

Super Searcher Watson RF finder and counter - 1 set and Watson Digi-Hunter - 1 set - Please send your quoted price and shipping costs to Ms. Jancy at optoelec@singnet.com.sg or fax to: 65-62-933-3180

SATELLITE EQUIPMENT

WANT TO SELL

Satellite C/KU Reception Parts - www.davefant.com 479-471-0751

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

STUDIO-

TRANSMITTER LINKS (STL) AND RPU

WANT TO SELL

Moseley SL 9003T1 used for 10 months. Still under warranty. Like new. Two channel 2x2 \$7800 new - \$6800 takes it. Call Jerry Evans 775-884-8000.

Moseley PCL 6010 / PCL 6020 950 MHZ composite STL Transmitter and receiver combo \$4000. Call David Hood 317-684-8128

TAPES/CARTS/ REELS/CDs

WANT TO SELL

Ampex 600, Portable Tube-Mono-7.5 lps Recorder-Player in Case w/ Handle \$250 + shipping 50 lbs. Call Ken Sands 313-494-6406

Ampex Reel-to-Reel 600 Series SP Speaker Amplifier Combo. Matches 600 Series Recorder in Case w/ Handle. \$250 + shipping 40 lbs. Call Ken Sands 313-494-6406

WANT TO BUY

Large or small collections of 16" transcriptions or 12" transcriptions, not commercial LPs. Bill Cook, 719-687-6357.

Radio World
Equipment Exchange

TRANSMITTERS/ EXCITERS/ TRANSLATORS

WANT TO SELL

Gates FM 2043. 20 KW FM Transmitter with BE FX-30 Exciter. Now on 93.1 MHz \$4000. Call David Hood 317-684-8128

Elcom Bauer 2.5 Kw Transmitter with new frequency agile Bext exciter. Jampro 2 Bay Antenna available too. You pick up. \$4500. Call Jerry Evans 775-884-8000

1994 CCA 5000G Transmitter. Presently on Air. Availavle 6/1/06 \$7500. Call Chuck Tarkenton. 770-412-8700

WANT TO BUY

AM BROADCAST TRANSMITTERS. Prefer solid-state 500W to 2500W. Contact: Vinton 805-379-2743

Wegener DR-96, Satellite Receivers. Good condition. Make offer - Carl Haynes 601-573-2445

Starguide II satellite receiver, good condition. Make offer - Carl Haynes 601-573-2445

Wegener DR-96 Satellite Receiver - Make offer - Call Ken Diebel 318-728-2370

SOFTWARE/ DATABASES

WANT TO SELL

Now watch HDTV on desktop PC! This card will also download from PC, it scans all off-air digital. sing. \$50 includes shipping in the USA 770-300-9287- ask for Alleo or alleo21@yahoo.com

STATIONS

WANT TO SELL

OWN YOUR OWN!! FM Duopoly within 200 miles of Atlanta, Owner retiring!! New Fulltime AM sleeper with real estate and limited competition...great terms! RETIRE DOWN SOUTH-CALL DAVE HEDRICK-256-613-2630

AM., 1KW, full-time. Fantastic NY State resort. Active or inactive investors. \$25,000 minimum 478-741-1710 or wrecktech@yahoo.com

WANT TO BUY

AM BROADCAST TRANSMITTERS. Prefer solid-state 500W to 2500W. Contact Vinton - 805-379-2743.

Am Phasors, Phasor Parts, Phase Monitors, Rf Switches. An Transmitters- Continental Communications. 314-664-4497, contcomm@Sbcglobal.net

Advertise!

Call Claudia at 703-998-7600 ext. 154

STUDIO ACCESSORIES/ SUPPORT

WANT TO SELL

Super relay utility interlace \$30.00 "as is" includes shipping E-mail mralej@bbradio.org for a picture

Three wand and six bulk tape demagnetizers. \$12.00 each "as is" includes shipping. Email mralej@bbradio.org for a picture

Consultants

**Consulting Communications Engineers
EMC Test Lab**

- FCC Applications and Field Engineering
- Frequency Searches and Coordination
- AM-FM-CAIV-HHS-IPTV
- 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 AFCE

EVANS ASSOCIATES Consulting Communications Engineers

FCC Applications • Design • Field Engineering • Tower Detuning Upgrade & Relocation Studies • AM Directional Array Tuning & Proof

EXPERTS IN
TV • DTV Transition • FM • Directional Antennas • RF Exposure

210 S. Main St., Thiensville, WI 53092. (262) 242-6000, FAX (262) 242-6045
http://www.evansassoc.com Member AFCCE

COMMUNICATIONS TECHNOLOGIES, INC.

- 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) 905-0077
Marlton, NJ 08053 Fax: (856) 905-5124
www.commtechrf.com

JEM Serving Broadcasters Since 1948

9049 Shady Grove Court
Sutherland, MO 20671
(301) 921-0771
Fax: (301) 946-8727
mulvaney@mulvaney.com

Doug Vernier Telecommunication Consultants

Broadcast Engineering Consulting
AM/FM/TV/LPTV/DTV
Custom mapping service
Frequency searches
Propagation prediction
FCC application preparation

V-Soft Software for your PC
(800) 743-3684
www.v-soft.com

Scientific Broadcast Technical Consultants Since 1970

FM Engineering - FCC Applications
Upgrades, Frequency Search

Coverage Maps \$69
812-738-3482
kreising@otherside.com

The Coverage Map Store

REALcoverage.com

High Performance Engineering for Maximum Coverage

GRAHAM BROCK, INC. BROADCAST TECHNICAL CONSULTANTS

Full Service From Allocation to Operation AM/FM/TV/ANX Services
Field Work, Antenna and Facilities Design

Over 45 years engineering and consulting experience
912-638-8028
202-393-5133
www.grahambrock.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 Demorest Sq., #E, Demorest GA 30535-2725

R. MORGAN BURROW, P.E. & ASSOCIATES, P.C. ALLOCATION STUDIES

FIELD WORK A SPECIALTY

- AM, FM, TV, LPTV, DTV
- Interference studies
- Construction permit and license engineering
- CAIV, HHS, IPTV
- RF safety evaluation
- ATC, local, federal

ELECTROACOUSTICS OSHA measurements
304-258-7921 Fax 304-258-7927

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.

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: lmk@surcom.com web: www.surcom.com

MÉXICO INGENIERIA EN RADIODIFUSION Y TELECOMUNICACIONES

+52-81-83-583027 FAX: +52-81-83-581172
E-mail: etamezescamilla@axtel.net, etamez@ATT.net.mx

Empresa dedicada a: Venta de equipo. Asesoría y Gestoría en A.M., F.M., T.V. y MMDS. Elaboramos Memorias, Peritajes, Pruebas de Comportamiento, Características Técnicas, Planos, Proyectos, Instalaciones, Homologaciones y trámite para el NOM.

Are You a Distributor?

ADVERTISE HERE!
Space is available
Call 703-998-7600

ACTION-GRAM

EQUIPMENT LISTINGS

Radio World's Broadcast Equipment Exchange provides a FREE listing service for radio stations only. All other end users will be charged. This FREE service does not apply to Employment Help Wanted ads or Stations For Sale ads. These are published on a paid basis only. Send your listings to us by filling out the form below. Please be aware that it takes one month for listings to appear. The listings run for two consecutive issues and must be resubmitted in order to run again. Thank you.

Are you currently a subscriber to Radio World?
 Yes No

Please print and include all information: Signature _____ Date _____

Contact Name _____
Title _____
Company/Station _____
Address _____
City/State _____
Zip Code _____
Telephone _____

Brokers, dealers, manufacturers and other organizations who are not legitimate end users can participate in the Broadcast Equipment Exchange on a paid basis. Line ad listings & display advertising are available on a per word or per inch basis.

WTS WTB Category: _____ Model: _____
Make: _____
Brief Description: _____
Price: _____

WTS WTB Category: _____ Model: _____
Make: _____
Brief Description: _____
Price: _____

*Closing for listings is every other Friday for the next month's issue. All listings are run for 2 issues unless pressed for space or otherwise notified by listee.

Broadcast Equipment Exchange • PO BOX 1214, Falls Church, VA 22041
Tel: 703-998-7600, ext. 154 • Fax: 703-671-7409 • E-mail: cvanveen@lmaspub.com

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, 2006

	1x	6x	13x	26x
1-9 col inch (per inch)	\$110	105	100	95
10-19 col inch (per inch)	\$95	85	75	65
Distributor Directory	\$135	130	125	120
Professional Card	\$105	100	95	90
Station/Studio Services	\$200			
Classified Line Ad	\$2/word			
Blind Box Ad	\$16 additional			

Call Claudia Van Veen, at 703-998-7600 ext. 154, to reserve space in the next issue. Use your credit card to pay, we now accept VISA, MASTERCARD and American Express.

www.rwonline.com



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



TRANSMITTERS/ EXCITERS/ TRANSLATORS WTS (Cont.)

TRANSCOM CORPORATION
Serving the Broadcast Industry Since 1978
Transmitters and Broadcast Equipment for Radio & Television

Used FM Transmitters

1.5 KW	1983	BE FM 1.5A
2.5 KW	1984	Continental 814R-1
3.5 KW	1986	Harris HT 3.5
6 KW	1995	Henry 6000D
7+IBOC	2005	Harris Z16 HD
10 KW	1988	BE FM10A
10 KW	2001	Henry 10,000D-95
20 KW	1985	Harris FM20K
25 KW	1982	Harris FM25K
25 KW	1980	CSI-T-25-FA (Amp Only)
30 KW	1986	BE FM30A
50 KW	1982	Harris Combiner w/auto exciter-transmitter switcher

Used AM Transmitters

1 KW	1983	Harris MW1A Solid State
5 KW	1985	Continental 315R1
5 KW	1982	Harris MW5A
5 KW	1987	Harris MW5B
10 KW	1982	Harris MW10A
10 KW	1992	Nautel ND10 Solid State
50 KW	1985	Continental 317 C2

Exciters
Used Continental 802A Exciter
Used Harris Digit CD (2nd generation)
New 20 w & 30W Synthesized exciters

New TV Transmitters- Analog and Digital
OMB & Technologix
VHF and UHF TV Antennas
(10 W to 10 KW) TV STL

Used TV Transmitters
5 KW UHF Harris Diamond CD Solid State
55 KW UHF GE TT59B, CH 25
55 KW UHF RCA TTU-55B, CH 25

Used Misc. Equipment
Bird RF Thru-line Wattmeter, 50S
Coaxial Switch, 4 Port, 1 5/8"
Denon 720R cassette NEW
Dielectric 4 Port, 3-1/8" Coaxial Switch
Potomac Phase Monitor 1901 Digital 2 Twr
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!

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"

BESCO World Leader
INTERNACIONAL 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 Malary, National/Int'l Sales
at **321-960-4001**

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
In Our 33rd Year!

To advertise e-mail cvanveen@imaspub.com

TUBES & COMPONENTS

RF PARTS CO.
From Milliwatts to Kilowatts

EIMAC • TAYLOR • ECONCO • SVETLANA
Motorola • Toshiba • SGS • Thomson & Mitsubishi Semiconductors

Se Habla Español **800-737-2787** We Export
760-744-0700 Email: rpf@rfparts.com Web: www.rfparts.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

Eimac **Pro-Tek**
SVETLANA **OMB** **EEV**
USA DISTRIBUTOR

BEST PRICES To Order: **FROM OUR STOCK**
1-800-881-2374
Outside U.S. (352) 688-2374
Se Habla Español

3089 Deltona Blvd. 352-688-2374
Spring Hill, FL 34609 BEST SERVICE Fax 352-683-9595
Website: www.dandcelectronics.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.goodrichentprices.com

POWER EIMAC YOU CAN TRUST

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

TURNTABLES

WANT TO SELL
Two Stanton Model 310 turntable pre-amps. \$30 each. E-mail mrale@bbnradio.org for price.

WORKSTATIONS

WANT TO SELL
Digilink II - Arrakis digital audio workstation: software, keyboard, color monitor \$2000 + shipping, call Craig Mon-Fri 9A-5PM CDT 432-620-9393

Digilink III - Arrakis Systems Operations Manual - \$100, call Craig Mon-Fri 9A-5PM CDT 432-620-9393

EMPLOYMENT

HELP WANTED

SEARCH REOPENED! -Rare Opening at Greater Media - Greater Media, a privately held company noted for technical excellence and long term employee loyalty and stability, has two rare openings for station level engineers within its New Jersey station cluster. Candidates should be well versed in all facets of radio station technical operation and have 3-5 years of experience in station related engineering. An associates or bachelors degree in a technical discipline will be given consideration in lieu of a portion of the experience requirement. SBE certification and/or FCC licensure is highly desirable. We are looking for very talented technical people and compensation is consistent with that goal. Full benefits. Please e-mail your resume to Keith Smeal, director of technical operations at engineering@greatermedianj.com. Greater Media is an equal opportunity employer and encourages female and minority applicants to apply for these positions.

TRANSMITTER ENGINEERING POSITION - Ft Myers Broadcasting Co. has an opening in its Engineering Department for a Transmitter Engineer. This position is primarily responsible for overseeing several radio (AM & FM) transmitter sites, as well as serving as the backup Transmitter Engineer for WINK-TV's television transmission facilities. Knowledge of radio studio equipment a must. Knowledge of television studio equipment helpful. Send resume to: Keith Stuhlmann, Director Of Engineering, Ft Myers Broadcasting Co. 2824 Palm Beach Blvd. Ft Myers, FL. 33916 or e-mail to: keith.stuhlmann@winktv.com



Experienced in the Broadcasting field and currently looking for a job in radio. ABS graduate and a degree in Broadcast Communications. Chris 405-812-0156

Radio World Equipment Exchange

What happens when a talented, likeable, creative person and American Broadcasting School collide? You get a person destined to be in the world of radio! Karlis 765-457-1955

Looking for more engineering work and voice tracking as well? 25 years in the business. Dade Moore www.DADE.CC, 281-448-6912

Creative, down-home, funny and easy going personality who loves to talk about anything... especially sports. Audio/Music experience, will travel. Justin Bryce (469) 644-7647 p1jbryce@mac.com

Dependable, Creative, Committed! STRONG NEWS BACKGROUND. Pleasant voice, ARTICULATE. Happy persona, versatile, accepts change well. Co-host, news, weather, or sports -Juliette Dobbs-Jewellouis@sbcglobal.net 469-222-5949

Enthusiastic, energetic, and reliable Veteran. Great personality, relates to audience. Good prep/writing skills. "The Bossman In The Bighouse" will relocate. Darrell 817-731-3468 thebossman06@yahoo.com

Friendly and outgoing persona, dependable, plus fluently bilingual in English and Spanish. Good digital, and boards. Extremely creative copy/writing skills. Nely Chavez (469) 951-8426 nely0417@sbcglobal.net

Laid back, funny guy with a pyrotechnics license! Good work ethic, lots of theater/production, creative copy/digital, audio and technical experience too! Jake Farmer 214-535-8006 jakebundy@yahoo.com

Mind for Radio. Interest lay in every aspect of the industry. Prepared to make a serious impression. Will travel, Gypsy by heart. Justin Grigson 214-228-5590

Talented news/commercial writer, with production and on-air skills. Hard working and dedicated with great Board-op/Producer experience, accustomed to Dallas syndicated environment. Erika Hawkins 972-939-2206. ekabit@aol.com

Very reliable, energetic, male voice who takes direction well. Have 3 years of radio/promotional experience. Wants on-air/behind scenes. Blake Kellum worshipper3@sbcglobal.net or 817-223-9409

Need a good sports talk show host? I'm looking for a spot in the surrounding eastern KY area - willing to relocate as well. Experience with call-in shows for all sports including NASCAR even high school sports! Tape available. Call Jim Ward at 703-371-5416 or nascar43324@yahoo.com

Friendly, Eager to work, ISCEIT Certified, Commercial FCC License with radar, NABER Certified two-way radio technician, amateur radio extra, seeks CE, asst. CE F/T, P/T Contract, AM/FM, Cable, TV. Contact: Mitchell Rakoff, mitchellrakoff@yahoo.com 718-969-5224

Naturally conversational and exuberant guy, with roots in Texas. On-air/production skills. Let me bring energy and fun to your station! Navarro Fisher 214-912-9638 navarrofisher@yahoo.com

Not a breathy or whiny female! Pleasant voice and can apply it to any task. Great with directions, industrious, and energetic. Aminah El-Amin 214-418-7465 spring1204@aol.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
43	Acorn	www.acornrf.com
29	AEQ, SA	www.aeqbroadcast.com
25	APT	www.aptx.com
22	Armstrong Transmitter Co.	www.armstrongtx.com
3	ATI	www.atiaudio.com
43	Audion Labs	www.audionlabs.com
9	Axia - A Telos Company	www.axiaaudio.com
13	Axia - A Telos Company	www.axiaaudio.com
43	Bext, Inc	www.bext.com
19	Broadcast Electronics	www.bdcast.com
47	Broadcast Tools, Inc	www.broadcasttools.com
23	BSW	www.bswusa.com
43	Circuit Werkes	www.circuitwerkes.com
7	Comrex Corporation	www.comrex.com
41	dMarc/Scott Studios	www.dmarc.net
4	Electronics Research, Inc.	www.eriinc.com
39	ESE	www.es-web.com
44	Gorman Redlich Mfg	www.gorman-redlich.com
40	Grace Broadcast Sales	www.gracebroadcast.com
1	Harris Corporation	www.broadcast.harris.com
45	Henry Engineering	www.henryeng.com
37	HHB Communications U.S.	www.hhbusa.com
33	Holophone	www.holophone.com
34	Inovonics Inc	www.inovon.com
16	LBA Technology, Inc.	www.lbagroup.com
6	Logitek	www.logitekaudio.com
31	Moseley Associates	www.moseleysb.com
26	Mouser Electronics	www.mouser.com
17	Omnia - A Telos Company	www.omniaaudio.com
35	Orban/CRL	www.orban.com
5	Radio Systems Inc	www.radiosystems.com
43	Raduga USA	www.raduga.net
20	RF Specialties	www.rfspecialties.com
40	RTI	www.timeandtemp.net
38	S.C.M.S.	www.scmsinc.com
8	Sabre Communications	www.sabrecom.com
27	Shively Labs	www.shively.com
30	Sine Systems	www.sinesystems.com
15	Telos Systems - TLS Corp.	www.telos-systems.com
11	Tieline Technology	www.tieline.com
12	ViaRadio Corp	www.viaradio.com
55	Vorsis	www.vorsis.com
2	Wheatstone Corporation	www.wheatstone.com
56	Wheatstone Corporation	www.wheatstone.com

GUEST COMMENTARY

Was Fessenden's 1906 Broadcast Accidental?

This December Brings a Big Radio Anniversary. But Why Did the Inventor Miss the Point?

by Edward F. Perry Jr.

One-hundred-and-three years ago, Professor Reginald Audrey Fessenden, an educator, engineer and inventor, began construction of a radio station in Brant Rock, Mass. He designed that station to transmit voice communications and arranged to have special receivers installed on a number of ships.

Then, on Christmas Eve, 1906, he played phonograph records and performed on his violin in front of a microphone. The audience at sea was astonished. Fessenden was delighted. He had demonstrated the feasibility of a wireless telephone.

Fessenden never pursued the concept of broadcasting, and at the time probably never envisioned there could ever be such a thing.

Serendipity

Most historians view the event we celebrate this year — the first broadcast of words and music actually received by a mass audience — as a mere spur in the history of communications technology. Today in 2006, it seems automatic that the technical ability to transmit sound without wires must certainly lead to the practice we know as “broadcasting.”

But Fessenden did not found a broadcasting industry. His experiments with wireless voice communication did not even seem to stir imaginations in that direction. And despite Helen Fessenden's diary entry about her husband's “broadcast,” there is the possibility that Fessenden did not mean to broadcast at all; that the multiplicity of receivers he had installed in ships were there, not to create an audience, but to ensure he could document at least one reception report.

It fell to Lee De Forest, one of Fessenden's competitors, to demonstrate nearly a decade later that radio was, in fact, a magic carpet that would bring the world into everyone's home.

Why did Fessenden miss the point so completely? Probably it was the scientific mindset at the time. The telephone was

still a new device; a tidy little miracle that transformed Bell and his engineers into legends.

Communications was a point-to-point business and Fessenden's financiers naively set their sights on Bell's customers. But it was also the tenor of the times.

There are people alive today who remember the early years of the 20th century. Ask about mass communication at that time and they will tell you about newspapers. The concept of instantaneous broadcasting simply did not exist then.

The idea that one could sit at home and leisurely peruse that world of songs, stories and news spewed from a speaker

Most historians view the event we celebrate this year as a mere spur in the history of communications technology.

on the table was unknown. In fact, in 1906, the concept of leisure existed in only a limited number of homes.

So in this centennial year we honor Fessenden and his first broadcast because of what he did, not because he became rich by doing it. The first astronaut on a distant planet may leave it without ever mining the gold. He may never even see the glimmer. And though others may find the fortunes, he will be secure in history as the one who went there first.

History, at least the history of broadcasting, must certainly remember Professor Reginald Aubrey Fessenden. On Christmas Eve, 1906, he went there first. And proved it could be done.

The author is the owner of WATD(FM) in Marshfield, Mass.

Corrections

The May 24 issue, page 46, contained an erroneous caption. The photo, reprinted here, shows Lincoln Zimmanck of Audio Intervisual Design Inc. working in the Plus24 booth.

Also in that issue, a story about electronic audience measurement stated Arbitron will begin using data from cellphone-only households in 2008. The company says it is including cellphone-only households now in the Houston PPM trials and plans to include cell households in paper diaries in 2008.



Radio World
The Newspaper for Radio Managers and Engineers

Our readers have something to say

“For my Introduction to Radio class, your articles underscore or solidify FCC rules, research or tech advances that haven't been covered in our textbook.”

Burt Burdeen
Adjunct Faculty
Columbia College
Chicago



Shown: Heil CLASSIC PRO offers a retro look of the '40s with the dynamic sound of today.

GUEST COMMENTARY

Lessons From Hurricane Katrina

Broadcasters' Foundation Says the Storm Brought Out the Character of Broadcasters

by Gordon Hastings

"It was not just about the money. It was knowing that someone really cared."

These comments were central to nearly every conversation between the Broadcasters' Foundation and the more than 275 Hurricane Katrina victims we helped in 2005.

The Broadcasters' Foundation Hurricane Katrina relief effort was set in motion immediately following director Richard A. Foreman's establishment of a \$50,000 matching grant to help fellow broadcasters and their families impacted by the storm. Colleagues who cared deeply matched his grant within 48 hours. Supplemented by additional resources from the foundation, more than \$275,000 was expedited to broadcasters in Louisiana and Mississippi by the end of 2005.

We learned a great deal about the character of those individuals, who are the heart and soul of radio and television stations. We became closely acquainted with hard-working professional men and women, who cared about their commitment to serving their local communities despite having suffered enormous personal loss.

Many continued to find their way to their respective stations when they no longer had a home themselves. Others stayed at the broadcast facilities for days keeping information flowing to the public. They were grateful for our assistance and heartened with the knowledge that colleagues in far away places embraced them.

Courage under fire

The personal courage of these individuals is remarkable. While some were forced to leave the Gulf Coast in the interest of their children and families, many more stayed to see their stations back on the air, finding themselves back at work full-time and beginning to rebuild their lives.

It takes a family from many different backgrounds and with a wide variety of skills to compliment a broadcast station. Because of Hurricane Katrina, we met people holding nearly every broadcast job description who cared about each other, their stations and their communities. It was a valuable reminder that at the heart of our industry is a special group of men and women who love their jobs, neighborhoods, cities and towns, and truly believe that our profession is of a higher calling.

Hurricane Katrina aid in 2005 represented only part of the benevolent outreach by the Broadcasters' Foundation. In addition to the \$275,000 in Katrina grants, our work throughout the year continued by providing over \$300,000 in monthly grants to colleagues who are in acute need.

The Broadcasters' Foundation's average monthly grant to an individual or family is now \$1,100. That may not seem like a great deal to a person earning five figures, but for a person dependent only on Social Security, and who also is ill

and trying to pay medical deductibles, the money can be lifesaving. In 2006, our grants will exceed \$500,000. To put this in perspective, 10 years ago the annual grants total was only \$13,000.

The foundation's ability to grow its outreach has resulted from an outpouring



Norm Feuer of Clear Channel Radio Jacksonville, Fla., wins Champion Angler Award in the 2006 Broadcasters' Foundation Offshore Challenge. From left: Juliette Sargent, Feuer and Michelle Jones.

of support from throughout the radio and television industry. Broadcasters have come to understand the tremendous need that is fulfilled by the foundation's work. We have become the vehicle by which we can help our colleagues in a number of different ways.

During 2005, \$578,000 was contributed to the Broadcasters' Foundation Endowment Fund and to the Angel Initiative. The endowment is the means by which individuals contribute to the foundation on an annual basis. The Angel Initiative is an annual corporate giving program.

Contributors should know that even with the extraordinary demands placed upon us by Katrina we were able, through contributions and events, to replace endowment resources so they in fact exceed the amount we began with in January 2005. That fulfills the endowment fund's goal of always making sure we have the resources so no future call for help will go unanswered.

Fun for a good cause

The Broadcasters' Foundation annual events play a vital role in our outreach. Net income from the Golden Mike Award, the NAB Charity Golf Tournament and the annual Celebrity Golf Tournament exceed the operating expenses of the foundation. Therefore, we are able to cover all monthly grants, in addition to the foundation's total annual overhead, and still transfer operating surplus to the endowment fund at the end of the year.

A major reason for this extraordinary

accomplishment is that the foundation operates with extremely low overhead, which includes a staff of only two full-time employees, Director of Administration and Finance Eleanor Matera and myself. Our modest office space on the second floor of a 70-year-old building in Greenwich, Conn., works just fine.

Our signature annual event is the Golden Mike Award. This year we honored Jeff Smulyan, chair of Emmis

ment has been held annually at the NAB convention in Las Vegas for the past 11 years. The event would not be possible without the wonderful collaboration and support we receive from the NAB, historically from Eddie Fritts and now from the NAB's new President and CEO David Rehr.

The 2006 Broadcasters' Foundation Celebrity Golf Tournament, now in its seventh year, will be held on Monday, Sept. 25, 2006 at the prestigious Stanwich Club in Greenwich, Conn. The tournament sold out for the fifth year in a row. This event was conceptualized by Broadcasters' Foundation Director Scott Knight, and has become the industry's annual golfing event, raising more than \$300,000 annually in support of our mission.

The money we raise from our events is important, but equally beneficial to the foundation is the visibility among the many new people we reach through these functions. As Scott Knight has said many times, "There is nothing wrong with people having a good time in support of a charity that is near and dear to their hearts." I think Scott has it exactly right.

Following the creative tradition of the NAB Golf Tournament and the Celebrity Golf Tournament, foundation director Skip Finley has established the Broadcasters' Foundation Offshore Challenge. Yes, a fishing tournament to raise money for our mission.

The second annual Offshore Challenge was held May 19-21 in Nassau, Bahamas. Fifty-five broadcasters aboard 13 charter boats participated in the tournament, which raised \$45,000. Foundation Chair Phil Lombardo is following in the great tradition set by Chair Emeritus Ed McLaughlin and former Chairs Ward Quaal and Jim Delmonico in providing energized leadership for the board of directors.

The success of any philanthropic organization rests with its directors, and we think the Broadcasters' Foundation board has attracted a fabulous cross-section of the radio and television industry.

I have come to learn that giving back lifts the spirit of the benefactor and well as that of the beneficiary. How can you help? Embrace the spirit of giving back. As Ed McLaughlin has said so many times with his signature sign-off, "It will feel good."

Gordon Hastings is president of the Broadcasters' Foundation. For more information visit www.broadcastersfoundation.com or call Gordon Hastings at (203) 862-8577.

Communications. The dinner, held at The Waldorf Astoria in New York, set a new net revenue record. The outpouring of personal warmth for Jeff was exhilarating. The contribution of time and talent that made the evening so special was enormous.

Dick Ferguson, retired executive vice president of Cox Radio, set a new standard by personally coordinating and financing the production of a Jeff-TV satire that will be difficult to match in the years ahead. Dick's generosity is one more example of the wonderful folks in our industry coming together for a great cause.

The Broadcasters' Foundation Charity Golf Tournament for NAB2006 sold out in December 2005. This tourna-

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.rwonline.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.

Purchase reprints of articles:

E-mail Emmily Wilson at ewilson@imaspub.com.

◆ READER'S FORUM ◆

Does Internet Radio Cost the Listener?

Whoa there! Hold your horses. Skip Pizzi is an old acquaintance of mine from NPR days, but he's a bit wrong about Internet Radio ("Broadcasters, Pick Your Poison," April 20).

As broadcasters, once we launch our radio waves from our investment in transmitter gear and electricity anyone within earshot can tune us in. Our cost is fixed.

With the Internet you have to pay a subscription fee for this "free" service. Connecting to the Web is not free.

Internet bandwidth is not unlimited. If [enough] folks discover your Webcast and attempt to tune in or download your show you'll have to pony up for the additional bandwidth and it isn't free or cheap. In effect a Webcaster has to pay for each listener.

So, even though audio and/or video Webcasts will become available to cell phones, PDAs and other portable devices not unlike Walkman radios, it will cost the listener. And it will cost the program provider based upon the peak number of listeners. Bandwidth is not usually doled out in an instantaneous as-needed basis, but rather in blocks of sufficient size to handle the peak load.

This means that the only effective way

to reach a truly large audience at minimal cost is — tada! — via traditional broadcasting radio waves.

My intent was to state that we have a fixed cost per capita (listener) in broadcast radio while the other forms require an expenditure per capita, which can quickly get expensive on both the content originator's and the listener's end. So, while I agree we should have a presence in other popular media environments, we should not lose sight of our primary business, over-the-air radio. To that end I am a strong champion of HD-R multicasting.

*Ira Wilner
Chief Engineer
Monadnock Radio Group
Saga Communications
Keene, N.H.*

Remembering an Engineer

I'm enclosing photos taken at WKAQ(AM), San Juan, Puerto Rico in 1939. The gentleman in the photo is Chief Engineer José Soler. He was my father and passed away two years ago at age 98.

WKAQ was the first radio station in Puerto Rico and went on the air in 1922.

*José D. Soler
President/Chief Engineer
WCPR/Coamo Broadcasting Corp.
Coamo, P.R.*



WKAQ(AM) Chief Engineer José Soler, at left, circa 1939.

Digital Standards: Possible or Practical?

The electronics and broadcasting industries have established many standards over the years. We recognize RIAA equalization for vinyl, NAB Magnetic Tape Recording and Reproduction specifications, +4 dBm and 600-ohm audio, 50-ohm RF, AES/EBU for digital, 32, 44.1 and 48 KHz sampling rates, MPEG, ATRAC and other perceptual coding algorithms, data compression algorithms such as .ZIP .RAR, .LZH, .ACE and others.

Although the values cited are widely accepted, they are incompatible. A .ZIP file cannot be uncompressed with .RAR extraction technology. End connectors for brand "A" coaxial cable cannot be properly fitted on brand "C" cable of the same size, despite the fact that they properly mate together per the size standard. Sampling rates must match in order to transfer data from one component to another.

Most standards are established over a period of years. A good example is the TIA-222G revision for tower safety. Automatic sample rate conversion now is a common feature on digital audio equipment. Protocol bridges automatically convert between proprietary digital algorithms. For the end user it would be preferable for a common standard to exist whereby brand "C" codecs can communicate directly with brand "T" products. Microphones have adopted the XLR male connector. The technology inside the microphone may change, but the connection to the outside world remains the same. In fact, when phantom power became popular, the connector and cabling required no change.

Does the broadcast industry want or need such a feature? How long would it take to develop and adopt such a standard? How long would it last before it is outpaced by newer technology?

In the computer world, word processors contain conversion tools so that a document created in one brand can be opened in another. Compression software such as WinRAR, WinACE and WinZip allow users to access and convert between algorithms. Should broadcast equipment offer such a feature? Is it worth the cost? Would it be preferable and economical not to require conversion apparatus to make different brand equipment compatible?

Standards have been around for a long time. Can they keep pace with technology? Are they even necessary?

— RW

Keep 'Em Stocked

Joe Milliken's shopping survey ("Audio Stores, Where are the Radios?", May 10) was eye-opening, for sure. I have worked in the broadcast industry — the kind with pictures — and as a home systems installer in a market where the consumer is slow, almost loath to change what they have and know works.

Several equipment company reps told me the area where I live is one of the last in the country to adapt to new technology. Not surprising.

But the overview Mr. Milliken offered, in the area of the country he was in, scares me. From the broadcaster's viewpoint, there are few listeners choosing to upgrade to receive the new signals. But what is more maddening is the retailers' pathetic non-attempts to show new, groundbreaking gear to their buyers. Although I do remember satellite radio had a slow start as well. About the only startup that brought buyers in the door seems to be DSS television; and what once cost \$1000 to buy is now

given away. Sign of the times?

After reading the article, I recalled that even as an installer there are so many things the consumer electronics salespersons have to remember about the products they are selling. Most stores have specialists for the different products they sell. If stations want to get the word out, pick out a chain or a single store and get them, by whatever means necessary, to work with that station or group to bring the listeners in the door. I know from seeing it happen that when that station van or truck is in the lot, the listeners — and hopefully buyers — will come.

Keeping them in the store to listen to HD Radio is a collaborative effort: bumper stickers and free food are just the start. If the stores don't know the technology, or don't have it yet, they should know whom to call upon at the equipment companies or the companies' sales agencies.

This is a team effort. Don't kill this off before it's had a chance to prove itself.

*John Corbin
Fort Wayne, Ind.*

—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, RWEF
- Thomas R. McGinley — Technical Adviser
- Michael LeClair — Technical Editor, RWEF
- 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
- Anne-Marie Smith ext. 126 Assistant Editor (International)
- Keith Tate ext. 144 Editorial Assistant
- Peter Finch — Editorial Assistant, Milan

—EDITORIAL CONTRIBUTORS—

W.C. Alexander, Bruce Bartlett, James Careless, Naina N. Chernoff, Harry Cole, Mark Durenberger, Charles Fitch, Ty Ford, Scott Fybush, Frank Grundstein, Harold Hallikainen, Craig Johnston, Paul Kaminski, Peter King, Mark Lapidus, Sharon Rae Pettigrew, Carl Lindemann, Ted Nahil, Tom Osenkowsky, Ken R., Rich Rarey, Tom Ray, Randy Stine, James G. Withers, Travis the V/O Guy, Barry Umansky, Tom Vernon.

Radio World

Vol. 30, No. 16 June 21, 2006

Telephone: (703) 998-7600 • Business Fax: (703) 998-2966 • Editorial Fax: (703) 820-3245
E-mail: radioworld@imaspub.com • Web site: www.rwonline.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 Ads: 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.com
- Japan: Eiji Yoshikawa +81-3-3327-2688 Fax: +81-3-3327-3010 e-mail: callems@world.odn.ne.jp
- Asia/Pacific: Wengong Wang +86-755-5785161 Fax: +86-755-5785160 e-mail: wwg@imaschina.com

NEXT ISSUE OF RADIO WORLD JULY 5, 2006
NEXT ISSUE OF ENGINEERING EXTRA AUGUST 23, 2006

For address changes and subscription renewal, please visit www.rwonline.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—

- Stevan 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

imas 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 Emmly Wilson, P.O. Box 1214, Falls Church, VA 22041; (703) 998-7600; Fax: (703) 998-2966. Copyright 2006 by IMAS Publishing (USA), Inc. All rights reserved.

—Printed in the USA—

This Little Unit



Can Do BIG Things!

Our new AP-3 is the perfect HD Processor:



SETTING UP FOR HD RADIO?

The VORSIS AP-3 digital processor is the ideal tool to shape your sound exactly the way you want it —cleanly and efficiently.

Built around a multi-band compressor with complementary AGC, the AP-3 replaces a whole rack of dedicated units. VORSIS pre-conditions your signal (HPF, LPF, notch filter, de-esser, expander), then let's you apply 3-band AGC/compression and 4-band parametric EQ (signal chain reversible) before going through a final stage zero-overshoot peak limiter.

With real-time spectrum density readouts and full metering, our included PC graphic interface software makes operation of the AP-3 direct and easy, offering complete control of all audio parameters, presets, monitor functions, system settings and security—all through a single RJ-45 ethernet connection that lets you control one or many AP-3 units.

TAILOR THAT SOUND

VORSIS™

tel 252-638-7000 / sales@vorsis.com / www.vorsis.com

Copyright © 2005 by Wheatstone Corporation

World Radio History

It's a Whole New WORLD!



AUDIOARTS NET is the *EASY* way to interface your D-75N digital consoles! And because D-75Ns are also standalone designs each studio can operate *INDEPENDENTLY*, relying on the network only to share resources. And by *EASY* interface we *MEAN* it—you don't have to be a software guru or IT professional to get up and running—and *STAY* running! And because it's *AUDIOARTS*, you can rest assured it'll be reliable and preserve your budget. **TAKE ADVANTAGE** of *WHEATSTONE's* extensive expertise in *DIGITAL TECHNOLOGY!*

 **AUDIOARTS ENGINEERING**

sales@wheatstone.com / tel 252-638-7000 / www.audioarts.net

Copyright © 2006 by Wheatstone Corporation