RETIREMENT OF A FLAT-TOP. Page 22

Quality, at a Price

We try out Tivoli's NetWorks Internet/FM Radio.

Page 20

The Search for Radio Ads

What does Google's departure from radio mean?

Page 18

Tough Times in Sales

Radio salespeople meet in Orlando and ask themselves the obvious question.

Page 24

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Radio World

$2.50 The Newspaper for Radio Managers and Engineers March 11, 2009

INSIDE

HD RADIO

▼ What's actually on the dial? Amanda Alexander drives around Denver.

Page 12

▼ Roger Sarow, HD Radio and WFAE: 'We're here for the long haul.'

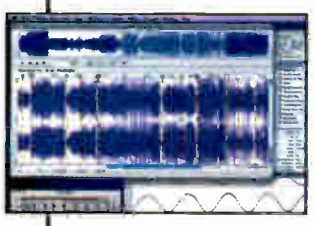
Page 13

ENGINEERING

▼ How the retirement savings of some woodpeckers affected a microwave path.

Page 16

BUYER'S GUIDE



▼ Content creation and audio production.

Page 26

NewBay Media

NEWS MAKER

Forr Helps PPM Encode Each Signal

Arbitron's Encoding Honcho Pulls Back the Curtain

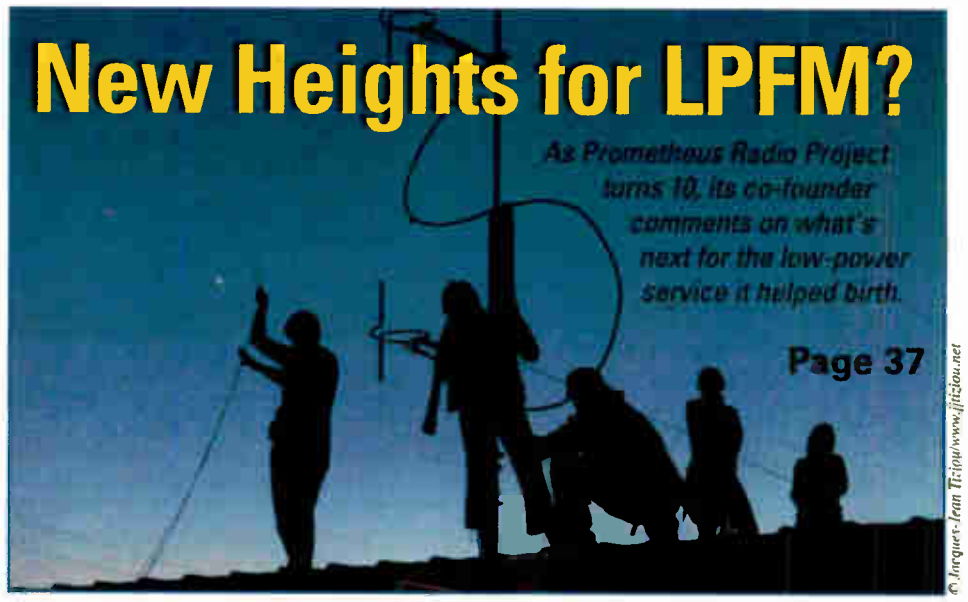
COLUMBIA, Md. In the PPM world, if you're not encoding, your listening isn't counted.

So how do you know that your Portable People Meter encoder is encoding the right station signal? And what if you are transmitting in analog and digital, have multicast channels or are streaming a signal over the Internet? What are the ramifications for PPM then?

Results collected through the PPM are now the Arbitron "currency" in 14 markets, and 11 more markets are due to come online by September. Once a market has been converted, PPM data is used for transactional purposes like buying and selling; the PPM data becomes the "coin of the realm" replacing the data collected by the traditional diary method.

Radio World News Editor/Washington Bureau Chief Leslie Stimson spoke with

See ENCODING, page 8 ▶


New Heights for LPFM?
As Prometheus Radio Project turns 10, its co-founder comments on what's next for the low-power service it helped birth.
Page 37

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NEWS ANALYSIS

Are More Stations Going Silent?

For Some Operations, It's Just Not Worth Being on the Air Right Now — or at All

by Randy J. Stine

WASHINGTON From small religious broadcast licensees and rural radio owners to large broadcast groups, stations are being forced to make some difficult financial decisions in tough economic times.

More owners of late appear to be taking a dramatic way out: letting stations go silent to conserve money. In some cases, the decision is permanent.

Broadcasters are searching for ways to cut operating expenses, industry observers say, and letting a station go silent certainly is one way to do that.

At any given time, some stations will be silent. Some shutoffs are for technical

See SILENT, page 5 ▶

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World Radio History

WINNING THE RATINGS WAR

VORSIS: THE TECHNICAL STUFF

The loudness wars are over. The winner? Nobody. Why? Because when everyone became as loud as possible, using the same limited tools, the personality of every station got lost. We call it "the sameness syndrome."

We hate the sameness syndrome and believe it's a good part of the reason ears are turning to alternate sources. They are just plain tired. Fatigued.

Imagine, then, scanning a radio dial and finding an aural oasis – sound that's breathtaking in its natural quality, but loud and still retaining a sense of dynamic range. Impossible? If you think so, you haven't heard Vorsis.

Vorsis is the first line of air-chain processors designed for today's 21st century radio listener. It's a complete ground-up rethinking of the tired and traditional approach that is inescapable with those well-known processors. Here we talk about a few of the innovations that make the flagship AP-2000 Spectral Dynamics Processor the incredible tool that it is. Many of these advances are shared among the entire range of Vorsis solutions.

Intuitive Interface and Operation

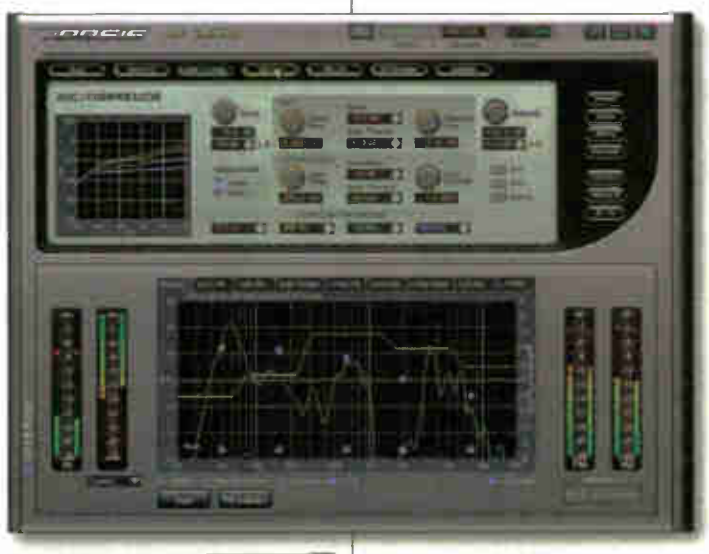
No processor can meet its full potential if it's not something that's easy to use or if the full palette of controls are not accessible. The Vorsis GUI is designed for intuitive operation, from the front panel or remotely on your PC. No control is more than two clicks of the mouse away. The screens offer a logical layout with a virtual control surface above and monitoring graphs and meters below. You can see and hear the results instantly. Nothing is easier.

Think about having the full engineering control you've always dreamed of – being able to find the whispers as well as the screams in your station's sound, crafting an aural signature that's so good, so transparent, you will have people calling to find out how you do it.

Vorsis Dynamics Control

Vorsis completely rethought dynamics control – AGC and compression – and came up with a design that's intelligent AND amazingly flexible to control and shape your station's "sound."

Five-band AGC (four-band in the VP-8) ensures a consistent spectral balance. Vorsis' exclusive SST™ Sweet Spot Technology manages the behavior of the AGC in real-time so that it always operates in its "sweet spot." The multi-band compressor, operating in concert with the AGC, provides unprecedented dynamics control. All operate in sum and difference – the highest signal controls the amount of processing. This is a completely new way to manage multiband dynamics to maximize the consistency of your station's on-air presentation – no matter what the incoming level or era of the music.



Powerful Bass, Incredibly Clean Voice

Vorsis Bass Management System extracts and reveals the nuances in the program that are simply not heard in any other radio processor. It puts deep pristine bass on the air without the distortions of common bass clipper technologies. VoiceMaster is a special Vorsis clipper management tool that has its own automatic processing chain dedicated to detecting and specially processing live speech signals, giving you the loudest and cleanest on-air voices ever.

Superior Stereo Enhancement

In rethinking Vorsis, it became clear that stereo enhancement HAS to be integral to the processing. It is, after all, a manipulation of the amplitude of the L/R difference signal that creates the perception of a wider sound field. With Vorsis, you'll get smear-free enhancement of the stereo image that can be as wide as you desire. But that's only the beginning – you can also control the stereo image width on a frequency-conscious basis and use L+R to L-R signal ganging to prevent the image from wandering uncontrolled. It's already field-proven to manage wide discrepancies between the recording techniques of various eras (oldies to the over-mastered music of today) and even reduce multipath interference.

Surgical Limiting and Clipping

To some the idea of 31 bands is scary. Not to us. It's simply amazing what can be done with it. Limiting and clipping's primary purpose is peak control to increase loudness; the less audible in its action, the better. 31 bands allow surgical limiting – its dynamic operation is nearly inaudible to the ear so the resulting sound is louder AND cleaner. It also provides unprecedented opportunity to further fine-tune the sound. FM and HD/DAB have entirely different transmission characteristics, so Vorsis processors have completely separate limiting and final peak control sections for analog and digital broadcast.

Welcome to the 21st Century

Vorsis is the first processor designed for the needs of a modern radio station and its listeners. Visit the web to learn more and read our application notes and white papers. Call us to set up a demo today.

It'll make a HUGE difference in your station's sound AND your bottom line.

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World Radio History

NEWSWATCH

RADIO AD PROJECTIONS: Local ad spending in all media will be on the decline for the next five years, says BIA Advisory Services and its Kelsey Group division. BIA/Kelsey forecasts U.S. local advertising revenues to decline from $155.3 billion in 2008 to $144.4 billion in 2013, a negative 1.4 percent compound annual growth rate. Radio's portion of that is $16,718 billion in 2008, falling to $16,036 billion in 2013, a negative 0.8 percent compound annual growth rate. By contrast, the online segment will grow nearly 30 percent in that period, predicts BIA/Kelsey. However, online advertising is only a fraction of over-the-air radio advertising in the period, with $247 million in ad spending for online radio in 2008 to a projected $908 million in 2013.

NEXT-GEN PPM: As radio moves content onto other platforms, new Arbitron President/CEO Michael Skarzynski wants PPM to measure audience for that exposure and move as well into TV, Internet and wireless devices. Questioned by Radio World during a media conference call about how Arbitron will develop its audience measurement as radio gets on portable devices and in what time frame, Skarzynski — an electrical engineer-turned-CEO — said the company has approved funds to extend its PPM platform. "Our tech roadmap calls for taking what you would look at today as a PPM hardware suite and moving, over time, to smaller devices and a software-only solution. The idea is the PPM software would allow Arbitron to measure listening and viewing on a laptop, smartphone or a flat-panel display hooked up to a cable TV head-end." If things go as planned, Arbitron could beta-test a pilot within 12 months, he said.

SIRIUS XM BAILOUT: Sirius XM found a reprieve from bankruptcy thanks to a $530 million loan from Liberty Media, which gets a 40 percent equity stake in the satellite radio company and becomes its single largest shareholder. The deal from the company that owns DirecTV and the Discovery channel pays some of Sirius XM's debts and may have saved the job of CEO Mel Karmazin, according to some analysts, who said creditors had warned that if the satcaster filed for Chapter 11 bankruptcy, they likely would have ousted Karmazin. The loan comes with a high 15 percent interest rate and Liberty's obligation to provide a second loan in May is subject to conditions that give Liberty an out should Sirius' financial conditions worsen.

WRISTFONE RADIO: The WristFone from Neutrano (*www.neutrano.com*) combines a phone, a music player, radio and 2 Megapixel camera — all inside a functional wrist watch. The WristFone is a GSM cell phone watch with a touch-screen LCD display and a built-in numeric keypad for dialing or texting. Noteworthy: It can tune into an FM radio station, show videos or surf the Internet while you are commuting on the bus, subway or train. Pair it with a bluetooth earpiece (or the included wired earphones with microphone) to start making/receiving calls and listening to music. WristFone includes earphones and a USB port for charging and data transfer.

FCC: "The commission has seldom if ever had a greater summons to action." FCC Acting Chairman Michael Copps said that with enactment of the stimulus bill, "We are called upon by Congress and our new president to develop a national strategy to get high-speed, opportunity-creating broadband out to all our citizens." Copps also said that opening "clogged lines of communications" is a vital first step of FCC reform.

TRADING: Radio station sales fell more than half in the past year, according to SNL Kagan. The company anticipates "more forced sales, Chapter 11 reorganizations and declining cash flow multiples in the first half of 2009, as station owners cope with the weak ad market." Looking beyond, it anticipates a "stronger financial future for broadcast radio after (a) difficult 2009." Radio station sales dropped from $2.2 billion in 2007 to $932 million in 2008.

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INDEX

NEWS

Forr Helps PPM Encode Each Signal 1
Are More Stations Going Silent? 1
Newswatch 3
From the Editor 4
Arbitron PPM Encoding Best Practices 10

HD RADIO NEWS

An HD Radio Listening Test in Denver 12
They're Built; Now Will the Listeners Come? 13
HD Radio Scoreboard 13

FEATURES

Workbench: Flash! (An Engineer's Work Is Never Done) 16
The Search for Radio Advertising 18
People News 19
Tivoli Offers Quality, If at a Price 20
KYPA's Move Closes a Chapter 22
Keys to Successful Facility Design 23
How to Sell Smart in Bad Times 24

BUYER'S GUIDE

AudioFile Combines Numerous Tasks 26
AEQ Mar4Suite Pro Flies in the Canary Islands 28

OPINION

Reader's Forum 36–38
What Next for Low-Power FM? 37
If You Serve Them, They Will Listen 38

World Radio History

What Happens When Your HD2 Dies?

Also, RW's Web Site Now Offers New and Better Tools for Content Discovery, Sharing

You've gotta nurture your product. You can't just slap it up there and expect it to make money for you.

Consistent, high-quality service might not matter much if no one's listening to your signal, but you'd better pay attention to such considerations if you expect to grow audiences. That's the rationale behind a story in the HD Radio News section of this issue.

As I noted in a recent RW blog entry, for some time there's been scant attention given to the question of quality of service on digital broadcasts, particularly multicast channels. I think that's because most observers believe that few consumers are in a position to be affected, given the number of receivers out there.

But based on anecdotal comments, I think that's beginning to change.

For instance, one engineer noted on Broadcast.net's Radio-Tech listserv recently, "A few months ago at the public station I worked at, the STL for the HD2 and HD3 locked up on Thanksgiving Day. The studio actually got quite a few calls over it. They had only been on the air at that point for just under two months." He was echoing a comment from another engineer who'd had a similar experience.

Such remarks were unthinkable not long ago. Yet if there are indeed close to a million HD Radio receivers in the national marketplace, as proponents believe, this development should not be surprising. That's a million folks who have an interest in the quality of your product and not just its existence.

I recall complaints in the early days of RDS, in the 1990s, about stations purported to be on with RDS but that actually were not, or that were not keeping their data current and thus were giving a poor first impression of RDS to consumers.

So are we as an industry tending our new HD Radio product once the technology has been put in place?

The public can go to the HD Radio Web site to find a list of digital stations and multicast stations in a market. Is that list current? What is the experience in the field? Are stations actually on? Are multicast channels on? Are there time-alignment issues? Audio processing problems?

We asked engineer Amanda Alexander to drive around Denver to compare published reports of HD Radio broadcast activity, including multicasts and PAD, with her real-world experiences. You can read her report on page 12.

I'm interested in your own observations about digital service in your market. Write to me at *pmclane@nbmedia.com*.

★ ★ ★

WOR(AM) in New York just aired its first paid text spot on the HD Radio title field.

"Sales and the buyer are all in a quandary about how to price this, as we don't have any clue how many people are listening on an HD Radio," Buckley Radio's VP and corporate DOE Tom Ray tells us. "But it's a new source of income." Tom is also an RW contributor.

He said this started with a question from health care supplier Novartis looking to do RDS text ads (itself a notable question).

"The sales person involved and I explained that AM radio doesn't do RDS, *but* we do have a text field available on the HD Radio signal," Tom tells me. "But we have no clue as to how many people are actually listening to WOR in HD Radio.

"The buyer wanted to try it, and we have an actual schedule to air these spots Monday through Friday through the end of the year. The only real quandary right now is how to price it. Sales is working with the buyer to come up with a mutually agreeable rate."

As I write, WOR sends "title & artist" information through an interface it had built by a student member of SBE Chapter 15. "It works on a time basis, and we put up the name of the show and the phone number, alternating every so often," he continues. "Right now, we're simply running the text spots at fixed times during the correct dayparts. Eventually, I'll have our ENCO system tie into the HD system and spit out the data. Up to this point, that hasn't been necessary to do, as with talk radio, well, we don't have constantly changing title & artist info like music stations do. But if we start doing more of this, we'll need to tie ENCO in."

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Please visit *radioworld.com* and become familiar with its navigation. As an RW reader, you have access to a great deal of useful material. The layout is different from what you might have been accustomed to on our site, and we hope you find it more intuitive.

For instance, beyond the featured stories on the front page, all articles are published within one or more major categories: News & Technology, Columns, Views, Business, Resources, Awards and Channels.

So your favorite articles by John Bisset, Skip Pizzi and Buc Fitch will be found under Columns; recent news stories are under News & Technology; my column and your letters and guest commentaries are archived under Views; and so forth.

See SITE, page 6 ▶

Share stories with others.

From the Editor

Paul J. McLane

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BURK TECHNOLOGY

World Radio History

AM Stations Silent More Than Two Months

As of Feb. 17, 2009
Source: *http://www.fcc.gov/mb/audio/status/silent.html*

Call	City	State	Silent
KABA	EAGLE RIVER	AK	9/15/2008
WREN	CARROLLTON	AL	9/29/2008
WCMA	DALEVILLE	AL	3/19/2008
WASG	DAPHNE	AL	8/8/2008
WLYG	HANCEVILLE	AL	11/15/2008
WEZZ	MONROEVILLE	AL	3/28/2008
WNUZ	TALLADEGA	AL	8/22/2008
KAPZ	BALD KNOB	AR	12/17/2007
KXXA	CONWAY	AR	5/19/2004
KYHN	FT. SMITH	AR	3/24/2008
KDXE	N. LITTLE ROCK	AR	12/12/2008
KWAK	STUTTGART	AR	5/10/2008
KYET	WILLIAMS	AZ	7/3/2008
KGDP	OILDALE	CA	8/31/2008
KVLE	VAIL	CO	9/1/2008
WBGC	CHIPLEY	FL	11/15/2008
WDGR	DAHLONEGA	GA	10/10/2008
WSFB	QUITMAN	GA	9/23/2008
WAZX	SMYRNA	GA	8/4/2008
WRFV	VALDOSTA	GA	3/7/2008
KUAU	HAIKU	HI	7/23/2008
KORL	HONOLULU	HI	9/29/2008
KUPA	PEARL CITY	HI	10/12/2008
KXLQ	INDIANOLA	IA	3/20/2008
KMCL	DONNELLY	ID	8/16/2008
KDJQ	MERIDIAN	ID	6/8/2008
KPTO	POCATELLO	ID	12/17/2008
WMCW	HARVARD	IL	5/3/2008
WKKD	SILVIS	IL	11/29/2008
WVSG	NEON	KY	3/29/2008
WKFO	STANFORD	KY	10/4/2007
WIBR	BATON ROUGE	LA	9/1/2008
WUBR	BATON ROUGE	LA	11/2/2008
WXOK	PORT ALLEN	LA	9/1/2008
KBYO	TALLULAH	LA	4/19/2008
KVCL	WINNFIELD	LA	4/2/2008
WMSX	BROCKTON	MA	12/1/2008
WWBK	BRUNSWICK	ME	7/19/2008
WOAP	OWOSSO	MI	8/18/2008
KGLB	ST. PETER	MN	7/28/2008
DWEEP	VIRGINIA	MN	8/2/2006
WTKN	CORINTH	MS	3/4/2008
WHJA	LAUREL	MS	8/25/2008
WMLC	MONTICELLO	MS	9/1/2008
WRPM	POPLARVILLE	MS	1/10/2008
WQMS	QUITMAN	MS	8/15/2008
WTYL	TYLERTOWN	MS	8/17/2008
WCIS	MORGANTON	NC	2/25/2008
KIMB	KIMBALL	NE	9/2/2008
KOLT	SCOTTSBLUFF	NE	7/24/2008
WDCR	HANOVER	NH	8/22/2008
KQLO	SUN VALLEY	NV	10/29/2008
WIPS	TICONDEROGA	NY	3/1/2008
KRAM	W. KLAMATH	OR	7/1/2006
WVZN	COLUMBIA	PA	11/3/2008
WLUZ	BAYAMON	PR	10/12/2008
WBSG	LAJAS	PR	8/20/2007
WABV	ABBEVILLE	SC	7/3/2008
WLTQ	CHARLESTON	SC	7/18/2008
WHSC	HARTSVILLE	SC	4/7/2008
WCSZ	SANS SOUCI	SC	9/11/2008
WJTP	WALHALLA	SC	10/3/2008
WNKX	CENTERVILLE	TN	11/1/2008
KOTC	MEMPHIS	TN	6/1/2008
WATO	OAK RIDGE	TN	3/19/2008
WSDT	SODDY-DAISY	TN	12/18/2008
WSTN	SOMERVILLE	TN	10/25/2006
KWWJ	BAYTOWN	TX	9/13/2008
KRCM	BEAUMONT	TX	6/10/2008
KJOJ	CONROE	TX	9/13/2008
KHLT	HALLETTSVILLE	TX	11/15/2008
KPBL	HEMPHILL	TX	4/1/2007
KVWG	PEARSALL	TX	11/3/2008
KBPO	PORT NECHES	TX	1/7/2008
KREL	QUANAH	TX	6/5/2008
KCLR	RALLS	TX	7/28/2008
KTUE	TULIA	TX	8/12/2008
KWUD	WOODVILLE	TX	6/29/2008
KNNZ	CEDAR CITY	UT	8/6/2008
KNFL	TREMONTON	UT	12/17/2008
WBVA	BAYSIDE	VA	3/15/2008
WLVA	LYNCHBURG	VA	7/31/2008
WVAB	VIRGINIA BEACH	VA	3/15/2008
WTFX	WINCHESTER	VA	11/17/2008
WAMM	WOODSTOCK	VA	10/7/2008
WQQQ	DURAND	WI	8/15/2008
WZRK	LAKE GENEVA	WI	11/18/2008

Silent

▶ Continued from page 1

reasons; but an increasing number appear to be intended to limit expenditures.

There is evidence that the numbers of both AM and FM stations going dark at least temporarily is growing. Radio World's review of the FCC's database, which lists stations that have been silent for more than two months, indicates the pace of filings to power down stations increased last fall through the beginning of this year (see chart).

In mid-February, the list showed more than 80 AMs and about 100 FMs off the air, not including translators.

The Federal Communications Commission does not archive past dark stations lists to determine year-to-year trends. Neither does BIA Financial Network; a spokesman said the silent list is unusual and hard to evaluate because STAs are filed for various reasons.

Radio stations must apply to the FCC for Special Temporary Authority if they remain silent for more than 30 days. By law, a broadcaster's license is cancelled if a station remains off the air for more than 12 months, according to the agency.

"It's not an evaluation by us at that point. They are simply informed they have forfeited their license and they need to stop broadcasting," an FCC spokesman said.

The FCC said it does not have data readily available that shows how many licenses were cancelled under such circumstances in 2008 and lacks the software to complete a year-to-year analysis.

Analysts said the number of silent outlets represents a small percentage of licensed stations — the FCC counts approximately 14,000 radio stations in the United States not counting translators, boosters or LPFMs — but it's difficult to gauge the number going dark since stations presumably are taken off the FCC list once licenses are surrendered after a year.

The spokesman said history has shown that radio stations go silent all the time for a variety of reasons. However, he acknowledged the number of filings "are a bit accelerated" at present based upon financial hardship.

'Financial hardship'

AM broadcasters seem especially vulnerable right now because of higher fixed operational costs, analysts said.

On the list of inactive stations are outlets owned by both large groups and small independent licensees, according to the FCC database. Clear Channel Communications, Citadel Broadcasting and Cumulus Media all have AM stations listed as silent in the FCC database.

The reasons stations go silent vary, from moving transmission facilities to leases expiring.

"There are a couple of situations like this and all are related to our inability to

See SILENT, page 6 ▶

SMALL(ER) WONDER

The new AudioScience ASI8921 tuner adapter packs 8 radio tuners into a single 6.6" PCI card. That's half the space (and half the power) of older analog tuner cards. Keep tabs on up to 8 AM or FM channels simultaneously, including RDS/RDBS info, all from a single antenna input. Monitor or record in PCM and MPEG-1 layer2 and MPEG-1 Layer 3 (MP3). Eight not enough? Install up to 8 cards in one system. Windows XP/Vista and Linux drivers available. To find out more about our small wonder, call **+1-302-324-5333** or go to **www.audioscience.com.**

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World Radio History

FM Stations Silent More Than Two Months

As of Feb. 17, 2009
Note: Translators are omitted
Source: *http://www.fcc.gov/mb/audio/status/silent.html*

Call	City	State	Silent
KKNI	STERLING	AK	3/12/2008
WTID	THOMASTON	AL	3/25/2008
WDLG	THOMASVILLE	AL	8/11/2008
KCCJ-LP	BATESVILLE	AR	7/29/2008
KWBF	N. LITTLE ROCK	AR	11/7/2008
KRIT	PARKER	AZ	11/18/2008
KYCJ	CAMINO	CA	11/26/2008
KBHH	KERMAN	CA	11/14/2008
KXTT	MARICOPA	CA	3/29/2008
KPDO	PESCADERO	CA	2/17/2008
KHJQ	POLLOCK PINES	CA	11/23/2008
K208EI	PORTERVILLE	CA	8/17/2006
KHGQ	QUINCY	CA	5/4/2008
KGDP	SANTA MARIA	CA	8/31/2008
KJAR	SUSANVILLE	CA	12/5/2006
KBDS	TAFT	CA	11/15/2008
KEAL	TAFT	CA	3/29/2008
KAMV-LP	BRIGHTON	CO	11/6/2007
KPAU	CENTER	CO	4/22/2008
KDVC	DOVE CREEK	CO	4/22/2008
KRGQ	MERINO	CO	6/27/2008
WBGY	EVERGLADES CITY	FL	9/16/2007
WFBO-LP	FLAGLER BEACH	FL	11/4/2008
WAZX	CLEVELAND	GA	9/15/2008
WBAW	PEMBROKE	GA	12/11/2008
WVVS	VALDOSTA	GA	6/13/2008
KPHL	PAHALA	HI	3/6/2007
KLZY	PAIA	HI	3/5/2008
KGCW-LP	JOHNSTON	IA	7/3/2007
KZWF	PATTERSON	IA	10/14/2008
KZWU	PLEASANTVILLE	IA	10/14/2008
KYME	ROCKFORD	IA	3/8/2008
KJLN	SAC CITY	IA	3/6/2008
KRID	ASHTON	ID	4/22/2008
KXML	FAIRFIELD	ID	11/14/2008
WTND-LP	MACOMB	IL	5/1/2008
WLJX-LP	SPRINGFIELD	IL	3/17/2007
WMLF	WATSEKA	IL	2/28/2008
KDVB	EFFINGHAM	KS	4/29/2008
KQZQ	KIOWA	KS	4/1/2008
WHFG	BROUSSARD	LA	9/1/2008
KNOU	EMPIRE	LA	8/29/2008
KXKW	SIMMESPORT	LA	2/29/2008
WKHW	POCOMOKE CITY	MD	6/23/2008
WUPT	GWINN	MI	6/5/2008
WCFG	SPRINGFIELD	MI	11/20/2008
KLTA	BRECKENRIDGE	MN	9/12/2008
KESY	STEELVILLE	MO	9/6/2008
WJNS	BENTONIA	MS	9/13/2008
WPRL	LORMAN	MS	6/18/2008
WVEM-LP	STANLEY	NC	7/27/2007
WHYC	SWAN QUARTER	NC	9/5/2006
WSIF	WILKESBORO	NC	5/9/2008
KPFX	FARGO	ND	9/12/2008
KHSK	ALLEN	NE	10/16/2008
WWHK	CONCORD	NH	9/4/2008
WNEC	HENNIKER	NH	12/7/2007
KQBA	LOS ALAMOS	NM	10/24/2008
KNUW	SANTA CLARA	NM	12/3/2008
KKIM	SANTA FE	NM	10/24/2008
KPHD	ELKO	NV	11/26/2008
KADD	LOGANDALE	NV	12/2/2008
KHIJ	MESQUITE	NV	12/4/2008
KCLS	PIOCHE	NV	7/29/2008
WNYL-LP	LIMA	NY	4/18/2007
WWOH-LP	MARIETTA	OH	4/15/2008
WPFX	NORTH BALTIMORE	OH	7/1/2008
KCGP-LP	GRANTS PASS	OR	7/11/2008
WWEC	ELIZABETHTOWN	PA	7/9/2008
WLRI-LP	GAP	PA	10/23/2008
WVIS	VIEQUES	PR	7/20/2008
WIGL	WINNSBORO	SC	7/18/2008
KAWK	CUSTER	SD	10/21/2008
WJBP	RED BANK	TN	12/10/2008
KAQD	ABILENE	TX	11/29/2008
KPBD	BIG SPRING	TX	8/12/2008
KSTB	CRYSTAL BEACH	TX	9/13/2008
KIOX	EDNA	TX	10/13/2008
KGRW	FRIONA	TX	7/23/2008
KLJK	HUDSON	TX	6/20/2008
KPBJ	MIDLAND	TX	1/31/2007
KSAP-LP	PORT ARTHUR	TX	11/5/2008
KTKY	REFUGIO	TX	11/10/2008
KPTI	WINNIE	TX	9/13/2008
KBAW	ZAPATA	TX	9/9/2008
KFMR	BALLARD	UT	6/10/2008
KEMR	CASTLE DALE	UT	4/22/2008
KHUN	HUNTINGTON	UT	4/22/2008
WRSY	MARLBORO	VT	12/18/2008
KAZZ	DEER PARK	WA	6/4/2008
KQQB	NEWPORT	WA	6/4/2008
KABW	WESTPORT	WA	5/16/2008
KYYR-LP	YAKIMA	WA	7/23/2008
WJWD	MARSHALL	WI	7/9/2008
WKPO	SOLDIERS GROVE	WI	3/18/2008
WTRW	TWO RIVERS	WI	3/5/2008
WKJL	CLARKSBURG	WV	10/27/2008
KADQ	EVANSTON	WY	4/22/2008
KGRK	GLENROCK	WY	7/30/2008
KARS	LARAMIE	WY	1/2/2008
KRFD	THAYNE	WY	12/11/2008

Silent

▶ Continued from page 5

keep the site we leased for our tower. In some cases, you can't avoid it," said Jeff Littlejohn, executive vice president of distribution development for Clear Channel Communications.

Littlejohn mentioned the case of WHJA(AM) in Laurel, Miss., which went silent in August of 2008.

"We lost the lease on the ground that supported the tower. Given the difficulty and expense of moving an AM station and negative economics of running it, it made no sense to rebuild," Littlejohn said. "In fact, we tried to give the station to a local church and they wouldn't take it."

Clear Channel plans simply to turn the license for the station back over to the FCC in September, Littlejohn said.

WRFV(AM) in Valdosta, Ga., has been off the air since March 2008. Licensed to Rama Communications Inc., the station was part of a "travelers' information" network but was losing money, said Shanti Persaud, account manager for Rama Communications.

"It was a financial decision that we had to make at the time [to turn it off]. It wasn't profitable. We had no other options," Persaud said.

Rama Communications, which owns several other radio stations in Florida, expected to turn WRFV back on this March after beginning a new financial partnership. Persaud said she expects the station to broadcast a syndicated news/talk format.

"Plus, we take the chance of losing the license if we are not back on the air in March."

Cutting costs

Some industry analysts said they would not be surprised if the commission becomes more considerate of economic hardships when determining forfeitures.

"I'm not sure how widespread the practice of going dark is, but at least, anecdotally, it appears to be getting worse as the economy worsens," said Marci Ryvicker, a Wall Street analyst at Wachovia Capital Markets.

"As we embark upon [quarterly] earnings season," she said in February, "the only thing the radio groups have under their control is the expense side. I would assume that there are significant cost savings from going dark. I would expect to see more of this at unprofitable stations."

That appears to be the case at WDPT(AM) in Decatur, Ala., and WTKI(AM) in Huntsville, Ala., which went dark in late January. The stations' owners, Christian Voices of Central Ohio, posted on a Web site (*www.protalkradio.com*) that "as a result of current economic conditions, we have been forced to cease operations."

Banks are dictating in some cases that broadcasters can no longer afford to run stations that are losing money.

— Larry Patrick, Patrick Communications

The stations broadcast a hybrid of Christian teaching and conservative talkers like Dr. Laura, according to its Web site.

"We shut the stations down with hopes to sell them or work out an LMA with another broadcaster. We are just praying for a turnaround in this economy," said Dan Baughman, president and chief executive officer of Christian Voice of Central Ohio. "When last September hit, we soon realized things were going bad very quickly and we were caught up in it. We really scrambled to hold out until this year."

Sometimes broadcasters are under pressure from lenders to shed stations that are unprofitable, said Larry Patrick, president of Patrick Communications, a broadcast brokerage firm that assists clients in buying and selling radio properties.

"We have clients considering turning off stations. Banks are dictating in some cases that broadcasters can no longer afford to run stations that are losing money. Lenders look at things differently than broadcasters. If it can't stand on its own you throw it on the junk heap," Patrick said.

Adding to the difficulty for some licensees is the fact that no one can sell a station right now, he added.

"The market is essentially frozen. There is no market for radio stations. If you can't sell the losers you might as well turn them off."

A side effect of turning off a station is that it immediately depresses the value of the broadcast license, he said.

Site

▶ Continued from page 4

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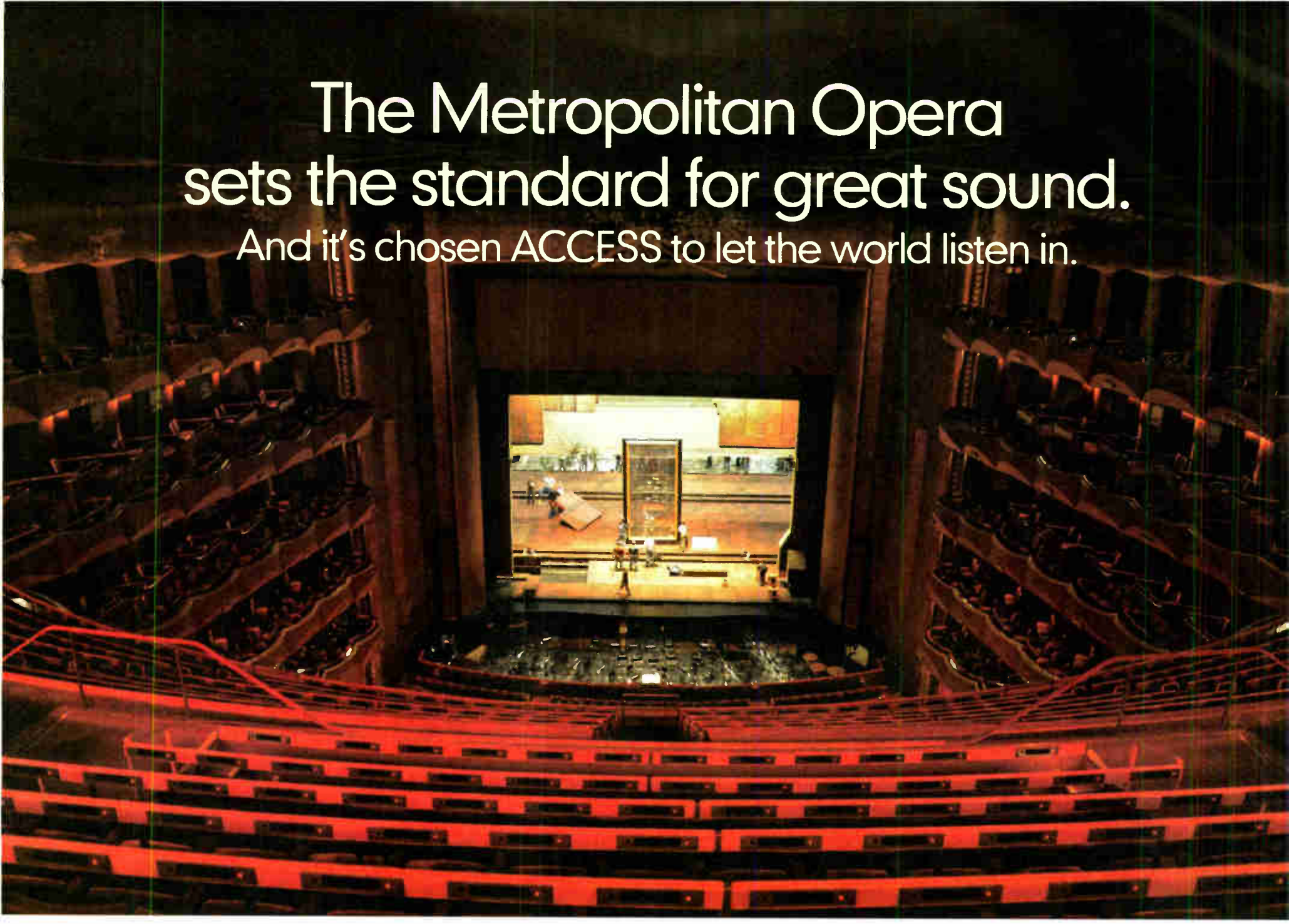

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World Radio History

Encoding

▶ Continued from page 1

Dave Forr, director of U.S. encoding operations, about what Arbitron engineers and other employees do to prepare PPM encoders, what happens when units arrive at a station, how they're activated and how encoding information is verified.

Forr, an electrical engineering graduate of Penn State, returned to Arbitron in 2000 (see box). He began his 21-year audience research career in the R&D division of CBS, where he worked in the consumer product evaluation laboratory and focused on video gear.

RW: What's your responsibility regarding PPM encoders?

Forr: Our group is fundamentally responsible for making sure that we have a market encoded in time for our pre-currency delivery of data. ... We're responsible for making sure that we get the stations on board. Not just the technical side of it; we work with sales, we work with station management to get their cooperation.

Encoding operations was split off and combined with another [Arbitron] group that sets up the PPM equipment and sends it out to the households. I can tell you about that because I set it up.

At the very beginning of this process is the identification of the stations that we're going to invite to encode. There's a formula for that ... but basically all of the FCC-licensed stations in the market are invited to encode, regardless of their subscriber status.

RW: Once stations get your letter, how long does it typically take until they're ready to encode?

Forr: Before our currency date, we have two months of pre-currency. Seven months before that we start the encoding process. And two months before that the invitation letter to encode goes out. Thirteen months total.

We send these letters out, we invite them to encode. When they respond, we send an encoding agreement. If they're subscribing to the service, that encoding agreement is part of their subscription paperwork. If they're not, we ask them to sign a simple document that basically says, "You're getting this equipment. Arbitron maintains ownership of it. You're not going to reverse-engineer it."

We don't sell the equipment in the U.S.; we license it.

RW: Has anyone tried to reverse-engineer a PPM encoder?

Forr: Not to my knowledge. I know of some people who have tried to take the covers off, but we have tamper-proof screws and warranty stickers over the seams. But I can say this because I am an engineer, we like to open it and see what's inside. ... The core of the encoding engine is burned into silicone. It's not something you can download and look at on your PC.

Once the stations sign an encoding agreement, we've got internal systems that put that information into our systems. Then encoding ops gets notified that this station is signed up and they're ready to go.

At that point we'll talk to the engineer on the phone. We'll ask him about his station, we'll ask how it's configured, what kind of equipment he's got in his broadcast chain, how it all interconnects.

Dave Forr: The Coder'

Photo by Leslie Stimson

This is Dave Forr's second stint at Arbitron, where he's now director of U.S. encoding operations.

He began his career at CBS, where he worked mostly in a consumer product evaluation laboratory focusing on video gear. Forr said the lab developed the first automated, objective video tape evaluation system adopted by JVC, which licensed the VHS tape format.

Forr worked peripherally in the early development of HDTV formats and technologies. "Working at the lab was, for an engineer, like going to work to play if you could afford the toys."

From there, he went to work for AGB as an engineer designing TV ratings technology. He took over AGB's field operations as director of U.S. field engineering.

Forr first went to work for Arbitron in 1988 to help roll out the national Scan America installation and run the operations technical support department and repair facility. Arbitron's ScanAmerica was designed to package national TV audience ratings with household purchase data. Arbitron dropped ScanAmerica and got out of the terrestrial TV and cable ratings business in the early 1990s.

He was involved with some of the early field tests for PPM in 1992 and 1993.

Forr left Arbitron to work for SRI in New Jersey where he built an engineering organization to develop TV ratings equipment in a bid — underwritten by the major TV networks — to develop a system to compete with Nielsen.

He returned to Arbitron in 2000 to undertake the rollout of encoding equipment in the U.S. in support of PPM.

— Leslie Stimson

We'll spend a fair amount of time on the phone developing a block diagram of his station. We'll work with him to understand where best to put the encoding equipment to make sure that every possible way that this station has of getting its product out to its customers is covered with encoding.

We don't want them to have an emergency automation system at their transmitter site that's not covered with encoding because, if their main studio goes down, they have to go to their automation system up on the mountain. Their station's still on the air but they might as well turn off the transmitter and save electricity because they're not getting credit for it if it's not encoded. That's the impression that we try to make on the engineers: We have to make sure that this is all covered.

RW: When you're asking them about the transmission chain, do you care more about what brand of equipment is in there or about the type of equipment in the chain?

Forr: Both. More the type than the brand, but we capture all of that information so that we have it in our records. Typically we'll have to probe, because the backup automation system is just "out of sight, out of mind."

The benefit of hiring broadcast engineers from the industry is they understand this and they know the "yeah, buts," they know all of those [questions] to ask and probe for when we're talking to the station engineers. ...

What we learned in the early, early days of the trials in Philly and Houston was, when we asked them, "Tell us every way you have of getting this [the signal] out," they'll often say, "We haven't used that thing for 15 years, I forgot about it."

[But] if their studio goes down, they're running off that back-up automation system until they can get it back up and running.

RW: They need a back-up encoder for that.

Forr: That's right. So we make sure we cover all of the possible ways of getting their signal out with encoding. And some of the engineers at the stations are reluctant sometimes to encode those.

'We'll work with [the engineer] to understand where best to put the encoding equipment to make sure that every possible way that this station has of getting its product out to its customers is covered with encoding.'

A good example was a major news/talk station in Houston a couple years ago. ... Same situation. "Forget about that, we never use it."

This was the conversation: "What station are people going to listen to in Houston if a major disaster hits?" This was before Hurricane Ike came through. "Well, they listen to our station. We're news/talk." "Where your studio is, it could be prone to a hurricane impact. Where are you going to go if that studio goes down?" "We'll go to this [backup] automation system." "And what happens when the whole town is listening to just your radio station and guess what? You're not going to get credit for it." "Maybe we ought to install one there!" ...

We provide not just *an* encoder for every path, but an encoder and a backup for every path. If the station has their own primary path of getting a signal out, and they have a backup path to get that signal out, we'll put an encoder on both of them.

Some stations only have one signal path going out to air. If that's the case, we'll still provide a backup encoder and tell them to daisy-chain them and just leave one in bypass. That way, if there's ever a problem and it's the encoder — as surprisingly infrequent as that is — they're still not down while we ship them a new encoder.

RW: Are you providing encoders and backups to Arbitron subscribers only, or to every station in a market?

Forr: Every [AM-FM] station, regardless of their subscriber status, gets two encoders and a monitor free of charge. That way they stay on the radar screen, even if they're a small station and are not a subscriber. ...

[W]e provide a monitor for every station. So even if they have a primary signal path, a backup signal path, a backup to the backup and an automation system on the mountain, they may have four encoders, to make sure that they're covered in every way. But only one of those is ever on the air at a time. ...

We tell them to take this in-station monitor and connect it to the return air feed ... the feed that they have their own alarm system set up to. ...

We've designed this monitor to be able to interface with all [alarm] systems ... so that it can trip a trigger on a switch or on a serial port on the back that can interface to however that station has decided to alert their personnel whenever there's a problem with the station.

RW: What happens if there's a problem with the encoder?

Forr: Their first line of defense is to switch to their backup right away. Don't call Arbitron, don't do anything; get the encoding back on the air first.

After that they have a couple of numbers they can call. We have set up "ownership" of markets within our group; an Arbitron engineer is assigned several markets. The engineer at the station knows him, he's talked to him. He's worked with him during the installation. He's got his number; typically he's got his cell number too. So he'll call. If he doesn't reach that person we've got a toll-free 877 number that they can call. ...

Every market engineer has backup assigned to them. Someone will get that call. In the evenings, after hours, that number routes to our customer service people. Even in the middle of the night, if someone calls and says, "Hey I've got a problem," the folks that answer that phone have a list of "If, then" questions to ask. ...

If after that short list of questions is satisfied the alarm's still going off, we have an on-call engineer assignment that rotates throughout our group on a weekly basis. ... We call it the bat phone. If it's your turn to carry the bat phone that week, it's up to you to have it where you can hear it 24/7. If someone from customer service calls and says, "I've got an engineer on the phone ... we've walked through [the questions], he's still got an alarm, I'm going to pass him off to you." We'll take that call, troubleshoot and get him back on the air with encoding.

See ENCODING, page 10 ▶

World Radio History

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Encoding

▶ Continued from page 8

RW: Getting back to the encoder configuration process, where are we on that?
Forr: Let me back up to where we left off. We've talked to the engineer and develop a block diagram of that station. We'll send that to the engineer and have him look at it and say, "Yes, this looks like my station." (Sometimes they say, "Cool, I've been wanting to do one of these for a long time, can I keep this?")

We get them to confirm that yes, this how we're set up, this is everything and where we've designed the encoder placement is [acceptable]. At that point we generate an electronic work order that goes over to the [other Arbitron] group we were talking about, for fulfillment.

In the work order, we'll tell them: "These are all parameters that we've loaded into it. On the display we want it to read WXYZ. We want it to be a digital encoder configured for 44.1 kHz sample rate and all of the details that involves the interface of the station."

The engineer who has worked with the station specifies exactly how it's to be set up so that it interfaces perfectly when it gets there. ... We want the station engineer to be able to take it out of its box, put it in the rack, run his audio through it, plug it into power, turn it on. That's it. There's no user-configurable parameters to be set up. ...

[Configuration] is where the code assignment happens. That's the core of this whole process because, at the end of the day, if you don't know where that code's coming from that the PPM receives, everything else is academic. This configuration process is where we say, "This encoder gets code number 1234."

In our system, no two encoders ever have the same code. This encoder gets coded 1234. We tell our system that code 1234 is WARB's primary encoding chain and they're FM.

That's where that marriage happens. When the data collection happens in the evening from all the PPMs, *[Ed. Note: when panelists dock their meters at night and audio exposure data is sent to Arbitron]* — when PPM says someone was exposed to code 1234, the PPM doesn't know that it's WARB; it just knows that it got code 1234. Then in our system, that's married up to code 1234 equals WARB's primary FM chain. That's what goes into reports.

That part of this configuration process is critical. Built into that process, we have a quality assurance rule that says the person who sets up an encoder can't be the one to verify it. There are verification and re-verification processes built in there. ...

RW: To make sure that that person didn't assign the wrong number.
Forr: Yes. After we're satisfied that the quality is right, the code is right, the page of configuration parameters is right, all of that is verified, it then goes out the door to be delivered when it was specified to be delivered.

We get a return receipt from UPS so that our engineers know when it hit the dock. We'll usually give them a day or two and then we'll call and say, "I see that your equipment has arrived. I'm calling to see if you need any help or if you have any questions." What that really is, is us saying, "Let's get this done. I know this stuff is there."

RW: Because it's up to them to install it, not you ...
Forr: They're not going to let us start pulling wires. ... In the early days of the trials, we hand-delivered a lot of this stuff and went to the station and were there when it was installed. We didn't do much. ... They didn't want us in there.

Sometimes it takes a little prodding but we'll get them to install the stuff. They'll let us know, "I've got all the stuff installed. It's all turned on. ... I can't hear it. ... My green light on the monitor is on. Now what do we need to do?"

RW: How long does it take to get the encoding process going at the station?
Forr: We collect two minutes of audio, minimum [for each signal]. We'll collect more if time allows in the interest of completeness. Even so it's typically not more than five minutes. ...

We'll have them send us audio over the phone. ... We ask them to use a return air feed for this, the same as what their monitor is seeing. "Bring your station up on a pair of monitor speakers and lay the phone down. Come back in a few minutes."

Their first line of defense is to switch to their backup right away. Don't call Arbitron, don't do anything; get the encoding back on the air first.'

We need to do that for every encoder. Not just the primary that's on the air. ... Now if they've got an encoder up on their automation system on the mountain, that typically has to wait until the wee hours of the morning. ... [T]hey can send us audio from that into our voicemail system.

The code is so robust that we can recover that and analyze it off of voicemail the next morning. We'll know if they were cheating because no two encoders ever have the same code. We know which one went into the automation system on the mountain and we'll be able to see if that's the right code we've got coming back.

After we've gotten through all of these for their AM or FM, now we need them to verify their HD2, give me the primary and the backup... for your HD3, give me the primary and the backup. Go to your Internet stream, given me the primary and the backup.

RW: There's an encoder for the Internet stream as well.
Forr: Absolutely. Even if they're simulcast we try to put separate encoding on their Internet streams, so that if at some point in the future they're not simulcast, we'll be able to back that information out. ...

What we're doing when we're collecting this information [is] looking for two things.

We're bringing this into a tool that can extract the code and analyze how deeply it's embedded in the audio. We're analyzing the quality of the embedding that has occurred through this encoder.

We'll know if the signal levels they're sending into the encoder are right. We'll know if there's distortion in their audio that could impact the encoding. ...

The other thing we're looking for is ... remember I told you we want to verify the right code is with the right station? This is another verification step. We verify that I'm talking to the engineer from WARB and going into the system and looking at the code for WARB, which should be code 1234.

I'll look at the analysis tool and it says you're getting code 1234 over the phone from this audio ... We'll capture that audio and file it. We'll attach it to the work order so if there are ever any questions we have an audit trail. We'll also attach the block diagram to the work order. ...

After we've done all of that, the engineer who collected this information puts that into the work order and passes it off. Now it goes through ... a verification of his work. A different person will now take and open these files ... [He'll] run them back through the analysis tool, compare that output to the output that the first engineer got and make sure that it's right, make sure that the quality is good and make sure that the right code is assigned to the right station.

So it's not until that final QA process that involves the verification of all the information we brought back over the phone is done that we say this station is ready for reporting.

The reason we do that ... with all of the consolidation that's going on, you could have an engineer responsible for six stations and they're all running out of [one] room. It's never happened, but it wouldn't be inconceivable that that engineer put the wrong encoder in the wrong station. What we'll do when we configure them, we'll put a tag on the outside that says "This is for WARB FM primary chain." So it will be real clear where this encoder's to go. And when it's powered up, the display will say "WARB FM primary."

Over and over again we emphasize with the equipment where it's supposed to go, but at the end of the day what we want to know is that we're getting WARB's station over the phone and that's WARB's code that's coming into that audio.

Now we're satisfied that the station is ready for reporting.

RW: What does "ready for reporting" mean?
Forr: We'll flip a switch in our systems — click a box is really what it is — and say we're good to go. At that point our report processing people will include that data in the PPM numbers.

RW: What happens to the PPM equipment when a station is sold?
Forr: When stations sell and call letters change... it's nice because we don't have to send them a new encoder. There's an access port [on the unit] for a memory card.

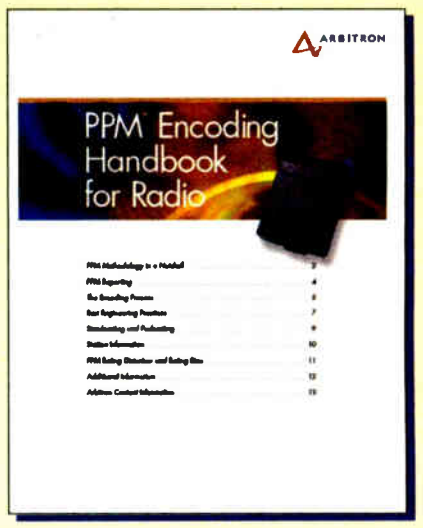
We can send them a new set of parameters on the memory card that will update their display. ... All they have to do is take this [card] put it in ... the green light will flash a couple of times. The display will say "succeeded," and they'll take that out and close up the port. They don't have to tear everything out when they sell the station.

RW: How many engineers do you have in the encoding division?
Forr: That's not something I can discuss.

RW: When you hire broadcast engineers what qualifications are you looking for?
Forr: I'm looking for broadcast engineering background. ... We've got folks on staff here who have been with the PPM project for a long time and have worked with the station engineers here enough that they understand them and have been indoctrinated. That's the exception; the rule is we're looking for people from the industry, because they can speak the language. They know what to ask for.

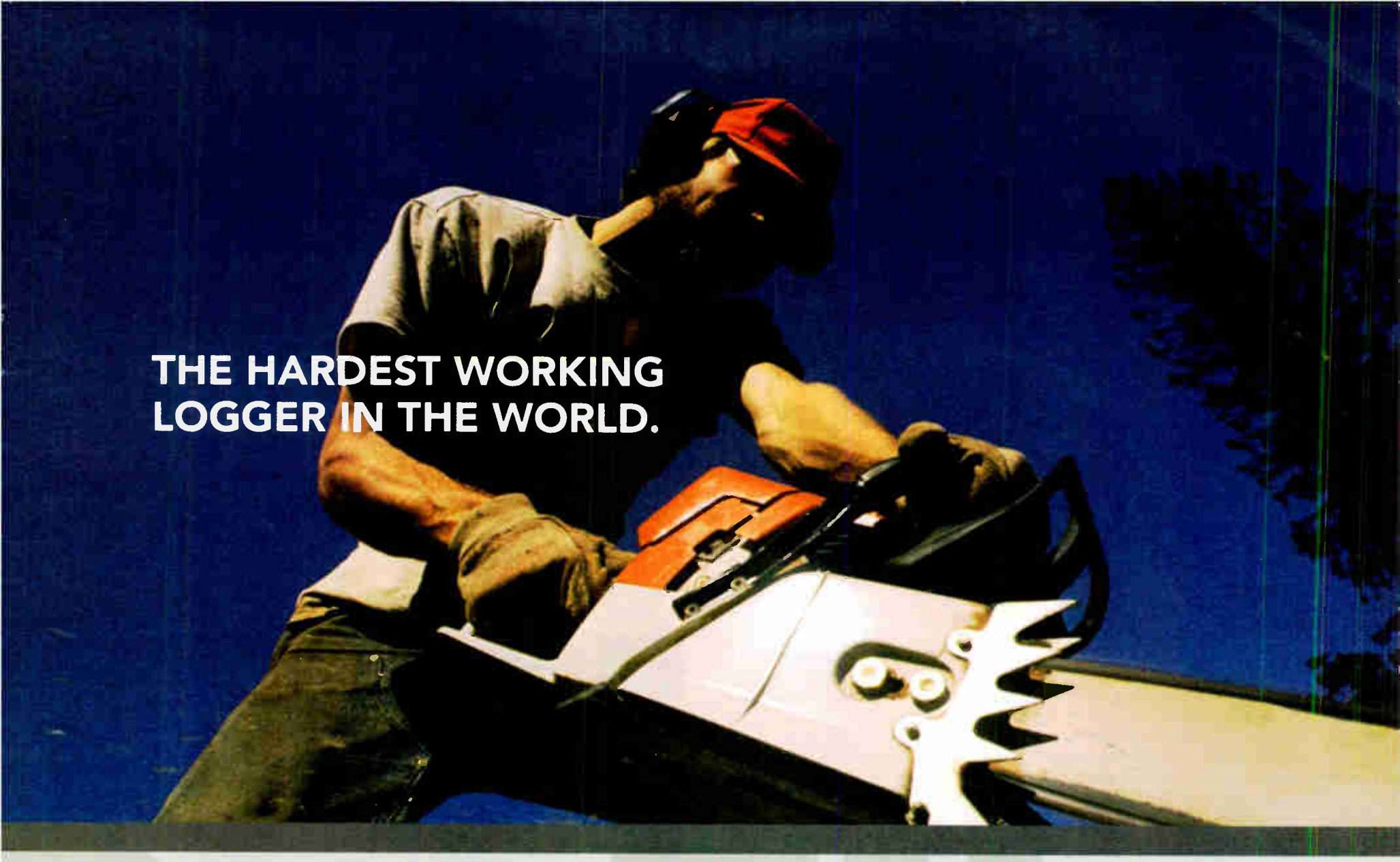
Arbitron PPM Encoding Best Practices

Excerpts from the Arbitron PPM Encoding Handbook, available at *www.arbitron.com/downloads/ppm_encoding_handbook.pdf.*



- The station will need to monitor encoding at all times. Arbitron's encoders seldom experience mechanical failure. Most un-encoded intervals result from scheduled or unscheduled transmitter maintenance or other changes to the station's transmission facilities, during which the station inadvertently excludes the encoder from the transmission path.
- The encoding monitor should be connected to an alarm system paging the station's engineer.
- Encoding equipment is configured for an individual station (i.e.: an AM station; an FM station; an HD-multicast station; or an Internet stream of an AM station, FM station, or HD-multicast station). Encoding equipment should not be exchanged between stations — even if those stations simulcast with one another.
- Some engineers plug the primary and backup encoders into power strips that can be remotely shut on and off. This helps ensure the engineer's ability to switch remotely from the primary encoder to the backup encoder, in the event that a remote switching becomes necessary.
- The station's engineer should be mindful that encoders require adequate ventilation. Arbitron recommends allowing a space for ventilation between any two encoders.
- Should an Arbitron encoder fail, the encoder will still pass audio.

World Radio History



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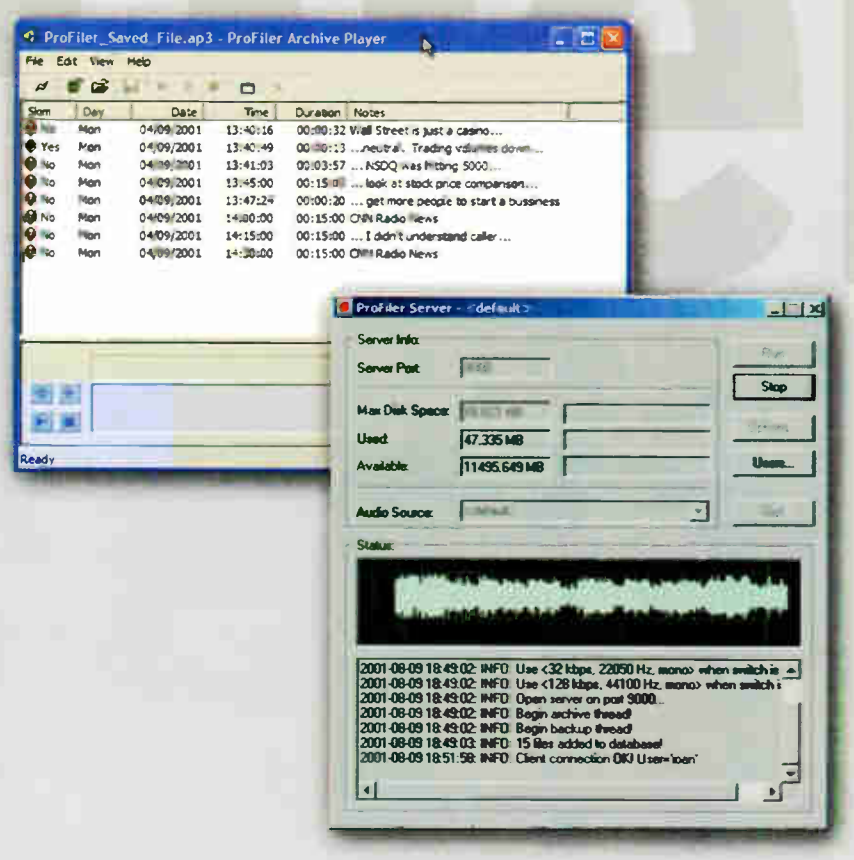

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World Radio History

HD Radio News

Radio World | Covering Radio's Digital Transition | March 11, 2009

WFAE Embraces Digital
Page 13

FIRST PERSON

An HD Radio Listening Test in Denver

When We Drive Around the City, What Digital Stations Do We Hear?

by Amanda Alexander

Radio World asked me to drive around the Denver area with a published list from the HD Radio Web site (*www.hdradio.com/find_an_hd_digital_radio_station.php*) in hand, to compare the list of stations believed to be airing an HD Radio signal with what's actually happening in the market.

On Feb. 10 I drove around between 3 and 4 p.m.; I re-checked around noon two days later for discrepancies to see if they were resolved yet — so for instance, if the chart shown states I could not receive either the analog or digital of one station, that was true both times.

I drove a 2006 Ford Escape with an in-dash HD Radio, the JVC AHD39 a CD receiver with built-in HD Radio tuner.

The Denver-Boulder HD Radio station list names 46 total stations. Of those, 17 are multicast channels with 13 HD2s and four HD3s. The published list appears for the most part to be up to date. I did not discover any HD Radio stations not already on the list.

I did not find any issues involving the time-alignment of the analog and digital signals. I've done HD Radio surveys in the past and I usually find problems with time alignment. This time everything sounded great.

I also found no unusual processing audio issues to report. HD Radio processing tracked that of the analog in terms of flavor and compression for all stations. Audio levels stayed balanced when switching from analog through to digital.

Formats

Four stations had changed formats: 92.5 HD3, a side channel of KWLI and owned by CBS Radio, is actually no longer CNN but instead a format the station calls "I Hear Dead People." It's an interesting format. As a former co-worker put it, it's all dead people singing. The PAD for the HD3 station reads, "I Hear Dead People."

I did not find any issues involving the time-alignment of the analog and digital signals.

One of the stations owned by Crawford, my employer, KLZ(AM) on 560 kHz, "The Light," is now Christian contemporary conservative talk.

Another AM, 950 kHz "The Fan," moved to FM and now 950 is "Cruisin' Oldies." The HD2 channel for KYGO(FM) on 98.5 MHz is now oldies instead of smooth jazz as shown on the original list.

Signal

My radio had trouble acquiring and keeping a digital signal for three stations in the market.

KJMN(FM) on 92.1 MHz did not get a lock in Denver or Aurora, a suburb 20 miles away that is considered part of the Denver market. The unit would try but could not keep digital more than a second or two. The unit could lock on and retain the analog signal with no problem.

Photo by Cris Alexander

The author tunes to a station found on the list on page 14.

I could not receive an HD-R lock on KMXA(AM) at 1090 kHz.

In downtown Denver and southeast Aurora, my radio could not receive a signal at all, either analog or digital, on 1490 kHz, which is KCFC(AM) in Boulder.

Radio World also asked me to note whether the multicast channels seemed live and whether they were transmitting data for receiver displays.

None of the multicasts were live; all seemed to be automated. The music multicasts were all music, with liners here and there. I never heard a person other than voice doing the liner for the station. The HD3 channel for KYGO(FM) on 98.5 MHz might have been live but it's a satellite feed, ESPN Radio.

The accompanying chart provides a rundown of the program-associated data that I saw displayed for each station and other observations about each station.

For the most part, besides the few for which I could not get an HD Radio lock or receive a signal, the signals were great. Going under bridges and near power lines that had leaks caused the HD Radio signal to go away for a little bit until I was clear of the area. When this occurs, it's typically with AM. Every once in a while it may affect FM, but rarely —usually only when

See DENVER, page 14 ▶

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World Radio History

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Radio World's HD Radio™ Scoreboard

The HD Radio Scoreboard is compiled by Radio World using information supplied by iBiquity Digital Corp., the HD Digital Radio Alliance, BIA Financial Network and other sources. Data reflect best information as of mid February. This page is sponsored by Broadcast Electronics. HD Radio is a trademark of iBiquity Digital Corp.

They're Built — Now Will the Listeners Come?

As HD Radio goes, NPR affiliate WFAE(FM) in Charlotte, N.C., is a veteran.

"We went on air with a BE HD Radio transmitter in 2005, and immediately began multicasting on FM," said President and GM Roger Sarow. "We were the first U.S. station to do multiple HD secondary channels (HD2, HD3), and we've been doing it ever since."

Today, WFAE continues to operate three HD radio channels. WFAE HD1 is a simulcast of its FM signal. HD2 "JazzWorks" is all-jazz, all the time. HD3 Xponential Radio mixes blues, rock, world, folk and alternative country. Operating in MP3 mode, WFAE's HD-R channels operate at 48, 34 and 24 kbps respectively and include a traffic info data channel provided to the station as a participant in the Broadcasters Traffic Consortium.

What has public response been to WFAE's pioneering HD Radio broadcasts? Without ratings information, it's hard to tell. "I listen to WFAE HD2 at home on my Radiosophy HD radio," Sarow quipped. "I'm probably 25 percent of its listener base."

The station's assessment of its HD Radio audience is deduced from listener e-mails and the occasional phone call. Judging by Sarow's reply, response has been small, implying that not many people are listening to WFAE's multicast channels.

Public confusion over the concept of digital radio is a big part of the problem, Sarow believes. "People really don't know the difference between satellite radio and HD Radio; they are quite baffled," he told Radio World. "Add the fact that satellite radio has gotten the lion's share of advertising and receiver availability, and it's not surprising that the public really doesn't know about us. Maybe if Sirius XM doesn't make it past their next debt refinancing, this will change."

Sarow also points to the lack of HD Radio receivers — both in stores and as options in cars — as depressing potential listenership to HD Radio stations. "Go into most electronics stores and ask for an HD Radio, and chances are they'll either show you an XM receiver or a clock radio with a digital faceplate," he said. "As for cars: Well, with the auto industry in the shape it's in, I'm not optimistic about HD Radios ramping up as options anytime soon."

Roger Sarow: 'We're here for the long haul.'

Collectively, these factors seem not to bode well for WFAE's HD Radio efforts. So does Sarow think the station's earlier heralding of the format as "revolutionizing radio" was wrong? Not at all.

"I see what's happening with HD Radio right now as akin to the slow development of FM in the 1950s and 1960s," He said. "People who are old enough to remember will recall that, in its infancy, FM was just as ignored as HD Radio is today. As well, despite the fact that it clearly offered more than AM, broadcasters treated FM as a poor cousin when it came to programming and advertising. Only when AM/FM radios became universal did things start to change — and even then, it wasn't until rock moved onto FM in a big way that the format took off."

The station is willing to wait for HD Radio to come into its own — including being included as a standard feature on all consumer radios — even if this takes years. "We're here for the long haul. That's why we are staking our claim to this spectrum now, to be in place when people make the move to HD Radio. Our only problem now is to provide the best programming we can on HD Radio at the lowest cost, so we can afford to wait for this to happen."

— James Careless

The HD Radio Bottom Line

	Last Year	Last Month	Current
On the Air	1,615	1,865	1,874
FMs Multicasting	827	994	1,017

Total U.S. stations: 14,124
exclusive of LPFM and translators

World Radio History

HD Radio in Denver: What I Heard

Station	Freq	Format	Licensee	My Observations
KUVO-HD	89.3	Jazz/Variety	Denver Educational	No PAD
KCFR-HD	90.1	News/Talk	Colorado Pub Radio	Dynamic PAD
KCFR-HD2	90.1-2	Classical	Colorado Pub Radio	Dynamic PAD
KJMN-HD	92.1	Span/CHR	Entravision	No HD Lock
KWLI-HD	92.5	Country	CBS Radio	Static PAD
KWLI-HD2	92.5-2	Willie/Heritage Country	CBS Radio	Dynamic PAD
KWLI-HD3	92.5-3	CNN Headline News	CBS Radio	Static PAD
KTCL-HD	93.3	Alternative	Clear Channel	Dynamic PAD
KTCL-HD2	93.3-2	Classic Alternative	Clear Channel	Dynamic PAD
KPTT-HD	95.7	Rhymc/AC	Clear Channel	Dynamic PAD
KPTT-HD2	95.7-2	Pride Radio	Clear Channel	Dynamic PAD
KBCO-HD	97.3	AAA	Clear Channel	Dynamic PAD
KBCO-HD2	97.3-2	Performance Studio C	Clear Channel	Dynamic PAD
KYGO-HD	98.5	Country, Lincoln	Financial Media	No PAD
KYGO-HD2	98.5-2	Smooth Jazz	Lincoln Financial	No PAD
KYGO-HD3	98.5-3	ESPN Radio	Lincoln Financial	No PAD
KQMT-HD	99.5	Prgsv/ClRck	Entercom	Dynamic PAD
KQMT-HD2	99.5-2	Deep Cuts & Live Rock	Entercom	No PAD
KIMN-HD	100.3	Hot AC	CBS Radio	Dynamic PAD
KIMN-HD2	100.3-2	Best of the 80's	CBS Radio	Dynamic PAD
KIMN-HD3	100.3-3	Holy Hits Radio	CBS Radio	Static PAD but no audio
KOSI-HD	101.1	Lite Rock	Entercom	Dynamic PAD
KOSI-HD2	101.1-2	Blues	Entercom	Dynamic PAD
KRFX-HD	103.5	Clsc Rock	Clear Channel	Dynamic PAD
KRFX-HD2	103.5-2	Classic Rock That Rocks	Clear Channel	Dynamic PAD
KXKL-HD	105.1	Oldies	CBS Radio	Static PAD
KXKL-HD2	105.1-2	All Number One Radio	CBS Radio	Dynamic PAD
KXKL-HD3	105.1-3	50's and 60's	CBS Radio	Dynamic PAD
KALC-HD	105.9	Hot AC	Entercom	Static PAD
KALC-HD2	105.9-2	Comedy	Entercom	No PAD
KBPI-HD	106.7	AOR	Clear Channel	Dynamic PAD
KBPI-HD2	106.7-2	All New Rock	Clear Channel	Dynamic PAD but no audio
KLZ-HD	560	CCtmp/Talk	Crawford	Dynamic PAD
KLTT-HD	670	Chrst/Talk	Crawford	Dynamic PAD
KKZN-HD	760	Talk/Prgsv	Clear Channel	No PAD
KLVZ-HD	810	Span/Chrst	Crawford	Dynamic PAD
KOA-HD	850	Nws/Tlk/Spt	Clear Channel	No PAD
KPOF-HD	910	Inspiration	Pillar of Fire	No PAD
KRWZ-HD	950	Oldies	Lincoln Financial	No PAD
KMXA-HD	1090	Span/AdHts	Entravision	No HD lock
KLDC-HD	1220	Gsp/Cst/Rlg	Crawford	Dynamic PAD
KCFR-HD	1340	News/Talk	Colo. Pub Radio	No PAD
KGNU-HD	1390	Eclectic	Boulder Community	No PAD
KCFC-HD	1490	News/Talk	Colo. Pub Radio	Could not receive analog or digital
KEPN-HD	1600	Sports	Lincoln Financial	No PAD
KDDZ-HD	1690	Family Hits	Radio Disney	No PAD

For my drive-around, I used a list downloaded from *HD Radio.com*, which shows HD Radio stations believed to be on the air in the Denver market. My own observations are at right. Formats are as published; I mention discrepancies in the story. IBiquity Digital maintains this list, based on information gathered from stations; the company also has listening stations in several markets to check broadcast quality and says information is checked regularly. IBiquity invites updates to its channel lists via e-mail to *stationoperations@ibiquity.com*.

Denver

▶ Continued from page 12

the signal already is getting weak.

There definitely is a variety of radio to listen to in the Denver/Metro area. I wish I would actually listen to the radio; I get so tired of commercials and love listening to my MP3 player. Now that I have seen this list and what is out there, I may start listening to some of the HD2 and HD3 channels on the FM side as well as a few different AM stations. Typically, I stick with our stations and a couple others for talk radio.

Some areas unfortunately are holes for HD Radio. Many stations have nulls, and in these the radio cannot lock in HD Radio. For example, 92.5 KWLI has a transmitter up north near Erie, Colo., several miles from Denver. Erie is about 25 minutes drive north of Denver.

My radio had trouble acquiring and keeping a digital signal for three stations in the market.

Here in Denver we have Lookout Mountain, home to several stations. On FM, if you are in certain parts of Boulder, you cannot get the HD Radio signal from Lookout Mountain. These FMs have boosters in Boulder, but analog only.

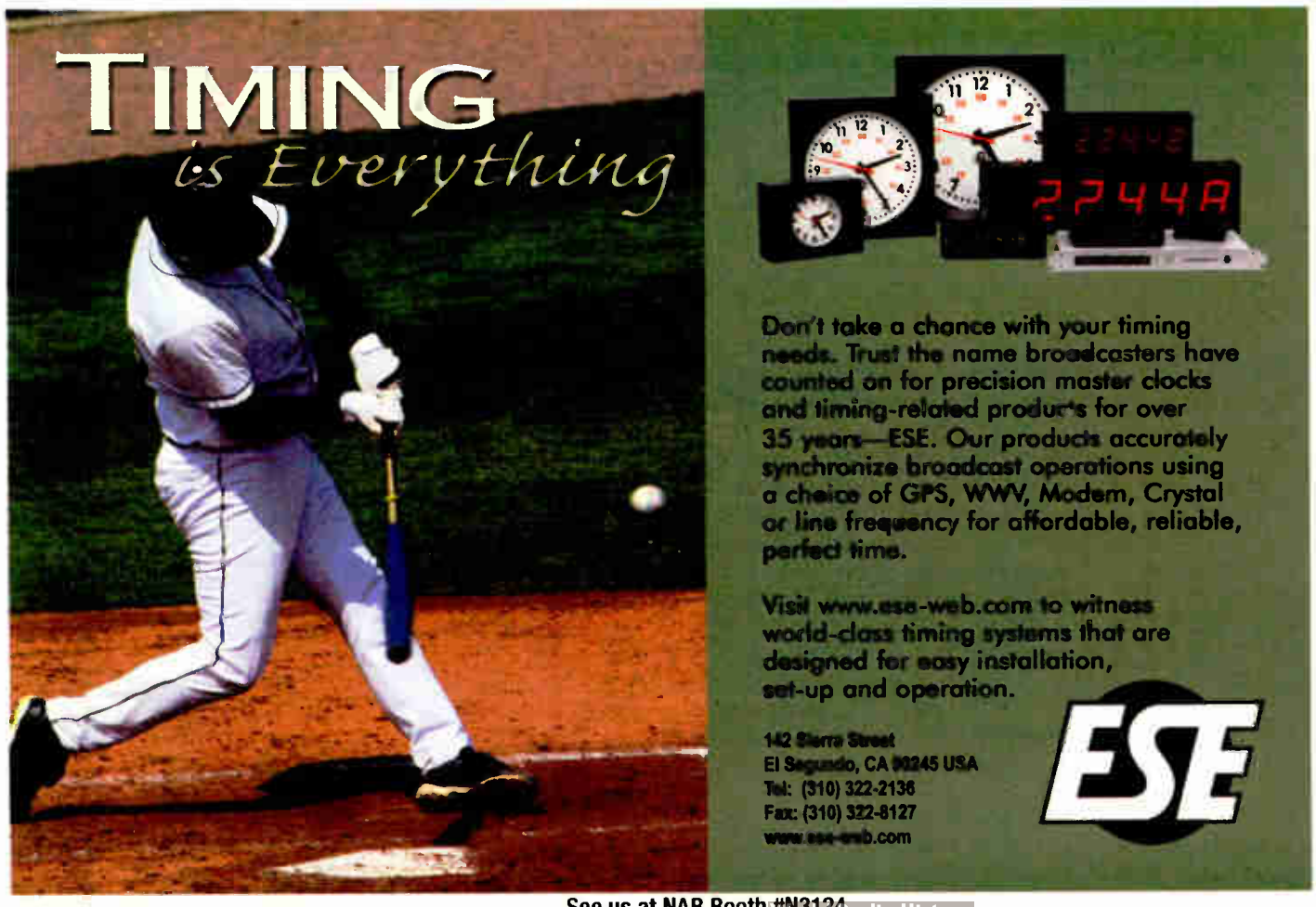
My parents and I have noticed while driving in our part of town, southeast Aurora, that the HD2 and HD3 sides of the station don't stay locked because of the weak signal. Also, west towards the foothills becomes difficult to get an HD lock. At times the analog even gets static.

HD Radio still hasn't caught on like I wish it would. I know of at least one person who lives in Boulder that got rid of his HD Radio because he couldn't get a signal. He's a fan of XM. But I have converted some people to HD Radio around Aurora. I'll get them to go somewhere with me in my car and I deliver a whole speech on HD Radio; I let them hear it for themselves and they fall in love with it.

Some of my friends just can't afford the radio, which is sad, but when you're a part-time worker going to school full-time, money is tight.

Amanda Alexander, CBT, is chief engineer for Crawford Broadcasting's four-station Denver cluster.

Wish to do a drive-around in your market? Write to Lstimson@nbmedia.com.



Radio World's HD Radio Scoreboard is published in alternating issues. Selected data is from BIAfn's MEDIA Access Pro™; the scoreboard also uses information supplied by sources including iBiquity Digital Corp., the HD Digital Radio Alliance and RW's own research.

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World Radio History

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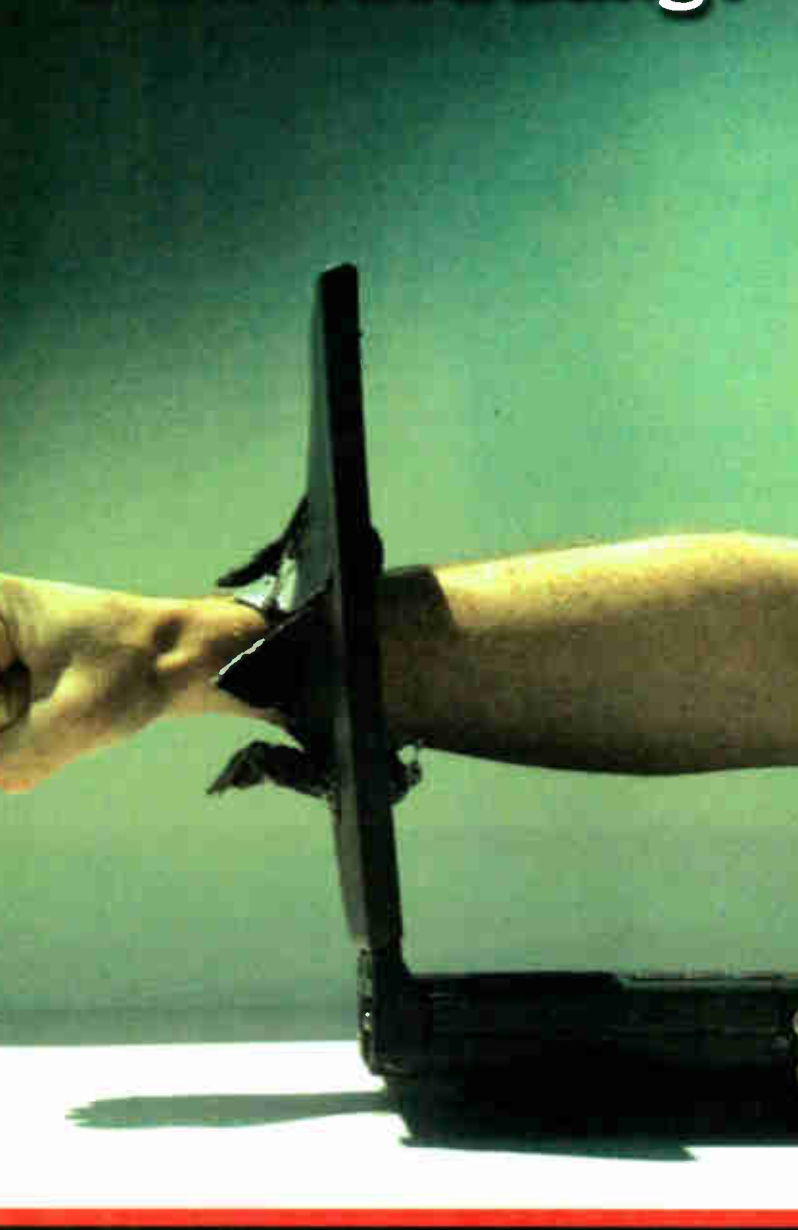

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Flash! (An Engineer's Work Is Never Done)

Also, How the Retirement Savings of Woodpeckers Blocked a Microwave Dish

by John Bisset

So you install your beautiful new transmitter equipment in a new building on the top of a mountain.

The installation goes well and everything is working perfectly. Best of all, you've drilled ground rods into the rocky mountaintop and followed good engineering practice in all your installation.

It's a model for future sites. Everything is documented properly; you even had enough budget to include some redundancy: a spare STL and backup low-power transmitter. The only thing missing is a generator, and you'll add that in next year's capital budget. You take a picture (Fig. 1).

Life is good ... for now ... and you head home. ...

★ ★ ★

Sometimes, it's just nature that takes on our transmitter sites.

Rick Levy of Broadcast Signal Lab (*www.broadcastsignallab.com*) passes along an interesting video that will make you chuckle at the persistence of nature — in this case, woodpeckers who stuffed a microwave dish with acorns.

View the clip by heading to *http://home.pacbell.net/dredmol1/acorns/*. Click on the "acorns.wmv" file for a good laugh.

Though most radio broadcast STL dishes aren't covered, it's not uncommon in colder climates to protect satellite dishes with a protective snow or ice cover. Let this video be a warning to inspect those covers for any holes or tears, and repair them promptly.

Netpresenter Newsfeed Server software may be a useful item for many broadcasters and their internal networks.

★ ★ ★

Although this does not qualify as a broadcast-specific product, Netpresenter Newsfeed Server software may be a useful item for many broadcasters and their internal networks. It is designed to scroll internal information on computer monitors throughout a facility or within a company closed circuit/IP network. It operates as a ticker running unobtrusively along the edge of a monitor screen.

Newsfeed Server can also be programmed to deliver video, audio, RSS feeds, Web pages, info from databases or Excel spreadsheets, PowerPoint presentations and Flash movies. According to Frank Hoen, Netpresenter CEO, "With Newsfeed Server, effective internal communication does not have to cost any time at all. It's an ideal way to reach

See SERVER, page 17 ▶

Fig. 1: A completed transmitter site building.

Fig. 2: A simple way to monitor streaming: the Roku SoundBridge Internet radio.

Model 730
Inovonics' Flagship RDS/RBDS Encoder
Supports RT+ Song Tagging

Featuring a front-panel LCD screen and jog wheel for instant on-site setup, the 730 may also be programmed easily through any of its data ports using the included Windows® software. USB, TCP(x2), UDP and serial ports can accept both ASCII and UECP command sets.

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World Radio History

Server

▶ Continued from page 16

employees quickly, without interrupting the work process."

A free demo is available. More information can be found at *www.netpresenter.com.*

★ ★ ★

Dave Radigan is a young broadcaster who has seen his dream of station ownership come true. The president of Radigan Broadcasting, owner of WEBO(AM) in Owego, N.Y., Dave started as a station intern and had worked his way up the ranks of Entercom stations in Rochester.

As station manager, Dave is always looking for ways to improve his operation, making it more efficient. To monitor his streaming, without a computer, Dave selected the Roku SoundBridge Internet radio, on which Radio World has reported in the past.

Pictured in Fig. 2 and listing for under $300, the radio does not need a computer, only a broadband connection and Wi-Fi. Find out more information at *www.roku.com.*

Dave Radigan can be reached at *dave@webo1330.com.*

★ ★ ★

Back to our model transmitter site story.

One day you are alerted to your station being off the air. Curiously, there is no response from the remote control, not even the auto-changeover of the backup equipment. You head up to the site.

You talk to a farmer who lives down the road and he tells you he saw a lightning strike during a brief thunderstorm, followed by a very bright white light — one that lasted about 30 seconds.

As you approach the mountaintop, you can't believe your eyes. You realize that the white light had been your transmitter building consuming itself.

If there is a silver lining to this catastrophe, it is that you hadn't installed a generator with a full fuel tank. If you had, the "after" picture may have shown a crater!

The farmer also tells you the lightning struck right at the building, leaving the antenna and tower alone.

This was the experience of William Cobacho and his associate Francisco Tejeiro of Spanish National Radio. The site (Fig. 3) was a total loss and now is in the process of being rebuilt. An engineer's work is never done.

John Bisset has worked as a chief engineer and contract engineer for 39 years. In 2007 he received the SBE's Educator of the Year Award. Reach him at john bisset@myfairpoint.net. *Faxed submissions can be sent to (603) 472-4944.*

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

Fig. 3: The building in Fig. 1 after Mother Nature got done with it.

MARKET PLACE

A Free Lunch

They say there's no such thing as a free lunch but England's Phonic Food is offering the next best thing, a royalty-free lunch.

The cooks at Phonic Food are offering the second volume of their royalty-free music library. Consisting of a range from high-energy energy bumpers to down-tempo atmospheres to humorous "cheese" bits, the DVD-delivered Phonic Food Volume 2 offers six hours of material to choose, divided up into useful segments. Files are 16-bit WAV.

Joe Young, chief cook, said: "We are tired of royalty-free music having the reputation for being substandard. Smaller companies should have access to high-caliber broadcast-quality music, without having to break the bank by paying for license fees and performance royalties."

Info: Phonic Food at 011-44-121-745-3338 or visit www.phonicfood.com.

World Radio History

The Search for Radio Advertising

Google's Recent Departure From Radio Bears Further Investigation

As readers of Radio World Newsbytes are aware, Google announced in February that it will shut down its three-year-old radio advertising business on May 31 when it eliminates its Google Audio Ads and Ad Sense for Radio services, cutting about 40 staff from its payroll in the process.

You may recall how Google entered the radio business in 2006 with the acquisition of DMarc Broadcasting, including the latter's legacy from Scott Studios and Computer Concepts, early leaders in the radio automation business.

Now Google is looking to sell off those assets, now known as Google Radio Automation.

While this move may appear to be yet another impact of the current economic downtrend, the story actually runs a bit deeper.

Today's financial crisis may have served as a catalyst or trigger to Google's decision, but its underlying problems were not caused by the current economy.

Google's radio ad business had never performed well, so it exited the market just as it had abandoned another short-lived effort to sell newspaper advertising earlier this year (the already shuttered Google Print Ads).

Google's television advertising business unit remains in operation, however.

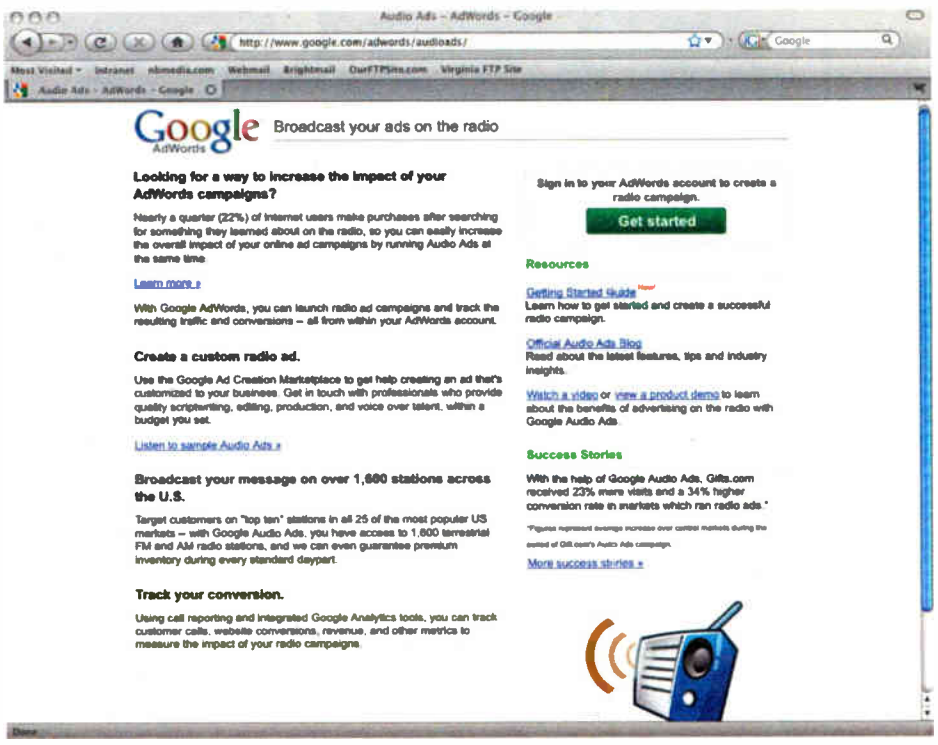
So, with apologies to Howard Stern, what began with Google's attempt to become "King of All Advertising" has now morphed into a more selective process, with Google saying it will focus on the Internet radio sector for future ad placement business.

On the surface, this is not encouraging for broadcast radio. Being placed in the same basket with newspapers by a new media leader today has got to hurt, and we all know in what direction that means they think radio is heading.

True enough, radio advertising revenues had begun their downturn in 2007, well ahead of the financial market meltdown, and looked to be following in newspapers' footsteps. But there are other, deeper reasons behind Google's radio exit.

Vive la différence

Google didn't grow into the radio advertising business organically but by acquisition.



Google's failure in the radio ad business may say less about radio than it does about Google and the specifics of its business play here.

The company's business model for placing radio ads also made it a sort of "bottom feeder," with access only to the last available slots at most stations. This did not amount to much of a formula for success.

Thus Google's failure in the radio business may say less about radio than it does about Google and the specifics of its business play here.

The lack of a good fit between Google and radio also can be seen as a bad sign for radio, but it's just as viable to attribute it to a simple differentiation between media styles. Different strokes for different advertising folks.

In any case, Google certainly won't miss the money it could have made in the radio business, which at best probably would never have achieved more than rounding-error status on its ledgers.

Radio might have benefited from Google's filling of slots in the dusty corners of the broadcast ad inventory, but even this would not have had earth-shaking impact to many stations' bottom lines.

So while this could have been a minor win-win, now we'll never know.

Perhaps the worst impact for radio in this story is the association with newspapers, given their recent downward trends.

Radio is not and has never been much like print, however. Radio's cost model, advertising methods and overall agility are dramatically different from those of newspapers, and these differences can serve radio well today in its quest for continuing viability.

But it is important for radio proactively to change perceptions and fight off the association with other digitally challenged media forms like newspapers.

Radio should not be tarred with the same brush as other legacy mediums, but this could easily happen when stories about items like the Google decisions are circulated — if nothing is said or done to counteract them.

Radio can demonstrate its greater agility and applicability to contemporary advertising needs, and now is a great time to do so. Yet this can only be accomplished with proper investment, sharp innovation and strong leadership.

(For example, there are now, or soon will be, a lot of smart technologists and good journalists on the job market. Hire them to create new radio news services for on-air/online/mobile delivery.)

Note also that Google's move away from broadcast radio was predicated partially on the search firm's preference for the ability to identify more precisely who is listening to what on Internet radio.

The coming of the PPM will allow *all* forms of radio to enjoy this higher granularity and accuracy of audience measurement, however, so the validity of Google's justification here may soon fade.

Two-edged sword

This column has often cited the powerful position from which radio can act in the new media world, in that it is well poised to enter the Internet environment, while Internet-based entities cannot easily move into the broadcast space.

Further, the combination of on-air and online delivery can create potent synergies when optimally balanced.

It is this combination of legacy and emergent assets that can allow radio operators to maintain a strong posture in tomorrow's media landscape. But it will not happen without the requisite competence and commitment on the part of broadcast management.

The search for an early object lesson here might turn up the following: Google was unable to parlay its Internet success into the radio business, yet Clear Channel and other radio groups already have achieved leadership position in the online radio environment.

Maybe you can teach an old dog new tricks (as savvy dog trainers insist that you can). And maybe the young dogs should just stick to the turf they know.

Skip Pizzi is contributing editor of Radio World.

The Big Picture

Photo: Gary Hayes, BBC

by Skip Pizzi

World Radio History

People News

Send announcements to radioworld@nbmedia.com *with "People News" in the subject line.*

Arbitron Inc. named **Michael P. Skarzynski** president and chief executive officer, and to its board. Stephen B. Morris will continue as chairman.

"When I came to Arbitron in December 1992, we were just announcing the program to develop the Portable People Meter," Morris said in a statement. "Now that the PPM has been successfully commercialized in 14 markets and remains on track for its full commercialization in the top radio markets, this is a good time to hand the reins over to a new chief executive officer."

Skarzynski is former CEO of Iptivia, a performance management software company; he is a former executive with Lucent and AT&T Network Systems; he also was CEO for Performance Technologies, Xebeo and Predictive Networks. He worked for Motorola in management and is a former assistant secretary for trade development and chief of staff at the U.S. Department of Commerce. He is based at the Arbitron offices in Maryland.

Kevin Campbell

APT Ltd. named **Kevin Campbell** to senior management; he returns to Belfast from the United States to become senior VP of global hardware sales. He joined the company in 2003.

Harman Pro Group said **Andy Brown** was promoted to head of digital console strategy for **Soundcraft Studer**. He holds an electronics degree and has experience across a number of functions at Soundcraft. For 12 years he specialized in product management and delivered consoles including the MH range (MH2, 3, 4), the SM, Ghost, K-Series, the Series 4 and flagship Series 5 live sound consoles. He led development of the large-format digital platform Soundcraft Vi Series.

Andy Brown

Andrew Mulrooney

Comlab's Davicom division named **Andrew Mulrooney** director of technical support and training. He will be responsible for pre- and post-sales technical support as well as for product training in all territories.

Guy Fournier was appointed regional sales manager for the Canadian and U.S. markets. He will now be responsible for all sales and marketing matters in these territories.

"These changes are being put in place in order to better reflect the current responsibilities exercised by both Andrew and Guy," the company stated.

Guy Fournier

Broadcast automation and ad insertion software company **Spacial Audio Solutions** hired **Michael Dalfonzo**, the former director of industry affairs for RCS, as VP of sales.

Native Public Media launched its Media Blueprint Project; it named **Sascha Meinrath** to work with **Peggy Berryhill (Muscogee)**, director of media architecture and services, as the lead research consultant. The project will determine how the Native media network can use new media technologies and platforms.

Digigram named **Hervé Odini** as international sales director. Odini will be responsible for the company's international sales offices: Grenoble, Singapore and Arlington, Va. for the Americas. He will also head the Field Marketing department at the main office in Montbonnot, France. Formally responsible for EMEA OEM sales for Sun Microsystems, he has worked with HP, IBM and Ericsson as well.

Hervé Odini

Michelle McClure

Michelle McClure has become a member of **Fletcher, Heald & Hildreth**. She has been with the law firm since January of last year. She has both a telecommunications law and engineering background and has represented telecommunications industry clients as in-house counsel, a consultant and as an attorney in private practice. A graduate of the University of Colorado School of Law, she also holds a Master of Science degree in Telecommunications Engineering from the Graduate School of Engineering of the University of Colorado.

World Radio History

INTERNET RADIO

Tivoli Offers Quality, If at a Price

NetWorks Internet Sets a Standard, Starting at $649.99 With FM Included

by James Careless

For years, Tivoli Audio's Model One AM/FM tabletop receiver has set the standard for clear, full-range radio reception. Such success is a double-edged sword: Every time the company comes out with a new audio product, critics are quick to compare it against the Model One's standards to see if it measures up.

In the case of the Tivoli Audio NetWorks Internet/FM radio, the company has hit the mark. Of many Internet radios I have tested over a decade, the Tivoli NetWorks is so far the best when it comes to audio quality and overall performance.

This doesn't mean that it is perfect by any means. Moreover, at $649.99 for the wood-veneered Internet/FM receiver and $100 more to add a second speaker for full stereo, the NetWorks *should* be the best.

Tivoli Networks, left, with companion speaker.

Nuts and bolts

Both the Tivoli NetWorks and its companion speaker are built into wooden speaker enclosures that measure 8.74 inches tall by 5.51 inches wide by 5.12 inches deep. The speaker comes with a 15 foot connecting cord, which I applaud: A radio that sounds this good needs good separation. The speakers are 3.5 inch magnetically shielded full-range drivers that can be used close to computer and other devices sensitive to magnetism. (Note: This was more of a problem in the floppy disk days.)

The NetWorks radio has a bright blue monochrome display that indicates what audio source you are listening to. This can be Internet radio, FM, Music Player (connected to your PC's music library) or attached MP3 player (using the NetWorks' USB port).

The radio is designed to be controlled by the included small remote control. For redundancy's sake, all of the remote's functions are duplicated on the back of the radio, along with an extendable FM whip antenna, Ethernet port, Balance knob and Mono/Stereo switch (depending on whether you have purchased the companion speaker or not). On top of the Networks is a nearly flush-mounted dial that controls volume and muting and which can be used as a snooze button with the NetWorks' alarm clock.

A nice detail: The NetWorks' cable connections — including power; it has a built-in adaptor — connect underneath the radio inside a raised cavity. This makes for a neat appearance on the desktop.

In the cavity, the NetWorks has an Aux In for other music sources; a Mix In that allows you to input your computer audio to the radio, so that you hear both as need be; a Sub Out connection for a Tivoli Audio subwoofer; a 3.5 mm stereo mini-jack Rec Out port; and, of course, an Ethernet port.

The NetWorks also connects to Wi-Fi networks; punching in WEP passwords is painless thanks to the large display and ability to switch between numbers and alphanumeric characters with a single button push. (On other Internet radios, you have to scroll through the numbers to get to the alphabetical characters, and vice versa.)

For Internet radio tuning, the Tivoli NetWorks accesses a site operated by the company itself at *www.networks.tivoliaudio.com*. NetWorks owners can go here to add any radio station to Tivoli's lineup, chat with other members of the NetWorks community, get NetWorks news and receive technical help electronically or live from audio experts.

Format-wise, Tivoli's organization by location and genre — with the ability to select and save favorites — is similar to the Frontier Silicon Radio Portal (*www.wifi-radio-frontier.com*) used by the Sangean WFR-1. However, the Tivoli version offers extra genre categories I don't recall seeing on the WFR-1 such as "Scanners," police and railroad broadcasts captured by scanner and made available on the Web. The variety offered is impressive.

Performance

In terms of audio quality, the Tivoli NetWorks is unsurpassed. It offers more range and clearer playback than the Sangean WFR-1, which I tested side-by-side; and the WFR-1 is a very good Internet radio.

What makes the NetWorks exceptional is that the audio is so good, you forget that you are listening to an Internet radio station. Part of the reason is the unit's "Super Buffer," which buffers incoming signals to compensate for data dropouts. These almost never happen on the NetWorks radio.

In fact, the audio is so good that you soon forget that you are listening to a radio; it just sounds like a decent shelf stereo system playing a CD or similar music source.

Internet tuning is relatively easy on the Tivoli networks, although you do have to hunt through numerous drop-down menus. However, once you have found a station you like, it can be stored as a preset (five are offered per band on the remote), or include it on a personalized Favorites folder for quick access. FM tuning is also simple using the remote but can take time due to the radio's use of 0.1 MHz tuning steps. Once you save your five favorites using the presets, access is fast.

Concerns

Technically speaking, there is little that I do not like about this radio. In fact, my only quibble is that the top-mounted dial allows you to mute the system, but not turn it on or off. In an office, it is useful to not have to search for the remote every time the phone rings.

Actually, I don't get to have even this quibble. After I checked the paragraph above with Tivoli, it turned out that I simply have to press the top dial down a bit longer to turn the radio on or off. So I'm sorry; in two weeks I have been unable to find a single technical problem with this radio.

I do have concerns, however, with the confusing pricing of the Tivoli NetWorks on the *www.tivoliaudio.com* Web site. This page is not intuitive.

(Tivoli radios are sold by selected dealers; they can be found on a state-by-state basis at *www.tivoliaudio.com/dealers.php*. I suggest buying directly from Tivoli, to minimize problems and maximize selection. You buy on the site by going to the Products page, then adding the radio you want to a Shopping Cart. The key is to research what you want throughly, then make your selection.)

After I got my bearings on the site, I worked out the prices. The $599.99 base model (no companion speaker; no FM) is finished in cherry, walnut or wenge wood veneer. If you want FM, that's $50 extra, bringing the price to $649.99. If you want the companion speaker as well — and it is silly to buy a radio this good and not have stereo — that's $100 more. In short, the top-of-the-line model is $749.99, FM and companion speaker included.

My advice? Pay full price and get the package. I could live without FM, given that I have other radios in my office. But to listen to this radio only in mono would be a crime.

Pricing aside, the Tivoli Audio NetWorks is the new standard for Internet radios; at least in my office. Unfortunately, it is priced as such. After all, you pay more for a Porsche than you do a Toyota. Although both are good cars, the Porsche leads the two on performance and looks.

Shown as part of a set with CD player and subwoofer.

World Radio History

MARKET PLACE

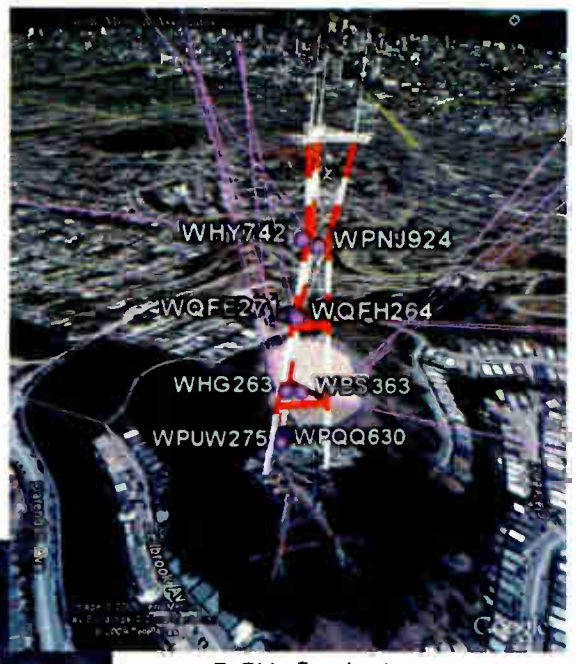
FCCInfo.com Goes Googly

Cavell Mertz and Associates, which provides the online database service FCCInfo.com, has merged those databases with the mapping capabilities of Google Earth to display the commission's broadcast, microwave and tower structure databases in a visual form.

"Using the 3D building and terrain features of Google Earth allows tower heights and microwave paths to be displayed in a unique perspective not freely available anywhere else on the Web," the engineering consulting company stated.

"Clicking on any station's balloon displays additional details such as channel and owner and also provides additional links to FCCInfo.com."

To access these features, users can follow the Google Earth link at *www.fccinfo.com*. A free version of Google Earth is available for Windows, Mac and Linux by visiting *googleearth.com*.



7 GHz fixed microwave display at Sutro Tower

A multiple licensee FM/TV site in Washington

Cavell Mertz & Associates has been providing the FCCInfo.com online database services for eight years. The company, an engineering consulting firm located in Virginia, specializes in broadcasting, media and communications systems and has been providing consulting, custom mapping and data solutions since 1989.

Info: Call Gary Cavell in Virginia at (703) 392-9090 or visit www.cavellmertz.com.

Ultralife Powers-Up Backup Power Subsidiary

Battery manufacturer Ultralife has started a subsidiary dedicated to developing backup power systems for "mission-critical" applications like broadcasting.

Called RPS Power Systems, the unit's roots go back to the acquisition of Reserve Power Systems.

RPS Power Systems initial offerings include traditional lead-acid batteries with a difference. Valve Regulated Lead Acid (VRLA) batteries are designed for very long life. RPS Power Systems has plans for other products such as uninterruptible power supplies (UPS), inverters and power distribution units.

Noting the "growing worldwide need for reliable backup power," Ultralife President John D. Kavazanjian said, "The launch of RPSD Power Systems is in direct support of our strategy to become a key player in the standby power marketplace."

Info: RPS Power Systems at (866) 860-3060 or www.reservepowersystems.com.

V-Soft's Zip-Signal Expands

The database for V-Soft Communication's free online Zip-Signal utility program has expanded to include Canadian and Mexican stations heard in U.S. Zip codes.

The Zip code utility will map radio stations' signal strength in dBu and mV/m to U.S. Zip codes; with the input of a station's call sign, the program will deliver a list of Zip codes and the signal strengths within the Zip codes served by a station.

The program contains all U.S. licensed AM stations, both day and night operations, as well as FM stations and now Canadian and Mexican stations. Signal strengths are calculated using the official FCC method. The user can click a Facility ID link and view the station's record on file with the FCC.

Info: www.v-soft.com/ZipSignal.

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World Radio History

FIRST PERSON

KYPA's Move Closes a Chapter

Station Believed to Have Been Using The Last Full-time Flat-Top Antenna in U.S.

by Marvin Collins

Even though KGFJ(AM) had been transmitting from atop the Odd Fellows Lodge building since Feb. 5, 1927, I did not discover the site until sometime in 1956.

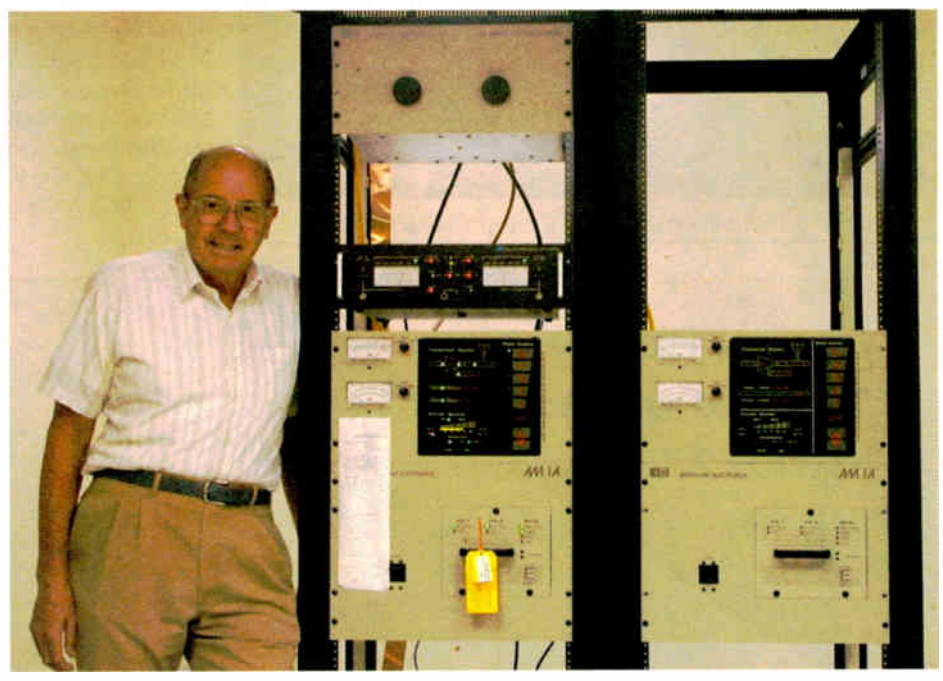
I was making my daily drive to my classes at the University of Southern California when, via my ham radio mobile rig, I heard a strong signal on the 10 meter ham band. I soon discovered I was talking to the on-duty engineer, Jack Gillis, at the nearby KGFJ transmitter site. Jack had his portable ham rig on the air from the transmitter room. At his invitation, I exited the Harbor Freeway for my first visit of the KGFJ site at Oak Street and Washington Boulevard in downtown Los Angeles.

A few years later the Santa Monica freeway was constructed and now the site can be identified as at the junction of the Harbor (110) and Santa Monica (10) freeways.

At the time of my visit in 1956, KGFJ was operating with an old but interesting composite transmitter, which was capable of 100 W output. Later the power of KGFJ was increased to 1,000 Watts. The output fed a flat-top antenna, actually an inverted L with an impedance of 15+j58 at 1230 kHz, on top of the Odd Fellows Lodge building.

The south end of the antenna atop the former IOOF Lodge building in Los Angeles. This antenna was on the air from 1927 until Jan. 14 of this year.

A close-up view of the former KGFJ/KYPA inverted L flat-top antenna. The north end of the antenna is close to the center of the picture.



The author stands next to the KYPA transmitter, now located at the KBLA transmitter site.

Little did I know that later in 1965 I would do some summer relief work at KGFJ. By 1965 a new RCA BTA-1R1 1 kW transmitter was on the air and the composite rig was a standby transmitter. I remember thinking about the history of that old composite transmitter as I tested it into the dummy load.

KGFJ was licensed to Ben McGlashan on Feb. 5, 1927. It is my understanding that Ben and his high school friend Cal Smith built KGFJ. Later Smith became general manager of KFAC, 1330 kHz, a position he held for more than 30 years.

It was not too long after my 1965 summer relief job at KGFJ that, via ham radio Teletype, I became friends with Freeman Lang, who was living in Honolulu. I soon learned that Lang had lived in Los Angeles and had been a prominent radio personality in the 1930s. My ham radio contacts with Lang led to my becoming friends with McGlashan, Smith and Loyd Sigmon of Sigalert fame. We were all ham radio operators. Smith and McGlashan remained life long friends.

By the time I met Ben McGlashan he had sold KGFJ. During a visit at his home he told me he sold KGFJ for $1 million. By today's standards, a million dollars for a Los Angeles radio station does not seem like much. After Ben passed away, Cal married Ben's widow Kay McGlashan.

The KGFJ flat-top antenna has been used on more than one frequency. The Class IV local station served Los Angeles on 1375, 1440, 1410 kHz between 1927 and 1928, then was assigned to broadcast on 1420 kHz on Nov. 11, 1928, then 1200 kHz on Nov. 15, 1929 and finally the current 1230 kHz on March 29, 1941. KGFJ was the first station in the United States to broadcast 24 hours per day.

The station had the call sign KGFJ, "Keeping Good Folks Joyful," from Feb. 5, 1927, until Oct. 10, 1977, when it became KKTT, "The Katt." On Oct. 15, 1979 the station returned to KGFJ. On May 1, 1996 KGFJ became KYPA, "Your Personal Achievement."

A number of years ago the Odd Fellows Lodge hall was sold. Recently the new owners increased the rent for the KGFJ/KYPA transmitter space by a factor of more than six, perhaps feeling that KYPA had no other place to go.

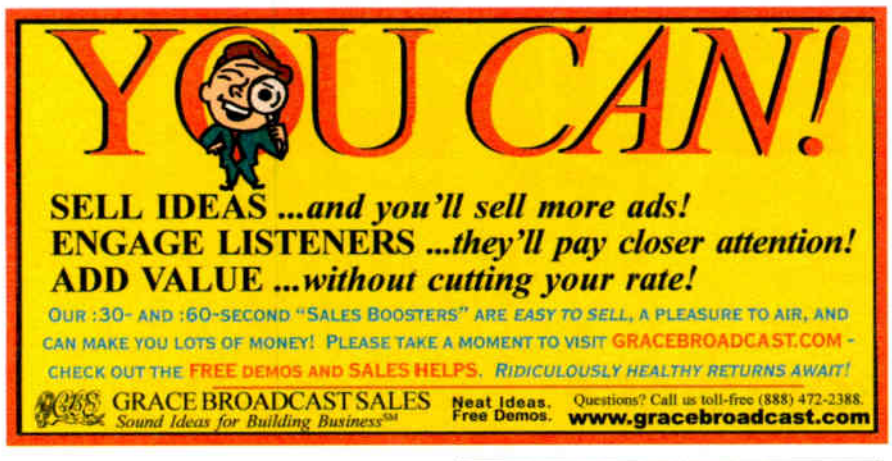
The owners of KYPA, Multicultural Radio Broadcasting Inc., recently purchased KBLA, 1580 kHz, a 50,000 watt six tower directional station in Los Angeles. Thus it was a good business decision to move KYPA to the KBLA site and stop paying high rent at the historic KGFJ site.

KBLA operates 50 kW, six-tower directional, on 1580 kHz. KYPA operates 1 kW on 1230 kHz feeding KBLA Tower No. 6.

It is believed that this move terminates the use of the last full-time flat-top antenna in the United States and the end of an era for this type of antenna. The inverted L antenna was in service from Feb. 5, 1927 until Jan. 14, 2009, a few days short of 82 years.

Marvin Collins, W6OQI, is the retired chief engineer of KFI(AM)/KOST(FM) in Los Angeles. He has been in broadcasting since 1954 and is still doing part time work taking care of the KBLA Los Angeles transmitter facility.

STATION/STUDIO SERVICES



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World Radio History

FACILITY PLANNING

Keys to Successful Facility Design

Hints About Pitfalls to Avoid From SIA Acoustics' Sam Berkow

by Sam Berkow

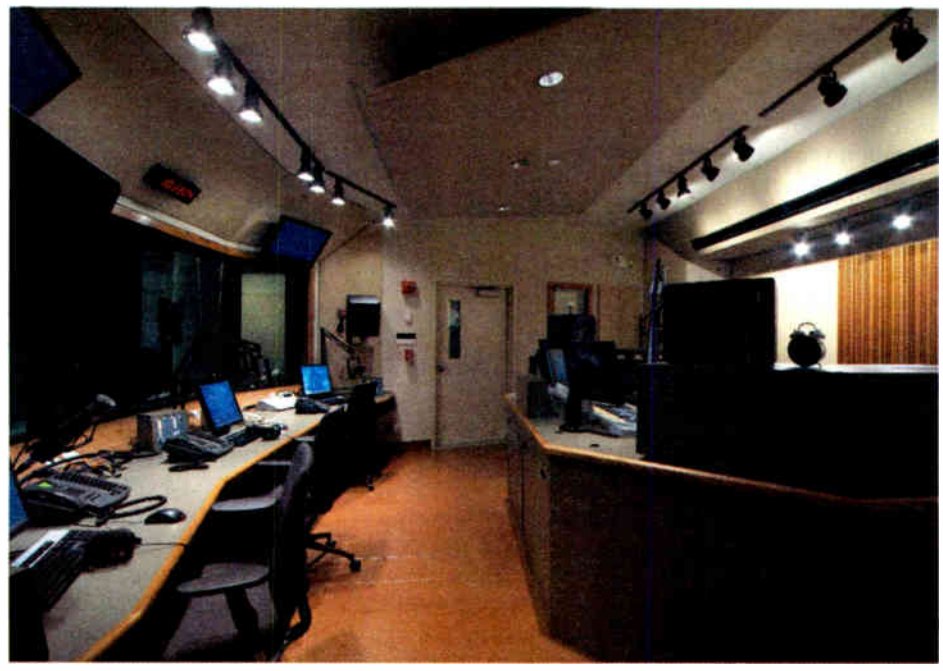
The author is managing partner of SIA Acoustics and founder of SIA Software Company.

At a recent AES convention, Paul McLane, the U.S. editor in chief of Radio World, chaired a broadcast session on facility planning in which a number of questions and topics related to planning and building a broadcast facility arose.

This article documents some of these topics and offers insights on what to do and what to avoid when planning a technical facility.

In projects of every size, cost is always a serious consideration. Remarkably, the initial projected cost is almost never on target, and the cost of almost every project tends to sneak upward.

We have seen facility owners and planners make a number of mistakes which, if eliminated, can substantially reduce this disturbing trend.

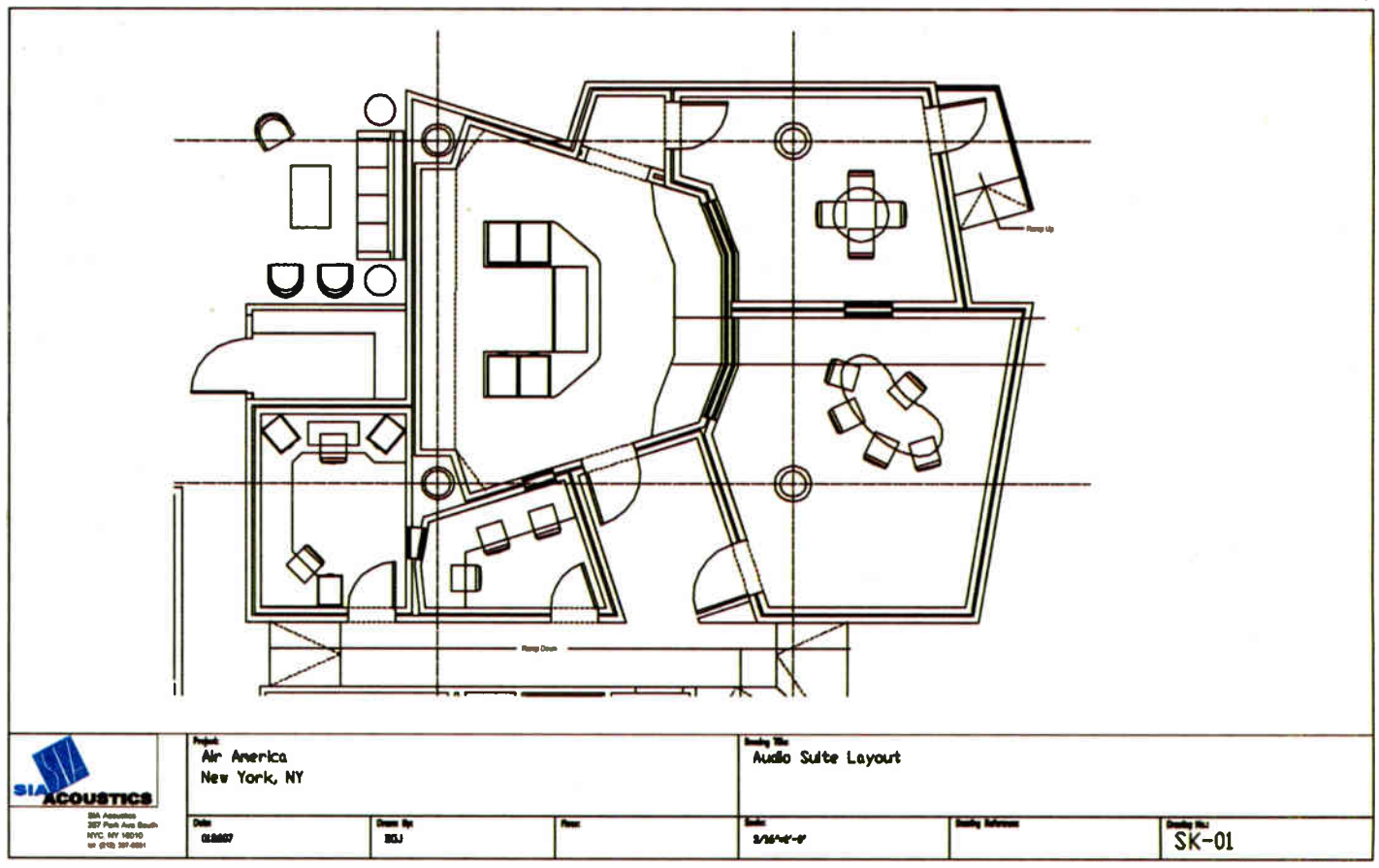


One control room supports two talk studios at Air America in New York.

What are the biggest mistakes facility owners make and best practices you can suggest?

There is a real and valuable need for facility owners to define clearly the needs of the facility, in terms of operations and architecture, as early in the project as possible.

To start the facility planning process, we urge clients to write a programming document for the facility with each space described in terms of its projected functions.



Layout for a studio suite at Air America

Documenting such issues is the best step one can take to get everyone on the design team on the same page. Setting the program for a facility as early as possible allows a realistic budget to be defined and controlled.

In our experience, the more effort that is put into a space-by-space programming document, the more likely that the design and construction team will stay focused on the needs of the facilities and identify costly design or site-related issues early on.

Often, changes to the design late in the process force costs upward in large and unavoidable steps. Remember, it is almost always easier to make changes on paper early than to make them in wood, steel and drywall once construction has started.

To start the facility planning process, we urge clients to write a programming document for the facility with each space described in terms of its projected functions. For each space, define at least the following items:

- Number of users working in the space (typical and maximum)
- Critical adjacencies (other studios, closets, offices, windows, etc.)
- Amount and type of equipment expected to be installed. Amount of power required and heat generated by this equipment should also be listed.
- Any special isolation conditions that require attention — anything near a demising wall, critical neighbors above or below or even adjacent spaces within your facility (a demising wall is a boundary that separates one tenant's space from that of the other, and from the common corridor)
- Special needs (lighting control, look, feel, size, tech tie-ins, etc.)

As with a business plan, we expect this document to start off full of holes, blanks and inaccuracies. It is just a starting place. We *want* the programming document to change during the schematic process, which will help to define priorities and limitations of each layout and changes under consideration.

During the schematic and programming phase, we encourage our clients to dream about both the short-term needs and longer-term hopes for the facility. We then can see what items are required to operate immediately, and plan, at least in terms of infrastructure, for future uses.

Small additions to the cost of conduit and accommodation for cabling can save huge amounts of money and inconvenience later.

Once a schematic layout is defined in conjunction with the programming document, a realistic "actual" cost can be estimated.

While it is common to start with a target budget, we urge our clients to define the facility they *want*, develop a programming document and initial layout, then develop a cost estimate. We then can work as a team to select how they scale it back to meet the budget if required.

One example of how this process works: A New York facility wanted to add two radio studios, each with its own control room, each large enough to host a six-person discussion show.

We encouraged the facility owners to create a full programming document. Using this as a basis, we studied the layout of the space available and found we could not fit the desired spaces into the space available.

Working with the facility management and engineers, we suggested a layout that provided one over-sized control room that supports two larger "talk studios." This configuration met the facility's operational goals; it allowed for future expansion by including lighting grids; and it was built on budget.

How are the demands of multi-platform broadcasters changing design of facilities? Are radio stations changing the way they design facilities to include real video content functionality and "new media"?

As so many traditional radio studios now host video shoots, we are seeing a trend to add infrastructure to new studios that will support the future addition of production lighting and camera locations, even when there is no immediate plan to add this equipment.

While adding cameras presents only a relatively small cabling issue, lighting grids can require substantial electrical and cabling. Several new facilities have added lighting grids and dimmer support cabling systems to new studios but have not purchased full production dimming systems.

Lighting systems that allow flexible lighting positions and creative dimming in conjunction with some visually acceptable wall treatments seem to the keys to making "casual-in-studio" video look good.

See FACILITY, page 25 ▶

World Radio History

How to Sell Smart in Bad Times

Radio Sales Folk Convene in Orlando Hoping to Find the Path to Profit

by Ken Deutsch

It was the best of times, it was the worst of times.

So begins Dickens' "A Tale of Two Cities," the 1859 novel.

For an optimist, that phrase could describe radio today as it battles competition on every side, yet also looks for opportunities in new platforms. A pessimist might counter that things are bad all around, pointing to last year's 9 percent decline in revenue (worst in decades), the poor performance of radio company stocks, frequent layoffs and radio's ongoing image problems.

The Radio Advertising Bureau tends to be made up of optimists.

The organization's annual conference this month will consider topics such as selling during the economic meltdown, the best ways to reach the listener via mobile technology and monetizing that former poor cousin of radio that has taken over our lives: the Internet.

"These are challenging times for the U.S. economy and the media sector including radio," said Jeff Haley, president and CEO of the RAB. "However radio has tremendous strength in flexibility and efficiency that can help marketers and retailers reach consumers."

Part of that flexibility is radio's power to customize advertising for the Internet, according to Eric Ronning, president of sales for TargetSpot, a New York company that helps stations bring advertisers and listeners together online, who will speak in a session about digital expertise.

"Compared to TV and print, radio has a good price point and it's easy to localize," he said. "Radio always does comparatively well in difficult advertising environments.

"We also think radio will do well this year because of the digital connection. In the past, if an advertiser bought the 25–49 demographic, a lot of his money leaked outside of that. This year, online radio is able to target down to the Zip code to ensure the person listening hears the ad in the location most beneficial to the advertiser.

"We call this 'follow the listeners instead of following the call letters.' We understand that there is a higher expectation of accountability now in advertising. Online radio makes it possible to be part of that conversation. So we can show advertisers that radio is not a dinosaur medium. In fact, it's one of the most exciting media going forward."

Tila Comstock: 'We have an Internet specialist at each of our clusters and this allows us to become more competitive. With contesting on our Web pages, we are building our databases. There's almost nothing we won't do.'

Sylvia Allen: 'Look at recession-resistant categories such as fuel, utilities, telecommunications, pharmaceuticals and consumer staples. Also look at the health care field and products targeted to seniors, our most rapidly growing population.'

Jeff Haley: 'Radio has tremendous strength in flexibility and efficiency that can help marketers and retailers reach consumers.'

Eric Ronning. 'We can show advertisers that radio is not a dinosaur medium. In fact, it's one of the most exciting media going forward.'

Ivan Braiker. 'Jiffy Lube saw more than 50 percent new customers through a mobile coupon program with Clear Channel's KCCQ(FM), Ames, Iowa.'

One of the economy-related sessions will feature Jeffrey Hedquist, president/creative director, Hedquist Productions of Fairfield, Iowa.

"I see successful stations as multimedia creators, producing audio, video and electronic word content delivered over a variety of media platforms," he said. "They won't just be selling radio time."

He also stressed that the key to making money goes beyond understanding the delivery systems.

"Knowing *how* to deliver alone will not serve us," he said. "It's knowing *what* to deliver that will save us. The same techniques that worked around the campfire will work over any platform."

The Buck speaks here

Buck Robinson, president/CEO of Robinson Radio, will talk about tapping two "untouched" multi-billion dollar markets.

"Long-form advertising is one potent source of revenue," he said. "While we think of 'infomercials' as tacky, over-the-top denizens of late-night TV, some Fortune 500 companies are now embracing the additional time that infomercials allow to effectively convey their products' benefits and competitive advantages. Even our own president turned to a prime-time 30-minute block to help him gain office."

The other area Robinson fervently touts is social networking sites.

"Are your kids on Facebook or MySpace?" he asked. "Radio stations have always enjoyed a very intimate relationship with their listeners, so why aren't more of them leveraging the power of social networking to actively cement that bond and grow audience interaction?"

If there is a silver lining to the bad economy, it might be that radio stations are now forced to become creative. Ask Tila Comstock, general sales manager, Beasley Broadcasting, Fayetteville, N.C. Her cluster owns a 40.7 share of the market.

"We don't use the old way of thinking about just radio commercials," she said. "We look for what our clients' budgets will allow, and maybe a little more.

"Our smaller advertisers with whom we work directly often don't have a Web site, so we can create one for them. It'll be embedded in our stations' Web sites, but it can use audio and video. Clients can even run their cable TV ads on the Web page we create for them. We have an Internet specialist at each of our clusters and this allows us to become more competitive. With contesting on our Web pages, we are building our databases. There's almost nothing we won't do."

Also eschewing "old ways" is Wayne Ens, president of Ens Media of Ontario, Canada. His session will discuss "New Guided Discovery Selling."

"Old techniques never did work efficiently," he said. "They relied on the math of making tons of unprepared calls in the hopes of tripping on someone who was ready to buy. Rude interruptions, otherwise known as 'cold calls,' simply undermine trust; and it's trust that has to be the foundation of partnering business relationships."

What is Ens' solution?

"We know that it takes five to seven valid business contacts, those that benefit the advertiser, to get a decision-maker to trust you. Clients can be systematically guided to discover the benefits a particular radio rep delivers."

Music, messages on the move

Makers of mobile devices, including cell phones, iPods and other MP3 players, are trying to eclipse radio as the prime content supplier. Some radio stations fight this technology; others embrace it.

Ivan Braiker is CEO of HipCricket, a Kirkland, Wash., firm that specializes in mobile marketing. He will be one of the speakers in a session about "going mobile."

"Despite the recession, KTCK(AM), 'The Ticket' in Dallas, leveraged its mobile database and doubled its cume in each of the three quarter-hours that Cowboys 'programming push messages' were sent," he said. "Jiffy Lube saw more than 50 percent new customers through a mobile coupon program with Clear Channel's KCCQ(FM), Ames, Iowa."

In a survey commissioned by HipCricket, 58 percent of consumers said they would be interested in receiving mobile coupons. Approximately 47 percent said if they received a coupon they would likely redeem it.

It's the economy, stupid

"Selling Sponsorships in a Tough Economy" will feature Sylvia Allen, president of Allen Consulting of Holmdel, N.J.

All radio operators can do right now is focus on cutting costs and renegotiating their credit facilities.

— Marci Ryvicker

"Whether we are really in a bad economy or just think we are in a bad economy, companies are cutting their budgets," she said. "And what is the first thing to be cut? Marketing."

How do radio stations get companies to spend their marketing dollars to maintain market share? Allen suggests that stations step outside their normal circle of contacts.

"Look at recession-resistant categories such as fuel, utilities, telecommunications, pharmaceuticals and consumer staples," she said. "Also look at the health care field and products targeted to seniors, our most rapidly growing population."

She also suggests asking for referrals from existing happy customers, offering creative financing and treating customers like partners.

"Be a consultive salesperson," she said. "Not an order-taker."

Sheila Kirby is a veteran speaker at

If You Go

What: RAB2009

Theme: "Get In"

Where: Rosen Shingle Creek Resort, Orlando, Fla.

When: March 16–18

How: *www.rab.com*

How Much: $499 for RAB members; $699 for non-members

Keynotes: Cathy Coughlin, AT&T, "Connecting With Advertisers and Their Consumers," and Andy Stefanovich, Play, "Innovation: Inspired People & Ideas of Impact"

World Radio History

Shown: Rosen Shingle Creek Resort

these conferences and this year serves as planning chairman. Her session, "Revenue Opportunities Abound with Aggressive '09 Spenders," will discuss those sectors of the economy that are in a spending mood, as well as the ways the consumer connects with radio.

"Integration is the ability to follow and connect with the consumer at every technical touch point or interface," she said. "Consumers are media-agnostic; technology and devices allow them to connect on multiple platforms."

Her co-presenter for this session will be Susan Novicki, president, Morrison & Abraham.

RAB2009 will address many economy-related issues, but is this bear market really that bad?

"Business is trending down in double digits, which should not be a surprise to anyone," said Marci L. Ryvicker, CPA, CFA, vice president equity research, Wachovia Capital Markets, LLC. "The economy is in the tank, unemployment continues to rise and the auto sector is in turmoil. All radio operators can do right now is focus on cutting costs and renegotiating their credit facilities. The potential for bankruptcies and de-listing has weighed on the stocks and I expect this to continue well into the year."

In spite of this gloomy outlook, radio consultant Dan O'Day will present "How to Educate Your Clients."

"Selling isn't 'convincing' or 'tricking' people into buying something," he said. "Selling is educating. I had absolutely no interest in buying a TiVo until someone educated me. An iPhone? Forget it. I don't need the latest gadgets and I already have a cell phone. Then my office manager explained that no matter where I was, if there was a phone signal I'd be able to go online. 'Wait,' I interrupted. 'I can use an iPhone to find the address of a place I'm looking for?' Twice I was educated and twice I was sold."

By "educating," O'Day doesn't mean explaining the technical aspects of a new product or service.

"When I understand how those products could add to the enjoyment of my life, I invited them into my life," he said. "How do I get my clients to listen to me so I can help them succeed? Educate them and show them how they can achieve their goals."

Ken Deutsch has written for Radio World since 1985.

Facility

▶ Continued from page 23

In most cases, the cost of a grid is relatively small and has only minor impact on the cost of the structure of an isolation ceiling. However the cost of a production dimmer system that is acceptable to a video team is often more than a new facility may want to spend. A studio with a grid and cabling and power support in place can allow a rental lighting system to be added to in a few hours, without disrupting the work flow of the facility and adjacent spaces.

What HVAC parameters must a planner consider?

It is not uncommon for the HVAC and electrical part of a broadcast facility to consume more than 35 percent of a project budget. Adding to the cost is the use of larger ductwork, often with acoustical duct-liners, in-line duct silencers, multiple control zones, exterior duct wraps and low-noise grills.

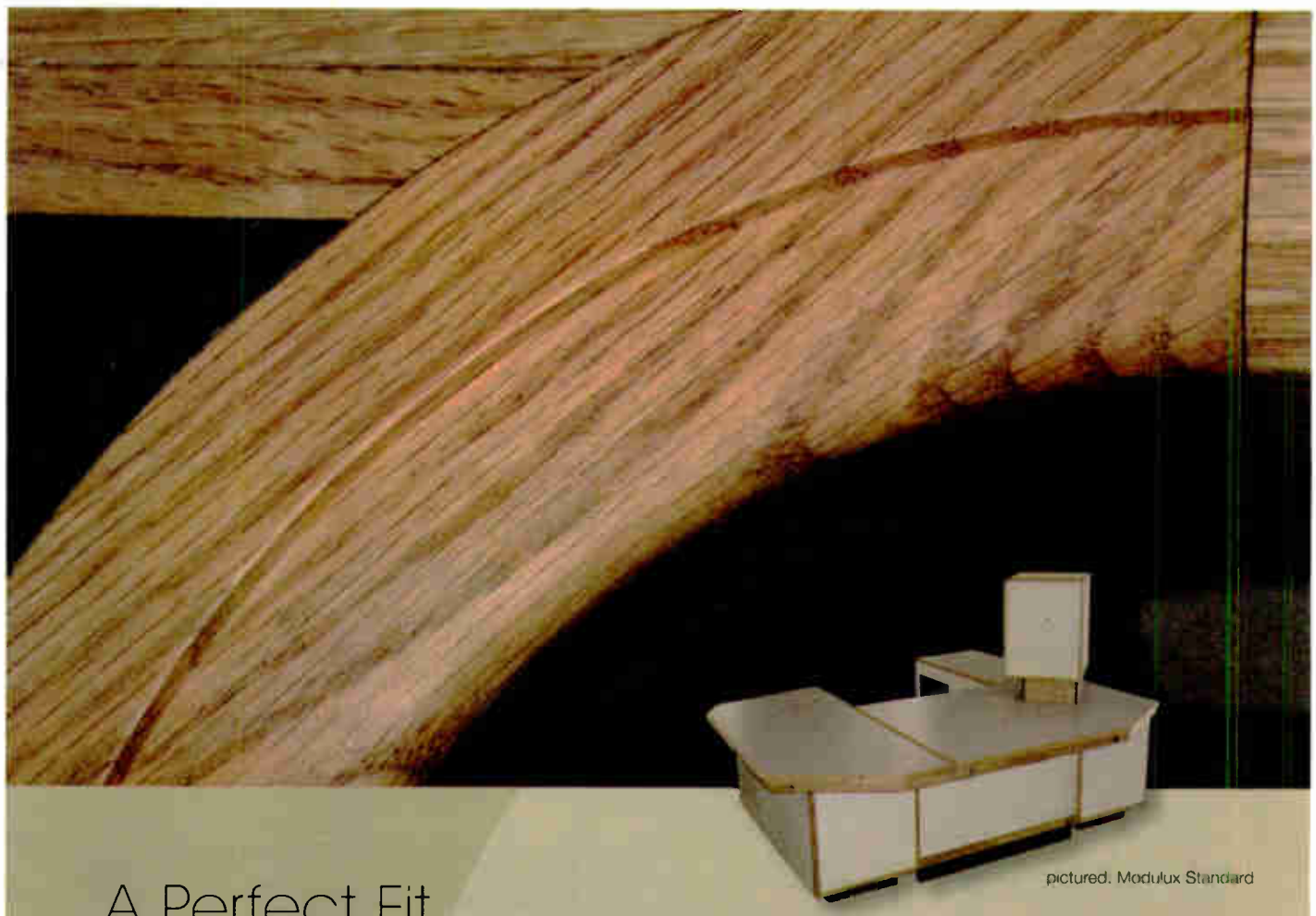
The amount of cooling required is a result of well-insulated rooms and equipment. Last, the use of ducted returns (used to control sound rather than simple plenums) adds considerably to the cost of a typical studio's HVAC system when compared to a typical office environment.

A common, often costly error is waiting until late in the design process to involve your HVAC engineer. We urge clients to engage their mechanical engineer as early as possible and demand the delivery of a "one-line" drawing that represents the paths of desired duct runs, as early into the schematic design as possible.

With this drawing in hand, all parties can consider and review the duct runs during the schematic design phase, reducing the likelihood that expensive changes required by the site conditions or other design considerations will be required later.

Obviously every situation is different; however, careful management of the design process can substantially reduce many of the most costly design and construction problems that many studio facilities run into.

Sam Berkow's acoustical design projects include work for Jazz at Lincoln Center, the Grand Ole Opry, Air America Radio, "This American Life," WBGH in Boston and others.



World Radio History

USER REPORT

AudioFile Combines Numerous Tasks

This Logger Becomes a Postproduction Suite When Used With KLZ's NewsRoom 4.5 System

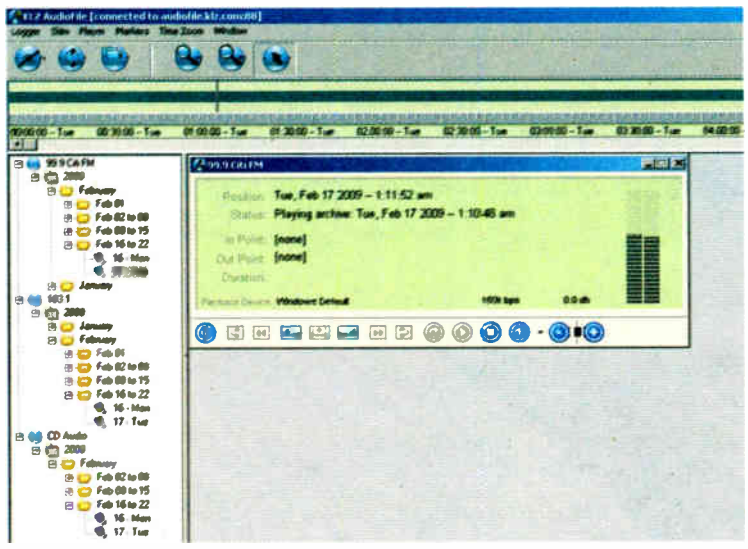
by Terry Kelly
Chief Engineer
CHUM Radio

KINGSTON, Ontario I am the chief engineer for several radio stations in eastern Ontario, Canada. Just over two years ago I was looking for a new, versatile and easy-to-use audio logger for the radio stations I look after. It had to be easy to use for the program directors, announcers and producers on staff. I also wanted to extract audio files in MP3 format that could be edited by our producers, announcers etc. I needed a skimmer that was simple to use and allowed announcers and program directors to be able to download the audio from the logger, selectable to the second. I needed alarm conditions, silence and logger fail.

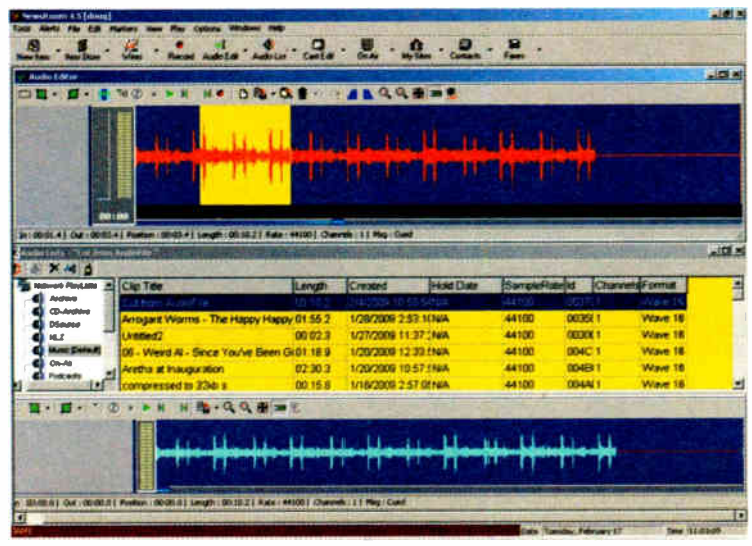
While attending a broadcast engineering conference I approached **KLZ Innovations** with the description of what I was looking for. Three months later they came up with an audio logger called KLZ AudioFile. It was bullet-proof; even using the beta issue I was sent originally, I could not break it or make it fail. I have been using the released version since and have never had any issues.

KLZ AudioFile is now installed at all the stations I look after.

KLZ AudioFile Logger comes in four-, six- and eight-channel configurations. It allows me to record audio on separate channels at different sample rates and store the audio for different lengths of time, for example my air feeds are sampled at 128 kbps low sample rate and the audio is logged for 90 days, my main program feed is logged at a high sample rate 320 kbps and only for 30 days. This audio can be used by production personnel for extracting bits, etc. Audio downloaded to the desktop for use by producers/announcers and anyone else for editing does not affect the original recorded material it is non-destructive.



AudioFile at work ...



... and cooperating with NewsRoom to edit a clip.

NewsRoom

Although AudioFile alone is not a complete post-production suite for audio editing, when added to KLZ's flagship product, NewsRoom 4.5, it becomes just that.

NewsRoom 4.5 is a complete news/sports/talk management software systems designed for the content management and creation of related stories and audio for broadcasters of any format. It allows users to capture content, be it text or audio and manipulate it for broadcast purposes. Users may take a piece of audio from AudioFile and do any type of editing within the NewsRoom 4.5 audio editor. Add, cut, layer, blend any amount of audio you wish. This audio is in MP3 format and can be extracted as such into NewsRoom where the sample rate may be manipulated.

Additionally, I can use AudioFile for skimming, which my PDs and announcer love to be able to download audio cuts from their shows. It has a built-in streaming server, which allows me to monitor the audio over the network and Internet from anywhere. There is a very good AudioFile player used to listen to and download audio cuts. The silence detection and alarms are built into the software and allow me to use them to monitor off-air conditions.

One of the best features of AudioFile is that the server runs on a computer in my rack room and the server runs as a service which make it difficult to be accidentally disabled/shut down.

The KLZ Innovations AudioFile Logger is an excellent product, I have only touched on the highlights. I call it bullet-proof and the developers are always there to support any issues, questions I have ever had, and are willing to listen to their clients' ideas which may enhance the product in the future.

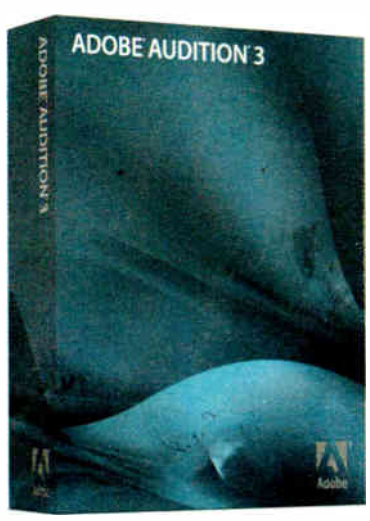
For information, contact KLZ Innovations at (800) 334-9640 or visit www.klz.com.

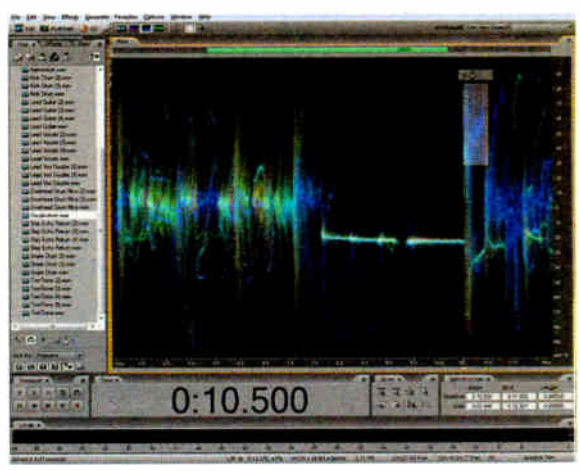
TECH UPDATE

Audition Makes the Cast

Adobe Audition 3 software is a solution for creating music, recording and mixing project soundtracks, producing a radio spot, cleaning up production audio for a movie or editing sound for a business presentation.

New features include an automatic crossfade creation, clip fade handles and automation lane editing improvements. Real-time response allows you to modify volume, pan and effects controls as you listen, recording those changes to your mix. Use innumerable effects combinations, with approximately 50 audio effects and digital signal processing (DSP) tools, and take advantage of multicore processor support and an optimized mixing engine.





Audition 3 allows users to create and arrange music with extensive looping capabilities, as well as support for VSTi virtual instruments. Advanced processing options include tools like the Radius time stretch engine from iZotope as well as Convolution Reverb, Analog Delay and Guitar Suite for analog-style effects. When users need to create audio quickly, included loops and ready-to-use music beds allow you to build music for spots, songs or movie soundtracks.

Users can remove or edit specific sounds or certain frequencies with new audio healing tools. Zoom into selected areas with top and tail views to quickly edit the beginning or ending. Phase correction tools and the Adaptive Noise Reduction tool provide more flexibility in correcting problems. When your audio productions are complete, create reference masters of your compositions by burning directly to gapless audio CDs.

For information, contact Adobe at (800) 585-0774 or visit www.adobe.com/products/audition.

World Radio History

MARKET PLACE

Comrex Expands BRIC Family

Comrex is expanding its BRIC technology IP codec family with the BRIC-Link.

The BRIC-Link is an "entry-level" model with fewer bells and whistles than the Access BRICs. It is also designed for less complicated but possibly always-on operations in remote or unmonitored locations. And though it might be less fancy it is fully capable of handling T1/E1 lines, satellite data channels, WANs and LANs.

I/O includes 1/4-inch, 1/8-inch, Ethernet and serial.

Comrex Technical Director Tom Hartnett said of the half-rack BRIC-Link: "We've included coding algorithms such as AAC and HE-AAC, licensed by Fraunhofer IIS, as standard, in addition to several Linear modes to accommodate various data circuits and network connections. The BRIC-Link also offers FLAC lossless compression, which reduces network bandwidth by 30 to 40 percent while providing completely transparent audio coding with no tandem coding effects."

For information, contact Comrex at (978) 784-1776 or visit www.comrex.com.

New USB I/O Box From Lexicon

Looking to stand out in the increasingly crowded USB audio input box category, Lexicon has introduced the I·Onix family of input devices.

The unusual thing about the I·Onix boxes is their base design. Rather than a square or rectangular box, they are triangular when seen from the side. Placed between a computer keyboard and the monitor, the I·Onix presents its largest face, the control panel, to the operator.

The family consists of two-, four- and eight-channel models. Preamps, made by dbx, offer 48V phantom power. All offer mic, line and instrument inputs and headphone monitoring. Mic/line inputs are through XLR-1/4-inch combi jacks. Digital conversion is up to 24-bit/96 kHz with the usual stops in between. There are also S/PDIF I/O and LED meters. The USB port is 2.0 with a top speed of 480 Mbps.

The shipping package includes Steinberg Cubase LE4 DAW software (Windows and Mac), Toontrack EZdrummer Lite drum sampler and Lexicon's own Pantheon II reverb plug-in.

Other recent Lexicon announcements include upgrades to the PCM96 digital audio processor. Software version 3.0.0.7 includes new pitch shift algorithms and compatibility with Steinberg Cubase and Nuendo.

For information, contact Lexicon Professional at (801) 566-8800 or visit www.lexiconpro.com.

'Phones on the Go

Audio-Technica's ATH-M35 headphones are aimed at portable operations.

However, portability does not necessarily mean skimping on the features. The ATH-M35s have a circumaural, closed-back design for increased isolation, yet they are foldable for easy storage. The drivers are a dynamic design.

The attached connector is a gold-plated 1/8-inch; a 1/4-inch adapter is included. The cable is 11 feet. A frequency response of 20 Hz–20 kHz is expected.

For information, contact Audio-Technica at (330) 686-2600 or visit www.audio-technica.com.

Symetrix AirTools Upgrades

Symetrix has an optional upgrade for users of the AirTools 6100 Broadcast Audio Delay.

The firmware upgrade adds a "user-specified offset to the TC89 (ESE timecode clock) output."

This action, measured for anywhere from 0 to 60 seconds, is designed so that the studio clock displays the time in delay (TID) plus any uplink/downlink latency such as that from ISDN lines, codecs and satellite signals.

The upgrade requires service at Symetrix and costs $300.

For information, contact the company in Washington state at 425) 778-7728 or www.airtoolsaudio.com.

GSelector Upgrades to 3.10

RCS Sound Software song management/scheduling platform GSelector has been upgraded to version 3.10.

The latest adds several features, notably searching and management functions. New is a "create groups" function permitting the grouping of active and inactive song management across a cluster.

Quick Filter allows for category searching using a given value. An Advanced Search function has also been expanded to encompass a whole enterprise database.

Another new function is described as "Twofer." This function allows schedulers to define a theme and designate a song placement and then follow it with a "Twofer" by the same artist, if that artist has a second song with a matching designated theme in its database description.

For information, contact RCS at (914) 428-4600 or visit www.rcsworks.com.

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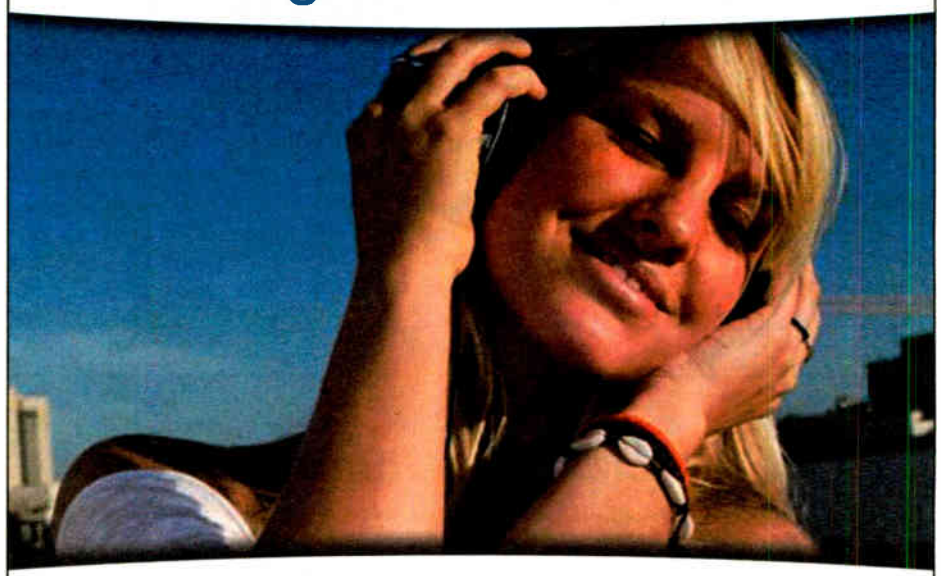

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World Radio History

USER REPORT

AEQ Mar4Suite Pro Flies in the Canary Islands

Production and Routing Are Part of the Offerings of This Automation Suite

by Manuel Sáiz Mesa
Project Director
Canarias Radio Television

LAS PALMAS DE GRAN CANARIA, Canary Islands Canarias Radio's production center in Las Palmas de Gran Canaria in the Canary Islands was commissioned on May 30, 2008. The center was equipped by AEQ. Early in 2009, AEQ was awarded the contract for a new production center in Santa Cruz de Tenerife.

Both production centers consist of two studios (studio-control), an auto control, two booths, and an unattended master control room.

All of the studios, including the booths, are equipped with AEQ's Arena digital mixers, and are connected to the AEQ BC-2000 D router matrix.

The Mar4Suite Pro can be seen on screen, above an AEQ Arena control surface, at Canarias Radio.

Useful features

Because of the importance of this new broadcast facility medium to the islands, it had to provide reliability, ease of use and technical support immediately available.

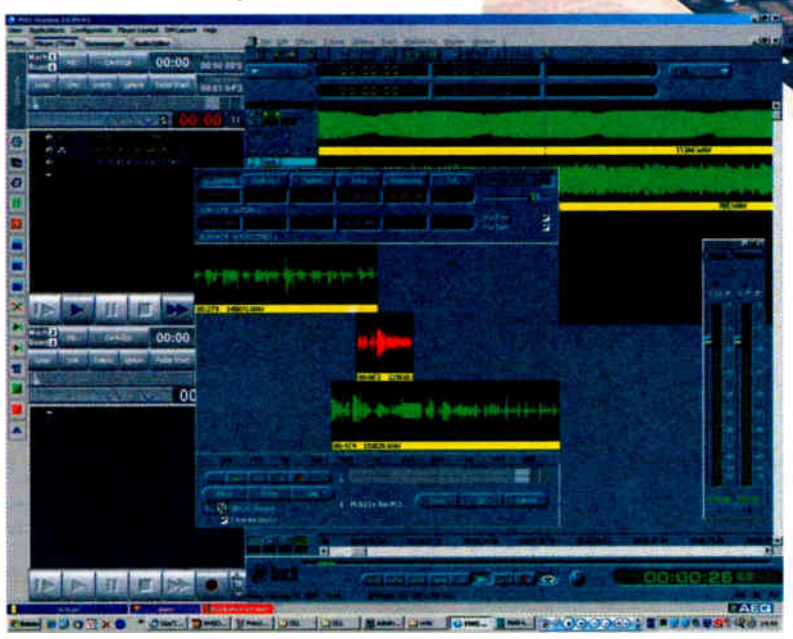
It was not easy to find an automation and audio management system that would adapt to our needs, tailor-made to fit into newly created facilities, yet with the support and experience of the professionals who make it all possible.

AEQ's Mar4Suite Pro automation system, which evolved from the classic Mar4Win system, was the answer. In choosing we relied upon favorable references from other users, such as National Spanish Radio, which has more than 1,500 operational workstations (500 in a single group in Madrid). It was the determining factor that helped us make our decision.

For operational radio stations, an automation system is a critical element that cannot be prone to failure. News, audio production, programming — it's all there. So, when AEQ explained the advantages of the Mar4Suite Pro, with an SQL Server database engine, broadcasting in a safe mode, automatic local archiving of scheduled content, and broadcast recovery in the same instant as a power failure, we decided we wanted to chance being the first major installation of a new system, instead the last installation of the previous one.

There are many useful features such as a broadcast list editor with a waveform display, live voice-over mixing for program introductions, decentralized information management and a powerful audio and text object search engine.

The Canarias Radio Mar4Suite Pro system has three servers, five broadcasting workstations in the studios, and six editing workstations in the newsroom. It utilizes all of the Mar4Suite Pro's applications: news receipt, text editing with embedded audio, audio editing and mixing, continuity recording for legal copies and, of course, broadcasting and automation applications.



Mar4Suite Pro Editing and Mixing Screen

It should be noted that the May 30th inaugural broadcast was launched without the benefit of preliminary testing because of the reduced installation time allotted. There simply was not time to determine if we selected the right equipment or manufacturer. However, our confidence in AEQ's supplied equipment was rewarded by not once experiencing a single on-air failure. Because of the short training period for our technicians, AEQ's technicians were present in the initial critical moments of operation. They were also present from a distance via the Internet. They tracked the daily performance of the new system while our personnel quickly came up to speed.

We are installing the second Production Center in Santa Cruz de Tenerife, which of course includes Mar4Suite Pro. But this time the goal is to interconnect the servers with those at Gran Canaries, so any operator can access online content.

Other stations have installed Mar4Suite Pro, and others who have migrated from MarSystem to Mar4Suite Pro. It has been a great experience and a source of pride for us to have taken the leap and we feel we have made the right decision.

For information, contact AEQ at (954) 581-7999 or visit www.aeqbroadcast.com.

TECH UPDATES

Maingear Ships Remix Workstation

The new **Maingear** Remix workstation equips radio professionals with a machine capable of handling any audio editing task. Remix features a selection of award-winning M-Audio interface cards that offer a range of audio editing capabilities.

Remix is optimized for compatibility with audio software including Digidesign Pro Tools, TASCAM GigaStudio, Steinberg Cubase, Adobe Audition, Sony ACID and Propellerheads Reason. It uses insulation materials that keep noise levels low and dense mesh air filters that keep the dust out.

Maingear partnered with CoolIT Systems to provide liquid cooling that ensures the Intel Core i7 processor runs cool and stays reliable for years of use. Maingear's systems are guilt in the United States and backed by an in-house support team.

For information, contact Maingear Computers at (888) 624-6432 or visit www.maingear.com.

SM Pro Audio IN5E USB mixer/interface

The IN5E from **SM Pro** is a 1 RU mixer/USB audio interface designed to provide the necessary connectivity, monitoring and mixing hardware requirements in a single device for connection to PC/Mac computer-based recording systems.

Building on the IN5, the IN5E has been updated to include SM Pro Audio's E-series microphone preamplifiers, USB audio interface and the TST3 Cat5 mic/line input extender connector. The TST3 is a remote box with XLR inputs — allowing, for example, extended connections between on-air rooms and production studios.

Users can connect a range of analog signals from microphones, turntables, keyboards, samplers and portable audio products through XLR, 1/4-inch and RCA connectors. The IN5E helps to minimize the need for additional peripherals such as phono preamps, socket converters or other devices.

The IN5E operates at 24-bit/48 kHz. The turntable interface has a switchable RIAA EQ curve. Dual headphone outputs are on the front panel.

For information, contact SM Pro/Kaysound at (800) 343-0353 or visit www.smproaudio.com.

World Radio History

WEB POWER TOOLS

Audio *Sentinel*™

Web-based Dual Channel Stereo Silence Sensor

The Broadcast Tools® Audio Sentinel is a web based dual channel stereo silence monitor with an integrated transparent audio switcher. The Audio Sentinel is designed to monitor two balanced or unbalanced independent stereo analog audio sources and transparently switch to a back-up analog audio source when silence is detected. The Audio Sentinel can be controlled and or monitored via the Internet using a web browser.

Available March 2009

Site *Sentinel*™ *4*

Web-based Remote Control

The Site Sentinel 4 is a fresh approach to remote site monitoring and control, or can provide an inexpensive solution to Internet enabling your present remote control system.

Available April, 2009

Web*Switch*™ Remote Power Switch

The WebSwitch™ is an ideal solution for instant remote reboot or remote control over the Internet! WebSwitch™ offers two power outlets, which can be independently controlled using a web browser. It is completely self-contained and includes a built-in web server and internal power supply. WebSwitch™ is simple to set up and can be configured in minutes using its built-in configuration web pages. Each outlet can be configured for "Standard" mode or "Automatic Reboot" mode. In "Standard" mode, users can remotely control each outlet. In "Automatic Reboot" mode, WebSwitch™ will ping a specified IP address and "power-cycle" that outlet if a number of pings fail.

FEATURES

- Two Independently Controlled Outlets
- No Programming Required.
- Control using a standard web browser
- Password protected.
- 120 volt, 10 Amp relay contacts.
- Relay can be set up to either pulse for a user-specified time interval, or to simply change states. (ON/OFF)
- Auto-Reboot Controller.
- Selectable TCP Ports.
- Self Contained, Built-In Power Supply
- Rugged, UL94-V0 Enclosure
- Desktop, Rack Panel or Wall Mountable

Available March, 2009

Relay *Sentinel*™ Web-based Three-relay Module

The Relay Sentinel is an least expensive and reliable way to remotely control equipment over the Internet using a web browser. The Relay Sentinel has three low-signal SPDT relays that can individually switch up to 1 Amp at 28V. Each relay can be turned on, off, pulsed or timed latched using the built in web pages.

Available March, 2009

Status *Sentinel*™ Web-based Three Input Module

The Status Sentinel is a robust, full-featured Ethernet based data acquisition device with three optically isolated status (digital) inputs. The Status Sentinel may be monitored over the Internet using a web browser.

Available March, 2009

Temperature *Sentinel*™ Web-based Quad Temperature Module

The Temperature Sentinel is an industrial grade, Ethernet data acquisition product for monitoring temperature within the range of -67°F to +257°F (-55°C to +125°C) and equipped with one SPDT electro-mechanical relay and the ability to communicate with up to four digital temperature sensors and one optically isolated contact closure input. It can be controlled and/or monitored over the Internet.

Available March, 2009

USA Proud

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INNOVATIVE PROBLEM SOLVING TOOLS FOR BROADCAST

World Radio History

TECH UPDATES

Netia Unveils Radio-Assist 8.0

At the 2009 NAB Show, **Netia** will introduce the Radio-Assist 8.0 range of digital audio automation software.

It is equipped with a range of tools for end-to-end multimedia workflows. Netia says its latest software suite extends beyond traditional broadcasting duties.

Radio-Assist 8.0 allows users to prepare publication at an early stage of the workflow. Publication is prepared at the same level as the on-air thanks to new planning tools. Compatibility with Netia's Media Asset Management system for all media — video, images, texts, and audio — is integrated. It also offers an automatic publishing engine for all media as well as managing associated metadata and linked media.

Radio-Assist 8.0 gives access to all types of media, archived or online. Regardless of the storage medium, items can be previewed and restored for repurposing and distribution, for broadcasting and multi-platform distribution.

By interfacing with Netia's Media Asset Management system, Radio-Assist 8.0 supports media groups having to manage and share video, audio, images and text throughout their entity.

Radio-Assist 8.0 makes three types of publishing available to users. With the new "Publication" tab, journalists can publish only audio content and its metadata; or publish audio and associated media, such as video, text or images; or prepare a group of items for automatic conversion and publishing to an array of destinations, such as a podcast, posting on the Internet or delivery to mobile devices.

Netia's Radio-Assist range of digital audio software programs covers each part of the production and broadcast workflow, allowing users to record, edit or prepare a playlist. In addition to new browse and publishing tools for multimedia functionality, the software features tools for acquisition, sound-file editing, commercial and music production, newsroom systems, scheduling, multicasting and administration.

For information, contact Netia at (888) 207-2480 or visit www.netia.com.

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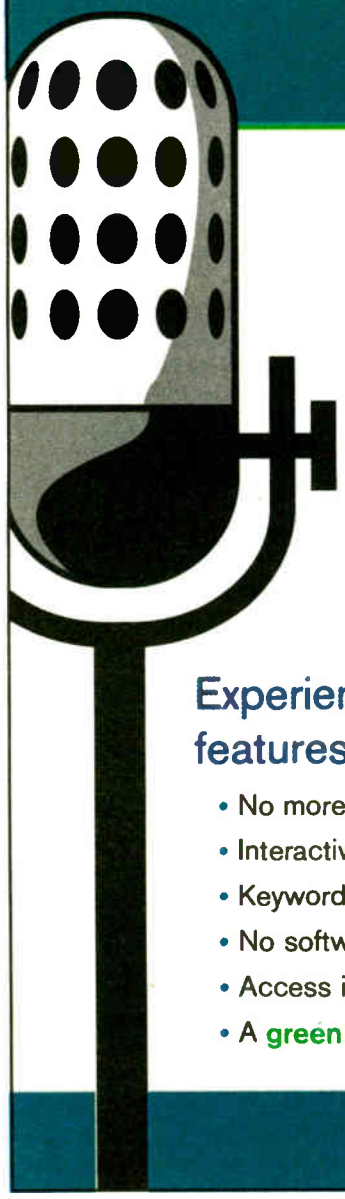

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Lynx Aurora 16-VT Adds Variable Trim Option

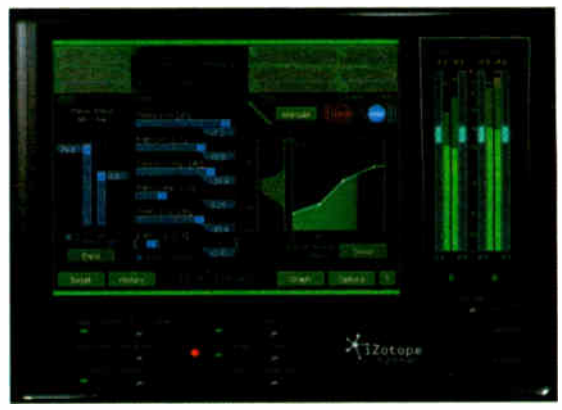
Expanding its line of Aurora 192 kHz A/D-D/A converters, **Lynx Studio Technology** has announced the Aurora 16-VT model. The Aurora 16-VT allows users manually to set the analog input and output levels within a range of +8.5 dBu to +24 dBu. Thirty two miniature trim pots are mounted on the primary circuit board to allow the adjustments.

Lynx says its Aurora converters already occupy a high-end converter niche for radio stations and recording studios but some users also required the ability to set the levels manually for optimum performance. The Aurora 16-VT provides this capability while preserving Aurora's other features.

Features of the 24-bit/192 kHz Aurora converter line include simultaneous 16-channel analog I/O and 16-channel AES/EBU I/O; single- and dual-wire modes; remote control capability via Lynx AES16, IrDA, FireWire and MIDI; onboard 32-channel digital mixer; word clock I/O with Lynx SynchroLock sample clock technology and connectivity via PCI, PCI Express with AES16 cards, ADAT, Pro Tools HD, FireWire and MADI.

For information, contact Lynx Studio Technology at (714) 545-4700 or visit www.lynxstudio.com.

iZotope Ozone 4 Masters Programming

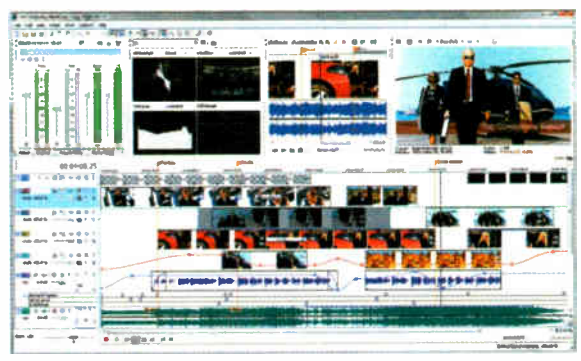


Ozone 4 from **iZotope** is a full-featured audio mastering suite. IZotope has updated and expanded Ozone's processing algorithms, optimizing them for low-latency DAW environments. Ozone 4 features a new Intelligent Loudness Maximizer mode, mid-side processing for control over the sound stage, hybrid crossovers, a redesigned interface and an updated preset manager featuring MacroPresets.

In addition, interface improvements and ease-of-use additions make Ozone more accessible to musicians who want to finalize their projects quickly, while offering precise tools for professional engineers, the company says. Ozone 4 is Mac- and Windows-compatible and works as a plug-in for Pro Tools (RTAS/AudioSuite), VST, MAS, Audio Unit and DirectX hosts.

For information, contact iZotope at www.izotope.com.

Vegas Pro Offers Audio Editor



Sony Creative Software's professional video and audio production software, Vegas Pro, is a digital nonlinear video editing application with significant audio editing and production tools.

Built on the Sound Forge DAW platform, Vegas Pro can operate at 24-bit/192 kHz resolution with an unlimited number of tracks. There are 32 assignable effects and 26 master and aux outputs. A waveform editor with tape-style scrubbing is the main tool. DSP tools include 5.1 surround sound, EQ, reverb, chorus, delay, gate, flange, wah, phase, time stretch. VST plug-ins are supported.

Vegas Pro is compatible with Sony's Cinescore and Acid music creation software applications.

Other features include Blu-ray disc authoring, easy YouTube features, and full XDCAM workflow. Also including DVD Architect Pro and Dolby Digital AC-3 encoding software.

For information, contact Sony Creative Software at (800) 577-6642 or visit www.sonycreativesoftware.com/vegaspro.

World Radio History

TECH UPDATES

Sonopedia Is an Encyclopedia of Sounds

Blastwave FX has introduced the Sonopedia, "The Encyclopedia of HD Sound Effects." With 20,000 royalty-free sound effects ranging from alligators to zippers, the Sonopedia is a professional sound effects library for media production.

Sonopedia is a 154 GB sound effects encyclopedia that comes installed on a premium 250 GB Glyph Technology GT 050Q FireWire/USB/SATA hard drive.

Features include Broadcast WAV files in 16-bit/44.1 kHz, 24-bit/48 kHz and 24-bit/96 kHz form and MP3; search software, audition, drag and drop; Mac and Windows-compatibility and embedded metadata.

Each sound in Sonopedia was produced in 24-bit/96 kHz with multiformat delivery. Sonopedia is cataloged with embedded metadata for quick, intelligent searching and is compatible with Pro Tools, Soundminer, NetMix, iTunes and other popular sound library search engines. Sonopedia sound effects are descriptively named and intuitively categorized for easy browsing, the company says.

Categories include ambience, animals, cartoon, Foley, horror household, impacts, industry, musical, office, science fiction, sports, transportation, warfare, water and weather.

For information, contact Blastwave FX at (313) 887-0370 or www.blastwavefx.com.

VoxPro 4.2 Has Vista Compatibility

Audion Labs' VoxPro platform is now compatible with the intricacies of Windows Vista file hierarchies. Also new is an "auto-record" feature for the batch recording of designated files.

These upgrades are on top of previous upgrades to the 4.0 release. Those upgrades included a "publication" wizard that allows users to podcast recordings. This wizard can be used to generate RSS files, compress audio to MP3 format and upload files to a Web site.

Additionally, a search function was added allowing file names to be searched for particular combinations. A search run by a user searches through folders to which that user has access; a search by the administrator searches through each folder in each account.

Users can record two-channel input into a mono mix, producing a "two-track mono" file (a recording with identical data on both channels). This setting is available in the user's Settings menu. To guarantee no clipping, the volume of each channel is decreased by 6 dB before the two signals are mixed.

A headroom slider was added above the VU meters. This slider functions as a "vertical zoom," allowing low-level signals to be seen and edited. Moving the slider changes the scale on the VU meters as well.

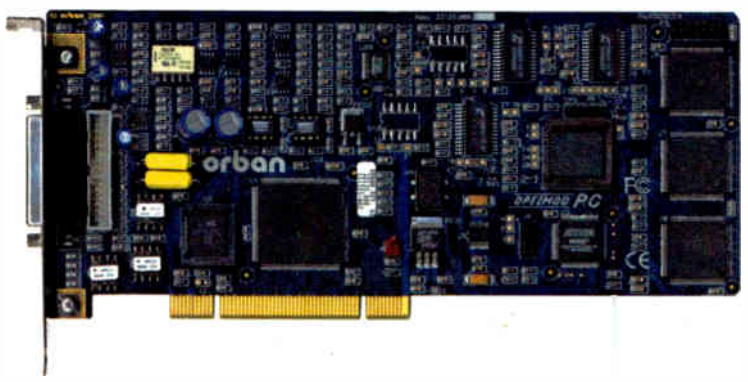
A change to the GUI has the waveform display showing peak values rather than average values. Because of this, the administrator's Headroom setting has been removed and the vertical scale of the display is now always full-scale; there is no extra room above the top border of the display for each channel.

Thus, the waveform display matches the levels shown in the VU meter (actually a Peak Program Meter), is consistent with the display in Zoomed mode, and conforms with standard practice in other popular audio editing applications.

The VU meters are always live, and display signal input when in Standby mode.

For information, contact Audion Labs at (206) 842-5202 or visit www.audionlabs.com.

Optimod-PC 1100 Frees CPU



Orban's Optimod-PC 1100 is a PCI card-based system with built-in digital signal processing for enhancing audio at ingest and playout for broadcasters, Webcasters and studios. Fully compatible with DAB, Internet radio, HD supplemental and TV subchannel applications.

Optimod-PC's tools include AGC (with the latest CBS Loudness technology), standard and parametric EQs, look-ahead limiter, multiband gain control and a peak level control. Included in the feature set are 30 factory presets. Includes IBOC, DTV filters. Internal processing is 24-bit/48 kHz.

The onboard DSP processor does all of the work, keeping the CPU free for other tasks.

Optimod-PC is Windows-compatible and should work with any Pentium II or better computer using XP Pro, Windows 2003 or Vista. It is also compatible with Microsoft Windows Encoder, RealNetworks RealSystem producer, Apple Quicktime, MPEG Layer II and MP3. Multiple Optimod-PCs can be used in a computer. A 25-pin D-sub-to-XLR breakout cable is available.

For information, contact Orban at (480) 403-8300 or visit www.orban.com.

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TECH UPDATES

ASI6622/20 Offer Multiple Play, Record Streams

The ASI6622 and ASI6620 multi-stream PCI-Express sound cards from **AudioScience** provide four or six mono/stereo play streams that are mixed to two balanced stereo outputs, and two or four mono/stereo record streams fed from two balanced stereo inputs, and feature the company's "anything to anywhere" mixing and routing.

The ASI6622 provides both balanced analog and AES/EBU inputs and outputs. The ASI6620 has analog I/O only. The maximum analog input and output level is +24 dBu. A choice of uncompressed PCM, MPEG Layer II and MP3 is available for both recording and playback. Compression is handled by a floating point DSP, allowing the host computer to focus on other tasks.

DSP-based functionality includes MRX multi-rate mixing technology, which allows streams of different sample rates and formats to be mixed digitally. TSX time scaling allows compression/expansion of any or all playback streams in real time with no change in pitch.

Additional highlights of the ASI6622 include AES/EBU inputs and outputs with sample rate converters on all inputs (only); dedicated AES/EBU and word clock Sync input (ASI6622 only); SoundGuard transient voltage suppression on all I/O; short-length PCI card format; and up to four cards in one system. Windows 2000/XP/ 2003/Vista and Linux software drivers are available.

The ASI6622/20 supports two adapter modes. The 4-Play mode supports four play streams, two record streams and two out streams with full mixing capabilities. The 6-Play mode supports six play streams, four record streams and two out streams with full mixing capabilities.

For information, contact AudioScience at (302) 324-5333 or visit www.audioscience.com.

Audiofile Wave Editor Made for the Mac

The **Audiofile Engineering** Wave Editor 1.4 was created for Mac OS X; the company says it brings a modern and elegant toolset to the practical task of manipulating audio with the Mac.

Wave Editor offers essential editing features while providing a favorable environment for sound design and creation. Taking advantage of Cocoa, Core Audio, Quartz and other solid OS X technologies, Wave Editor brings users up to date with the advances in interface design, speed and stability, without compromising power, according to Audiofile.

Wave Editor 1.4 adds features beginning with native support for VST plug-ins. Audio File First Aid diagnoses and repairs common causes of corrupt audio files. Wave Editor 1.4 expands on the DDP export functionality by providing DDP Import (DDP Loadback), giving users more power during the mastering and reproduction process by freely loading DDP images back into Wave Editor, with everything intact: track markers, indexes, ISRC and PQ codes, CD-TEXT etc.

Wave Editor 1.4 includes workflow enhancements including DDP MD5 checksums, PQ and Cue Sheet export, keyboard shortcut presets, user-customizable split-file naming support as well as smoother and faster performance, improved meters, and new contextual menu items for more efficient production, the company says.

For information, contact Audiofile Engineering at (800) 960-6522 or visit www.audiofile-engineering.com.

360 Systems' IR² Adds Ethernet Networking

360 Systems says its Instant Replay² audio clip player added Ethernet networking that lets the user leverage Internet and e-mail technology for on-the-fly updates to stored sound clip libraries. IR² includes a 100 MB Ethernet port for transferring files to and from a PC.

Producers can record audio directly onto hard disk. Editing software enables head-and-tail trims, fade-ins and fade-outs and gain changes. Fifty "hot keys" enable instant playback of sound effects from 10 banks of 50 clips; another 500 clips can be stored on the hard disk.

Users can build and store multiple playlists of audio clips in sequence, and store up to 24 hours of stereo digital audio on the internal hard drive. Audio clips can be transferred to and from a PC via point-and-click. Last-minute additions can be immediately retrieved over the Web and uploaded for live entertainment or production applications. One-touch back-ups also can be performed, providing an extra measure of protection for critical content.

Other IR² features include WAV file support; 16- and 24-bit recording formats; and balanced and unbalanced audio inputs and outputs. Production teams have more flexibility to load clips from a range of audio sources, including PC audio editing programs, CDs and digital music players, according to the company.

For more information, including pricing, contact 360 Systems at (818) 991-0360 or visit www.360systems.com.

SADiE Supplies 'Radio Producer' DAW

More than a digital audio workstation system, **SADiE's** BB2-J has been optimized for use by radio program producers.

The BB2-J is a small USB-based desktop control surface with a weighted jog wheel and the inputs and outputs needed for a simple two-channel configuration.

The heart of any SADiE system is the software editing/mixing system. The BB2-J platform ships with a "lite" eight-channel version of the SADiE Windows XP-based DAW software. This version should have everything required for basic radio broadcaster editing and mixing duties. It is compatible with the full SADiE editor.

Performance specs are 32 kHz–96 kHz sample rate with up to 24-bit conversion. Digital inputs and outputs are S/PDIF and AES3 on RCA connectors. Microphone input and a headphone output are available via 3.5 mm connectors. Other useful tools include a CD burning application.

For information, contact SADiE/Prism at (973) 983-9577 or visit www.sadie.com.

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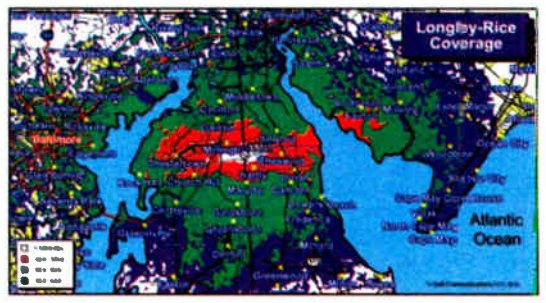

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Harris MW-5, 5k day 1k night at 930AM, buyer responsible for removal, $300/BO; Moseley PCL 600 STL xmtr & rcvr on 949.00, built in Jan '88, $1000 + shpg.; TFT 8301 319-B STL on 949.00, $900 + shpg. Mraley@bbnmedia.org.

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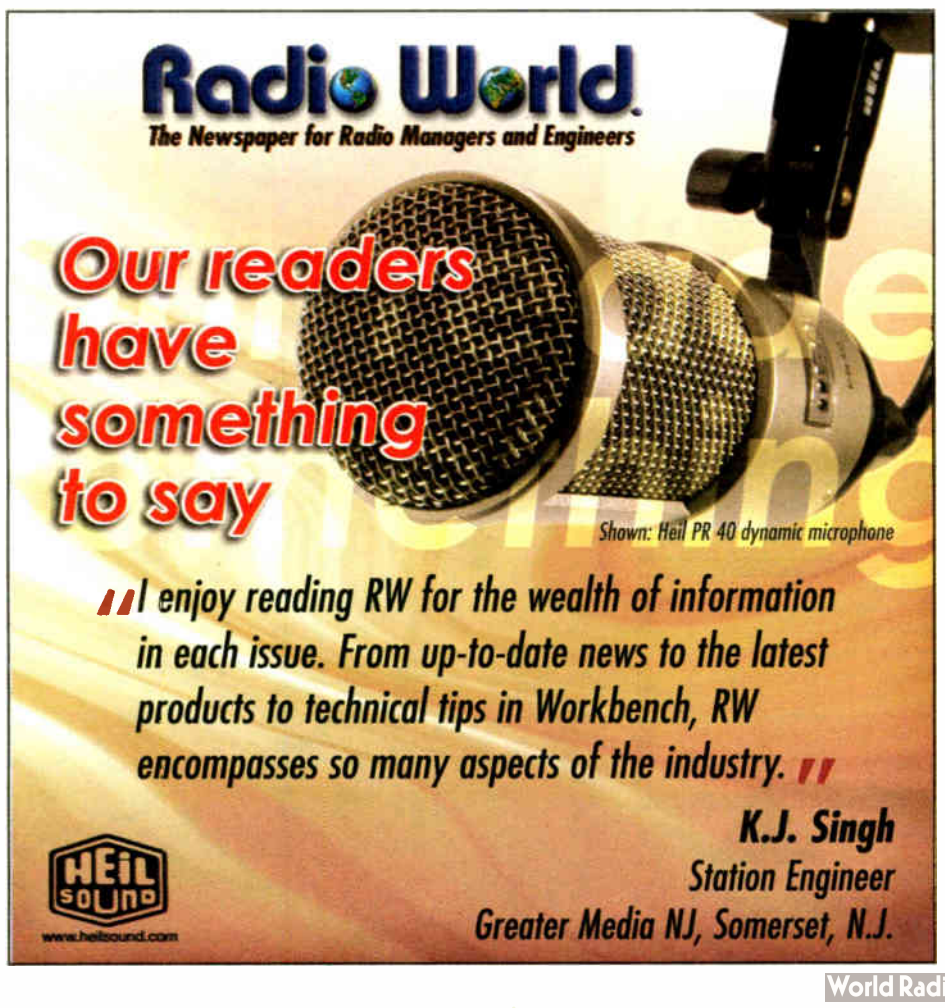

READER'S FORUM

HD Coverage Vs. Power

What seems to be missing in the discussion of HD Radio penetration and coverage is a method of correcting the design inadequacy of the average HD Radio. There are many HD Radios that are inadequate — even their FM analog performance is second- and sometimes third-rate.

By using proven radio design concepts as a thought model, it lends credibility to the concept that a "wide-band" receiver is not usually the best concept for weak signal reception.

Is it possible that no increase in the transmitted HD Radio signals would be required, if the design of the receiver was optimized properly?

— Frank Hertel

To the contrary, the direct conversion outputs or IF outputs of several discrete customized, bandwidth receivers, when multiplexed back together, as a single stream, will yield increased receiver sensitivity and selectivity. This recovery method could deliver an improved image of each discrete received component, and quite possibly do so without the need for any power increase.

Realizing that the HD Radio components' upper and lower data signals (sidebands of a sort to the main FM signal) can be separately recovered as discrete signal packets by a narrow-band method of reception, it might be worth visiting the design concept of a separate narrow-band receiver for each of the sideband elements that make up the HD signal envelope.

There could be some real challenges in perfecting the reconstitution of the two discrete HD components to yield a usable packet for HD reception, but the benefits to "interference rejection" are likely to be respectable, once perfected.

By this method of design, each element of such a "composite radio" could use customized bandwidth to maximize reception of each broadcast signal component (lower HD signal, main FM signal, upper HD signal). "Real" gains in sensitivity, selectivity and interference rejection could be realized.

Is it possible that no increase in the transmitted HD Radio signals would be required, if the design of the HD receiver was optimized properly? Is it possible that the concept of a redesigned and optimized HD Radio receiver should be considered, before granting any power increases, for the transmitted HD sidebands?

Without any doubt, increasing the power of the HD transmitted sidebands will increase the interference to the reception of adjacent, distant and/or weak signals that listeners may wish to receive. Even now, interference is an issue, in some instances, at the present power level that is authorized for the HD sidebands.

HD Radio transmission provides some real benefits that must be appreciated. However, there are other "thought processes" that could be investigated before throwing in the towel and using the "more power" theory as the easily assumed cure for any and all reception problems.

Frank Hertel
Newman Kees
RF Measurements & Eng.
Evansville, Ind.

A Guy By Any Other Name

Dear Mr. Wire, do you have any books out about your escapades as a superhero?

My name is Magneto Man, and like you I am an engineer and a writer. My pseudonym is Daniel Parks, a more traditional name for the benefit of those who regard Magneto Man as some fictitious handle. You can find my books on Amazon: "Gold River Canyon's Dead," "Tales and Doggerel of a Traveling Man," "The Laptop: Cyber Murders" and coming soon, "Short Stories for the Long Haul."

I like to research names now and then, the last being "Al Timeter," a real name of a real person.

I was sitting here thinking about communications towers that my employer manufactures and thought I'd pop "Guy Wire" in as a Google search to see if there really was such a person. Well, the rest is history.

May the magnetic forces be with you.

Magneto Man
Wagoner, Okla.

Season for Giving

That was so wonderful of you to allow the foundation the use of your own editorial space in the Dec. 3 issue ("The Season for Giving").

Please be sure that we really appreciate your generosity and kindness. The foundation really does wonderful work among the hurting and almost forgotten ... and you have been our friend for a long, long time.

William O'Shaughnessy
Chairman
The Endowment Committee
Broadcasters Foundation of America
Greenwich, Conn.

It is with much gratitude that I write to you for reprinting my letter to the industry in lieu of your regular editorial.

The headline says it all: "The Season for Giving."

Philip J. Lombardo
Chairman
Broadcasters Foundation of America
Greenwich, Conn.

World Radio History

GUEST COMMENTARY

What Next for Low-Power FM?

Prometheus' Tenth Year, and Radio's Year of Reckoning With LPFM

by Pete Tridish

The Prometheus Radio Project builds radio stations with civil rights groups, environmentalists and neighborhood organizations — people who think the mainstream media is doing so little to cover their interests that they are ready to go out and start stations themselves and volunteer their time to do it.

One station we worked with, Pineros Y Campesinos Unidos del Noroeste, used to pay $300 an hour back in the early '90s to a commercial owner to get an hour a week on the air to talk to the hard-working strawberry pickers of Woodburn, Ore.

After a nudge from the strawberry grower whose fields PCUN members were working in, this group was thrown off the air as "too controversial" by the station owner. PCUN realized that they would always be at the mercy of the big guys as long as they were "renting" the airwaves, so they applied for an LPFM license when the FCC opened an application window in 2001.

© Jacques-Jean Tizlou/www.jjtizlou.net

The author, in cap and standing by door, takes part in a 'radio barn raising' for WCIW/Radio Consciencia in 2003. The LPFM station is run by the Coalition of Immokalee Workers, a farmworker group in southern Florida.

When years later PCUN finally got their license approved and built their own low-power station, they saw that freedom of speech in this country was more than just another "sidewalk paved with gold" story about America — it could be the real thing, and something that could make a difference to their community.

Stations like these are a glimmer of hope for the local in a world of increasing consolidation of ownership and syndication.

The Prometheus Radio Project, our wacked-out and subversive bunch of radio pirates turned radio engineers turned media policy advocates, recently noted our 10th anniversary. What next?

Anniversary

Just as we don't only have a federal government but also state governments and cities and towns and school boards, we should not *only* have big media — we also need a mix of locally responsive small media, and a healthy non-commercial media sector.

Though every American does have one-300 millionth say in who is the president, and that is important, we would all have a lot bigger say in the decisions of our local school board, our zoning commission, our city councils if we had a media that was scaled appropriately to cover these things and inform people about the issues.

The same goes for culture — every town in America has someone as talented as Britney Spears (if not more so) but they stay invisible even in their own towns because of the way the airwaves are owned and operated.

The Prometheus Radio Project, our wacked-out and subversive bunch of radio pirates turned radio engineers turned media policy advocates, recently noted our 10th anniversary.

We've forced our way into an industry that didn't want us, an industry in a pathetic slow death dance as competitors slice away at radio's business model with a thousand different tiny gashes. At the same time, we've done our part to revive the medium of radio for many communities that had been overlooked by the powers that be.

We hear a lot of old-timers who look down on LPFM and then they whinge about the good old days when radio was live and local. Funny. That's exactly what our stations have been trying to bring back.

What will our 11th year hold? We have three big plans.

Finally Pass the Local Community Radio Act — This legislation essentially gives the FCC back authority over the granting of LPFM licenses. Even though the MITRE study was completed back in 2003 and found that the FCC could allocate low-power radio licenses with little cause for concern, we are still waiting for legislation to pass. The LPFM legislation has many supporters in Congress, but has so far been corked up by one or two friends of the NAB in high places. The leadership has changed, though. And both President Obama and Sen. McCain were co-sponsors on low-power FM legislation. It is time for the NAB to cut their backroom shenanigans and focus on issues of actual importance to broadcasters rather than working behind the scenes to bottle up progress on LPFM.

Straighten Out the Translator vs. LPFM Situation — No one wants it to end more than us; but it cannot end without justice.

Unfortunately, while waiting for congressional action on LPFM, the FCC opened a window for "translators" in 2003. Translators are repeater stations that use the same type of transmitters as LPFM stations and fit in similar available spectrum slots. There were close to 15,000 applications, including approximately 4,000 nationwide applications from a single religious network in Idaho.

While Congress had frozen the FCC's authority to distribute LPFM licenses to new entrants, incumbent broadcasters used the opportunity of the delay to apply to expand their coverage. Shockingly, incumbents and networks applied for translators on the very same channels that the National Association of Broadcasters had claimed LPFMs would cause interference.

Virtually every viable spot for an urban LPFM was applied for in 2003 — as a translator. Low-power radio advocates cried foul — while Congress had asked for further study of LPFM interference issues, they had no intention to give out these channels to existing broadcasters while the results of the study were being analyzed. After non-competing applications for rural translators were distributed, the FCC froze further processing of translators. However, competing (urban) applications are still awaiting resolution. Many of the channels that LPFMs have been patiently waiting for have not yet been distributed, though they have been applied for.

In the fall of 2007, low-power advocates convinced the FCC to take some limited steps to help with low-power frequency

See LPFM, page 38 ▶

◆READER'S FORUM◆

RDS Tagging

A note to thank everyone for their support of RDS tagging ("Tagging, You're It," Dec. 17, 2008).

There is a common misconception. Tagging is *not* made possible via RT+.

We use RT+ only to deliver artist and song title in a standardized way for the benefit of receiver manufacturers and for overall RDS efficiency. RT+ simply provides a way to identify unique "fields" in RDS such as "Artist" & "Title" etc.

The core to the RDS tagging is the transmission of encrypted "unique" numbers that correspond with the on-air activity. This is an American invention courtesy of Jump2Go, implemented within the JumpGate product.

Microsoft, Apple, Clear Channel and eight other major groups use our invention, not the European RT+ for tagging.

Go analog! Go USA!

Allen Hartle
Chief Technology Officer
Jump2Go
Seattle

How to ...

Send a letter to the editor: E-mail *radioworld@nbmedia.com* with "Letter to the Editor" in the subject field. Please include issue date.

An Idea to Fix The AM Band

I happened upon an old Philco portable radio with the little wooden roll-top cover that had been sitting for years in my storage area. It was one of the type that ran on a big DC battery, or AC.

Being the curious type, I took it to an electrical outlet and plugged it in. I figured I would either get smoke or nothing, but amazingly I got audio.

I listened to the AM stations that I had been "enduring" on much newer radios. The next day, when I wanted to catch some news and information, I turned it on again.

I think I now know how to fix the AM band. Forget HD Radio, forget moving AM broadcasters to a new FM expanded band, forget requiring satellite receivers to carry HD Radio, even forget the old AM stereo.

If the FCC wants to fix the AM band, require all AM radios priced over $20 shipped into the country to be able to sound as good as a 60-year-old portable tube radio does, and most of the AM problems will take care of themselves.

Michael Baldauf
Consulting Broadcast Engineer
Pueblo, Colo.

World Radio History

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NewBay Media

If You Serve Them, They Will Listen

And Keep on Listening

The economic and financial meltdown is forcing businesses of all kinds to reevaluate most everything about how they do business.

Radio is no exception; for instance Clear Channel's John Hogan recently announced that his company is "re-engineering" its overall product and business model.

Consolidation during the 1990s allowed Wall Street to redefine the priorities for our industry. More stations became public companies, with owners and managers more concerned about stock price and EBITDA than programming and serving the audience. Most people we know who are not radio corporate CEOs would agree that the shift has changed radio for the worse.

Stations and groups in all markets are downsizing and cutting costs in waves that haven't been seen since the Great Depression. Balance sheets have never been under so much pressure in our memory. Unless income can cover costs and deliver some measure of profit, a business cannot sustain or grow. The number of stations going silent has increased.

Balancing the imperative to make money and pay the bills with creating and delivering the product has always been the challenge. But like few other businesses, broadcasters are charged with responsible stewardship of a public resource. Serving the public is a basic requirement of every licensee. How many times can we write it? Perhaps too many stations have forgotten that much of what constitutes compelling programming that boosts ratings and revenue can also be valuable public service.

With lower budgets, staff reductions and even salary cuts for those who remain, we are forced to take more careful stock of what's really important to keep stations viable and valued members of our communities — what's worth keeping and making better vs. what needs to be jettisoned and left behind. The priority question driving those decisions must be: What compels listeners to choose my station and keep them listening?

The list of possible answers can be long and is unique for any given station and market. But the ones that matter the most identify attributes and program offerings that make listeners feel more personally connected to their communities, their friends and family, their careers and avocations and to their lives in general, living in an ever-changing and interdependent world. Radio stations that have done the best job serving up that connection have remained successful over many years and will continue to succeed.

Programmers and decision makers should take careful note of how Facebook, MySpace and Twitter are changing the way people inter-relate and communicate on the Internet. Social networking is rewriting the rulebook of how folks stay connected with the most important people in their lives. Radio needs to figure out a way to develop and deploy its own adaptation of this innovation.

In the Field of Dreams, if you build it, they will come. In radio, building it is just the beginning. To get them to come and keep coming back, you need to serve them that personalized connection, one that allows them to become part of something larger, something more significant and something more fulfilling. If you serve them, they will listen. And if you serve them well, day after day, they will keep listening.

— Radio World

LPFM

▶ Continued from page 37

availability. The FCC established a cap on granting no more than 10 more applications per entity (some had received many hundreds of licenses already).

This action was helpful, but really just a start to addressing the problem. The FCC needs to reorder priority between local groups and national networks. The current regulations establish that between LPFM and translators, whoever comes first gets the channel. Translator applicants got an opportunity to "cut the line" while LPFMs were waiting for the opportunity to apply in urban areas. This can be fixed easily if the FCC establishes that priority for using a frequency will be granted to local applicants seeking to operate a single, first station over chains of translators belonging to incumbent broadcasters.

Fix the Encroachment Mess — Low-power stations can be bumped at will by full-power stations. We've been willing to compromise, and move out of the way of full-power stations as long as there is an equivalent channel we can move to. In situations where the low-power station is going to be swept off the air just to allow some corporation to make a fast buck by moving their broadcast properties closer to an urban market, we have had to take a stand. The PCUN farmworker station was encroached within a month of getting on the air, and was only saved by some of the new interim procedures that the FCC agreed to in late 2007.

How does it hurt?

So now you've heard the nefarious LPFM plot.

Radio, ask yourself: How is this going to hurt you if low-power advocates succeed?

- In big cities there will be a handful of tiny new neighborhood radio stations on the dial, none of which compete for your market share a tenth as much as satellite radio or iPods.

- You may only be able to repeat your signal with translators (in the top urban markets) dozens of times instead of hundreds of times.

- If you want to change your format, move out of the small town you have served for 30 years to move a little closer and try to catch some of the population of a major urban area with some "outside the contour" coverage, you may need to take into account some of the live, local low-power stations that might be in the way of your scheme.

The NAB would like you to think it is out there slaying dragons to protect your business. But for real: Does any of this make an iota of difference to your station? What are you getting for your money when you pay your NAB dues?

Everyone in radio knows that LPFM has never asked much. There are people who started in low-power radio stations who are now SBE-certified radio engineers. There are people who started at low-power radio stations who have passed the communications law bar. There are even a number of people who lost their radio industry jobs and have ended up making a modest living running LPFMs.

There's no gold in the LPFM hills, but it is amazing how far a little underwriting money from the community can go if you don't have to send half of it to San Antonio!

One sign of the times is that the NAB lately has even tried to justify various deregulatory favors they've asked for by talking about how they will help LPFM stations. They certainly didn't ask our opinion about what would be in our interest, but their concern for our well-being is ... umm, touching.

One of these days, we look forward to some clever person over at NAB realizing that it is time to make peace on this issue and bring LPFM stations into the fold.

Radio, it's time that you came to terms with the bastard stepchild that you tried to smother in the cradle. We fought for LPFM to get the people back in to radio stations, after the corporations tossed them all out. LPFM was sold to people in this profession by the lobbyists as a threat. Looking closer after 10 years, you can see it is actually an opportunity to bring some new life to radio, and to reconnect radio to some of its best aspirations.

LPFM was sold by the lobbyists as a threat. After 10 years, you can see it is an opportunity to bring some new life to radio, and to reconnect radio to some of its best aspirations.

The author is director of electromagnetism and co-founder of the Prometheus Radio Project. He has been an organizer of 11 "radio barn raisings" in which a station is built by hundreds of volunteers in three days; he has helped to build numerous LPFMs. He is an SBE Certified Broadcast Radio Engineer. Pete Tridish is a pseudonym.

World Radio History

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ANALOG Two inputs per channel with fully agile - mic thru line sensitivity on every input • Soft touch, LED lit ultra-wear rubber keypads • Two stereo program buses with TEL mix minus bus output • Up to four additional mix-minus outputs available • Full metering and monitor section • Up/down clock/timer with master sync capability • Complete GPI channel remote control provided for all A & B inputs • Available in 6 / 12 / 18 / 24 channel frame sizes

DIGITAL AES / EBU or analog on any input channel • Mic thru line sensitivity on every analog input • Soft touch, LED lit ultra-wear rubber keypads • Two stereo program buses with TEL mix minus bus output • Ten fully programmable mix-minus outputs — standard • All outputs provided in analog and digital simultaneously • LED VU or PPM metering and full monitor section • Up/down clock/timer with master sync capability • Complete GPI channel remote control provided for all A & B inputs • Available in 6 / 12 / 18 / 24 channel frame sizes

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ANALOG is good. There are over 4000 analog Millenium consoles in service today and we continue to manufacture and ship analog consoles every day. That's because these boards are inexpensive, sound great (with specifications that rival and exceed many digital designs) and have enough features for many small and medium market applications. For more demanding applications, our analog consoles optionally can be equipped with additional mix-minus outputs, distributed output busses and redundant supplies making them even more capable and still a great value.

Going DIGITAL is a process. Radio Systems eliminates some of the stress with our NO CHARGE Digital upgrade program. For the life of your console we will swap any analog plug-in card for a digital one (or vice-versa) allowing you to gradually transition your studio to digital. You can even start out all analog and convert one channel at a time as digital arrives in your facility. But from day one your Millenium Digital console will out-put pristine digital audio to feed your air-chain processor and produce up to ten fully configurable mix-minus feeds.

At Radio Systems, our NETWORK is IP Audio by Livewire®. We've adopted this proven multi-channel standard from Axia® and installed it in our digital consoles. But we left local inputs as well to create the perfect hybrid of stand-alone and network capabilities. This way Millenium Network consoles easily mix local studio sources and connect to all Livewire enabled devices using standard Ethernet switches.

StudioHub+® is the glue of our entire console line. Use our award-winning CAT-5 wiring system to simply and quickly plug any source into any console channel. Or, easily configure custom talent panels and even interstudio tie line connections. And its value doesn't end after the installation is over. RJ-45 connectors allow new sources to be added at any time and makes trouble shooting easy.

Livewire is a registered trademark of TLS Corp.
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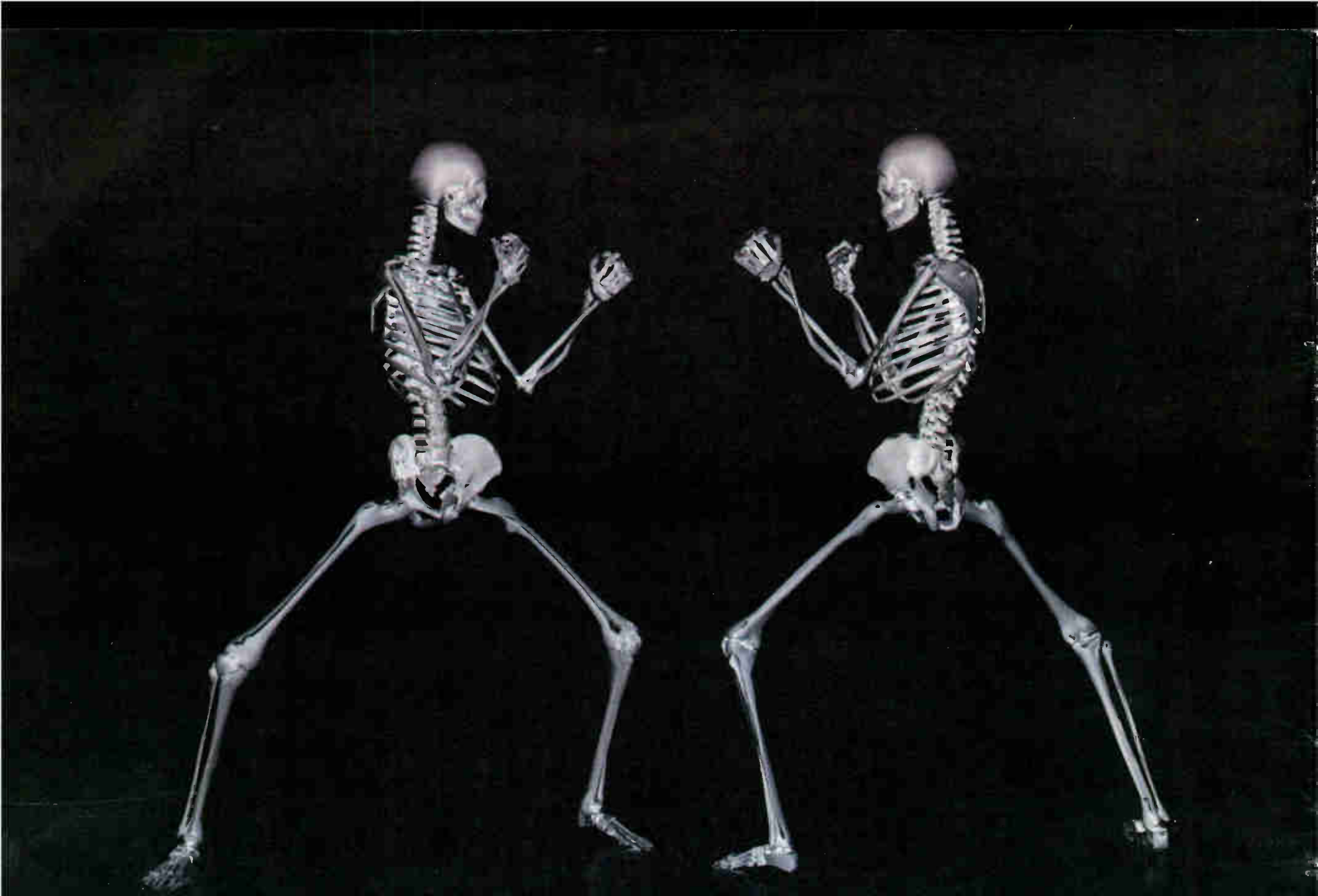

While the two usual suspects slugged it out in the loudness war, we quietly developed the ultimate weapon for the REAL challenge:

WINNING THE RATINGS WAR

Basic loudness is simply not the draw it was in the last century. Today, with so many options for audio delivery, getting and keeping listeners means you need to SOUND GREAT across all media. That's why we developed VORSIS – to deliver clean compelling audio that cuts through the muck without fatiguing those all-important ears.

With Vorsis, we rethought the whole process – developing new tools to let your station deliver the best possible sound to each and every one of those 20th century radios, not to mention the great new standard and hi-def radios being produced in THIS century.

With Vorsis, you're never stuck with your processor's signature sound. You have a full toolset to create your own magnificent sonic signature – one your listeners can key into just by scanning the dial. For the first time, you have the capabilities of bringing true fidelity to FM, AM, and HD/DAB radio.

Intrigued? Call us or visit us on the web to learn more or set up a demo. You'll be happy you did. Vorsis – more listeners listening more.

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